



# iAN-02EX

RELEASE 1.0  
ADMINISTRATOR MANUAL

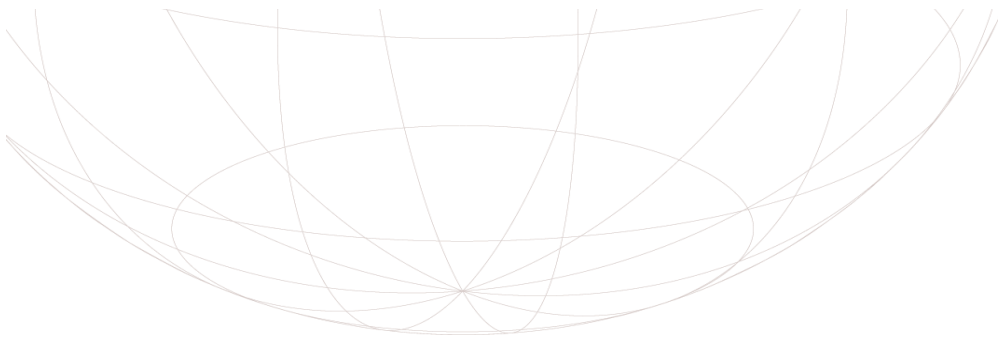


**IAN-02 EX**  
ISSUE 1.7

PART NUMBER UTSI-NJTC-200323150117





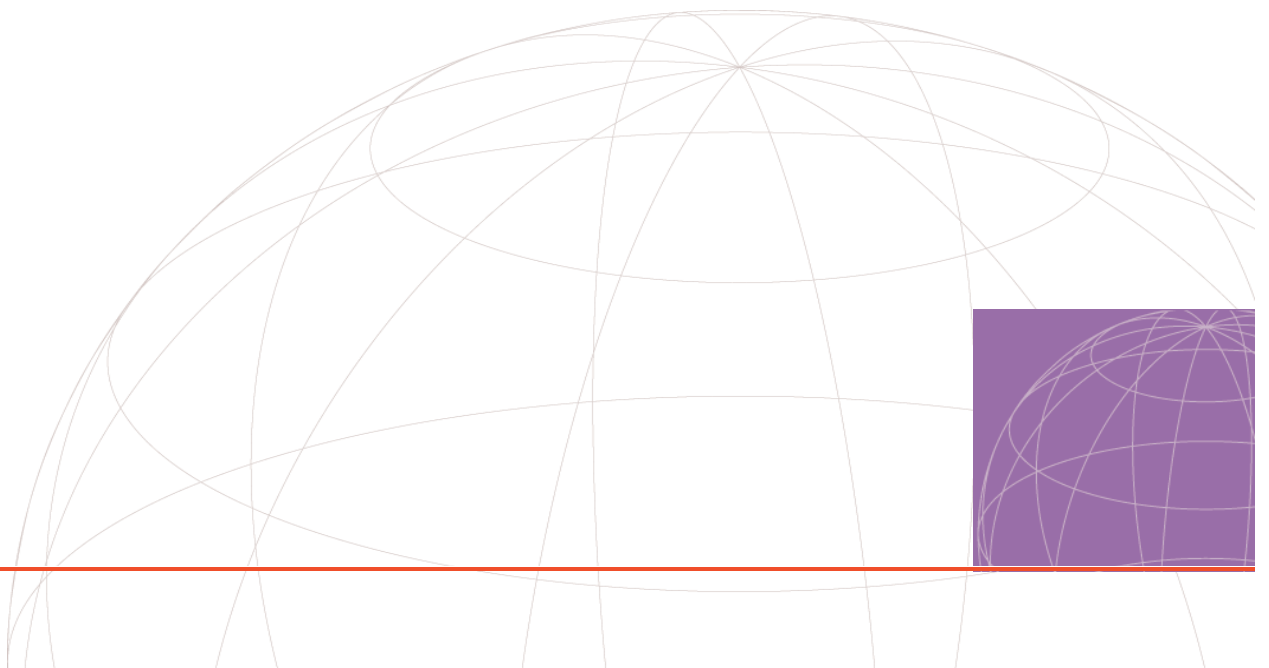


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# CONTENTS

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## ABOUT THIS GUIDE

Conventions .....	13
Notices.....	13
Figures and Screen Captures.....	14
Text .....	14
Related Documentation.....	14
Contacting Customer Service .....	14
Contacting Technical Documentation.....	14

---

## 1 OVERVIEW

Overview .....	17
Package Contents.....	18
System Requirements.....	18

---

## 2 HARDWARE INSTALLATION

Panel & LEDs.....	21
Installation Procedure .....	22

---

## 3 TECHNICAL SPECIFICATION

---

## 4 CONFIGURING TCP/IP PROTOCOL

Gateway Mode.....	27
Bridge Mode.....	30
.....	31
Web Browser.....	33

---

## 5 CONFIGURATION

Configuring via Web Browser.....	38
Status .....	40
System Status.....	40
WAN Status .....	41
DHCP Status.....	42
PPPoE Status .....	43
PPPoE .....	43
PPPoE .....	43
WAN.....	44
WAN IP.....	44
Device Mode.....	46

MTU Rate .....	46
DOS .....	47
Denial of Service .....	47
NTP.....	48
NTP .....	48
Gateway Mode Settings.....	49
LAN Configuration .....	50
Port Forwarding.....	51
IP Filter .....	53
DMZ.....	54
QoS.....	54
QoS Configuration .....	55
DSCP .....	56
Vlan Tag .....	56
Mac Cloning.....	57
Mac Cloning .....	57
PSTN .....	58
Switch Key.....	58
Digit Map .....	59
Provision .....	60
Provision.....	61
Syslog .....	62
Syslog.....	62
Element Management System (EMS).....	63
EMS.....	63
SNMP Community.....	64
SNMP Trap Target.....	65
VoIP .....	66
Protocol .....	67
MGCP.....	67
User.....	69
SIP.....	69
Audio Config.....	71
RTP .....	73
Tone.....	73
FAX.....	76
STUN.....	76
Speed Dial .....	77
Call Features .....	78
Digit Map .....	81
Hook Flash .....	82
Jitter Buffer .....	83
Password .....	83
Supervisor Password .....	83
User Password .....	85
Upgrade .....	87
Firmware .....	87

Configuration .....	87
View .....	89
Configuration .....	89
Save .....	90
Save Configuration .....	90
Load Default Settings .....	91
Load Default Settings using FXS Ports .....	91
Load Default Keypad .....	92
Reboot .....	92
Reboot .....	92

## A TROUBLESHOOTING

## B IAN-02EX PROVISIONING METHODOLOGY

Provisioning overview .....	97
Provisioning Features .....	99
GUI Settings for Provisioning/Upgrade Server .....	99
Provisioning Process rules.....	101
Auto-Configuration.....	101
Brief description on HTTP/TFTP Provisioning servers .....	101
TFTP Provisioning servers.....	101
Port hunting feature.....	101
HTTP Provisioning servers.....	101
Selection Priority for HTTP or TFTP servers.....	102
Frequency of Upgrade.....	102
Provisioning Server configuration files .....	102
File format of the configuration File .....	103
General Configuration File naming convention.....	103
Group Configuration File .....	104
MAC address specific Configuration File .....	104
Encryption Engine .....	105
Provisioning mechanism with MD5 based crypto utility: .....	105
Usage of the Simple Crypt Utility on a Windows platform:.....	105
Encryption tools.....	105
Sample configuration file <abconfig.cfg> for firmware version "V1.8.2.19a".....	105
Firmware Upgrade.....	113
File naming convention .....	114
Provisioning Default Values.....	114
UTStarcom, Provisioning Default Flag Values.....	114
Sample Provisioning Flow Behavior .....	115
Provisioning Flow .....	115

## C DEFAULT SETTING & VALUE

Default Value and Value Range .....	117
-------------------------------------	-----

---

## D IAN-02EX SNMP MIB REFERENCE

MIB Scalar Objects .....	129
systemInformationTable .....	139
currentAlarmTable .....	140
rgPortTable .....	140
rgVoipSpeedDialTable .....	141
rgVoipDigitmapTable .....	142
rgCallHistoryTable .....	142
rgHistoryAlarmTable .....	144
Trap .....	145
rgStart .....	145
rgRestarting .....	145
rgPortFault .....	146
rgSoftSwitchDown .....	146
rgLoadSuccess .....	147
rgLoadFail .....	147
rgShakeHandToEMS .....	148
rgAlarmStatusChange .....	148
rgLedChange .....	149
Syntax Types .....	149

---

## E UPGRADE PROCEDURE

Upgrade Procedure .....	151
Upgrade Notes .....	152
LAN side ip-address change .....	152
WAN side Static ip-address configuration .....	152



# LIST OF TABLES

Table 1	Notice Icon Descriptions .....	13
Table 2	Text Convention Descriptions.....	14
Table 3	LED.....	21
Table 4	Technical Specifications .....	23
Table 5	Feature Lists .....	37
Table 6	Status - System Status Field Description .....	41
Table 7	Status - WAN Status Field Description .....	42
Table 8	Status - DHCP Status Field Description .....	42
Table 9	Status - PPPoE Status Field Description.....	43
Table 10	PPPoE - PPPoE Field Description .....	44
Table 11	WAN - WAN IP Field Description .....	45
Table 12	WAN - Device Mode Field Description .....	46
Table 13	WAN - MTU Rate Field Description.....	47
Table 14	DOS - Denial of Service Field Description.....	48
Table 15	NTP - NTP Field Description .....	49
Table 16	Gateway Mode Settings - LAN Configuration Field Description .....	51
Table 17	Gateway Mode Settings - Port Forwarding Field Description .....	52
Table 18	Gateway Mode Settings - IP Filter Field Description .....	53
Table 19	Gateway Mode Settings - DMZ Field Description.....	54
Table 20	QoS - QoS Configuration Field Description .....	55
Table 21	QoS - DSCP Field Description .....	56
Table 22	QoS - Vlan Tag Field Description.....	57
Table 23	Mac Cloning - Mac Cloning Field Description.....	58
Table 24	PSTN - Switch Key Field Description .....	59
Table 25	PSTN - Digit Map Field Description.....	60
Table 26	Provision - Provision Field Description .....	61
Table 27	Syslog - Syslog Field Description .....	63
Table 28	EMS - EMS Field Description .....	64
Table 29	EMS - SNMP Community Field Description .....	65
Table 30	EMS - SNMP Trap Target Field Description.....	66
Table 31	VoIP - Protocol Field Description.....	67
Table 32	VoIP - MGCP Field Description .....	68
Table 33	VoIP - User Field Description .....	69
Table 34	VoIP - SIP Field Description .....	70
Table 35	VoIP - Audio Config Field Description .....	72
Table 36	VoIP - RTP Field Description.....	73
Table 37	VoIP - Tone Field Description.....	74
Table 38	VoIP - FAX Field Description .....	76
Table 39	VoIP - STUN Field Description .....	77
Table 40	VoIP - Speed Dial Field Description .....	78
Table 41	VoIP - Call Feature Field Description .....	79
Table 42	VoIP - Digit Map Field Description.....	81
Table 43	VoIP - Hook Flash Field Description.....	82
Table 44	VoIP - Jitter Buffer Field Description .....	83
Table 45	Save - Load Default Settings Field Description .....	91
Table 46	abconfig.cfg Default Value and Value Range .....	117
Table 47	MIB Scalar Objects Table.....	129
Table 48	System Information Table.....	139
Table 49	Current Alarm Table .....	140
Table 50	rg Port Table .....	141
Table 51	rg Voip Speed Dial Table.....	142
Table 52	rg Voip Digitmap Table .....	142

Table 53	rg Call History Table .....	143
Table 54	rg History AlarmTable.....	144
Table 55	rgStart Table.....	145
Table 56	Trap Variables .....	145
Table 57	rgRestarting Table .....	145
Table 58	Trap Variables .....	146
Table 59	rgPortFault Table.....	146
Table 60	Trap Variables .....	146
Table 61	rgSoftSwitchDown Table .....	146
Table 62	Trap Variables .....	147
Table 63	rgLoadSuccess Table.....	147
Table 64	Trap Variables .....	147
Table 65	rgLoadFail Table .....	147
Table 66	Trap Variables .....	148
Table 67	rgShakeHandToEMS Table .....	148
Table 68	Trap Variables .....	148
Table 69	rgAlarmStatusChange Table .....	148
Table 70	Trap Variables .....	149
Table 71	rgLedChange Table.....	149
Table 72	Trap Variables .....	149
Table 73	Syntax Types Table.....	149

# LIST OF FIGURES

Figure 1	iAN Product Deployment Schematic .....	17
Figure 2	Front Panel of 2-Port VoIP Gateway .....	21
Figure 3	Rear Panel of 2-Port VoIP Gateway .....	21
Figure 4	Installation Diagram .....	22
Figure 5	Settings - Network Connections - Gateway Mode .....	28
Figure 6	Local Area Connection - Properties - Gateway Mode .....	28
Figure 7	Local Area Connection Properties - Gateway Mode .....	29
Figure 8	Internet Protocol (TCP/IP) Properties - Gateway Mode .....	30
Figure 9	Settings - Network Connections - Bridge Mode .....	31
Figure 10	Local Area Connection - Properties - Bridge Mode .....	32
Figure 11	Local Area Connection Properties - Bridge Mode .....	32
Figure 12	Internet Protocol (TCP/IP) Properties - Bridge Mode .....	33
Figure 13	Starting Web Browser Window - Gateway Mode .....	34
Figure 14	User Name / Password Window - Gateway Mode .....	34
Figure 15	Web Configuration Main Menu - Gateway Mode .....	35
Figure 16	Starting Web Browser Window - Gateway Mode .....	39
Figure 17	User Name / Password Window - Gateway Mode .....	39
Figure 18	Web Configuration Main Menu - Gateway Mode .....	40
Figure 19	Status - System Status .....	41
Figure 20	Status - WAN Status .....	41
Figure 21	Status - DHCP Status .....	42
Figure 22	Status - PPPoE Status .....	43
Figure 23	PPPoE - PPPoE .....	44
Figure 24	WAN - WAN IP .....	45
Figure 25	WAN - Device Mode .....	46
Figure 26	WAN - MTU Rate .....	47
Figure 27	DOS - Denial of Service .....	47
Figure 28	NTP - NTP .....	49
Figure 29	Gateway Mode Settings - LAN Configuration .....	50
Figure 30	Gateway Mode Settings - Port Forwarding .....	52
Figure 31	Gateway Mode Settings - IP Filter .....	53
Figure 32	Gateway Mode Settings - DMZ .....	54
Figure 33	QoS - QoS Configuration .....	55
Figure 34	QoS - DSCP .....	56
Figure 35	QoS - Vlan Tag .....	57
Figure 36	Mac Cloning - Mac Cloning .....	58
Figure 37	PSTN - Switch Key .....	59
Figure 38	PSTN - Digit Map .....	60
Figure 39	Provision - Provision .....	61
Figure 40	Syslog - Syslog .....	63
Figure 41	EMS - EMS .....	64
Figure 42	EMS - SNMP Community .....	65
Figure 43	EMS - SNMP Community .....	66
Figure 44	VoIP - Protocol .....	67
Figure 45	VoIP - MGCP .....	68
Figure 46	VoIP - User .....	69
Figure 47	VoIP - SIP .....	70
Figure 48	VoIP - Audio Config .....	72
Figure 49	VoIP - RTP .....	73
Figure 50	VoIP - Tone .....	74
Figure 51	VoIP - Fax .....	76
Figure 52	VoIP - Stun .....	77

Figure 53 VoIP - Speed Dial .....	78
Figure 54 VoIP - Call Feature .....	79
Figure 55 VoIP - Digit Map .....	81
Figure 56 VoIP - Hook Flash .....	82
Figure 57 VoIP - Jitter Buffer .....	83
Figure 58 Password - Supervisor Password .....	84
Figure 59 Password - Supervisor Password - Confirmation .....	84
Figure 60 Password - Supervisor Password - Re-login .....	85
Figure 61 Password - User Password .....	85
Figure 62 Password - User Password - Confirmation .....	86
Figure 63 Password - User Password - Re-login .....	86
Figure 64 Upgrade - Firmware .....	87
Figure 65 Upgrade - Configuration .....	88
Figure 66 Upgrade - Configuration File - Apply .....	88
Figure 67 View - Configuration .....	89
Figure 68 View - Configuration - abconfig.cfg .....	89
Figure 69 View - Configuration - abconfig.cfg.txt .....	90
Figure 70 Save - Save Configuration .....	90
Figure 71 Save - Load Default Settings .....	91
Figure 72 Save - Load Default Keypad .....	92
Figure 73 Reboot - Reboot .....	92
Figure 74 Provisioning / Upgrade Scenario .....	98
Figure 75 Provisioning / Upgrade Server GUI Settings .....	99

# ABOUT THIS GUIDE

This chapter lists guide conventions and related documentation, and describes how to contact customer service and technical documentation.



*Release notes are issued with some products—visit our website at <http://support.utstar.com>. If the information in the release notes differs from the information in this guide, follow the instructions in the release notes.*

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## Conventions

This guide may contain notices, figures, screen captures, and certain text conventions.

**Notices** [Table 1](#) lists notice icons used in this guide.

**Table 1** Notice Icon Descriptions

Icon	Notice Type	Description
	Information Note	Information that contains important features or instructions but is not hazard-related.
	Caution or Warning	<p>Cautions are preceded with the word <b>Caution</b>. This type of caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also alert against unsafe practices and potential program, data, system, or device damage.</p> <p>Warnings are preceded with the word <b>Warning</b>. This type of warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	Caution or Warning due to potential electrical hazard	<p>Cautions due to potential electrical hazards are preceded with the word <b>Caution</b>. This type of caution indicates a potential electrical hazard. This hazard, if not avoided, may result in minor or moderate injury. It may also alert against unsafe practices and potential program, data, system, or device damage.</p> <p>Warnings due to potential electrical hazards are preceded with the word <b>Warning</b>. This type of warning indicates a potential electrical hazard. This hazard, if not avoided, could result in death or serious injury.</p>
	ESD	Information that indicates proper grounding precautions are required before handling a product.

## Figures and Screen Captures

This guide provides figures and screen captures as examples. These examples contain sample data. This data may vary from the actual data on an installed system.

**Text** [Table 2](#) lists text conventions in this guide.

**Table 2** Text Convention Descriptions

Convention	Description
Text represented as a screen display	This <b>typeface</b> represents text that appears on a terminal screen, for example <code>login:.</code>
Text represented as <b>user entry</b> .	<b>This typeface</b> represents commands entered by the user, for example, <code>cd \$HOME</code> .
Text represented as <b>menu, sub-menu, tab, and field names</b>	<b>This typeface</b> represents all menu, sub-menu, tab, and field names within procedures, for example: On the <b>File</b> menu, click <b>New</b> .
Text represented by <code>&lt;variable&gt;</code>	This typeface represents a required variable, for example: <code>&lt;filename&gt;</code>

## Related Documentation

This documents contain additional information about the iAN-02EX Release 1.0:

- iAN-02 EX Command Line Interface (CLI) User Manual  
UTSI-NJTC-20040647

## Contacting Customer Service

For information about customer service, including support, training, code releases and updates, contracts, and documentation, visit our website at <http://support.utstar.com>.

Refer to the documentation CD-ROM for information about product warranty.

Before contacting technical support, have this information available:

- Contract number
- Problem description
  - Symptoms
  - Known causes
- Product information
  - Software and hardware versions
  - Serial numbers
- Trouble locating and clearing attempts

## Contacting Technical Documentation

To provide comments on this documentation, send an e-mail to:

[techdoc.feedback@utstar.com](mailto:techdoc.feedback@utstar.com)

Please include the name and part number of the guide being referenced. If applicable, provide the chapter and page number.





# 1

## OVERVIEW

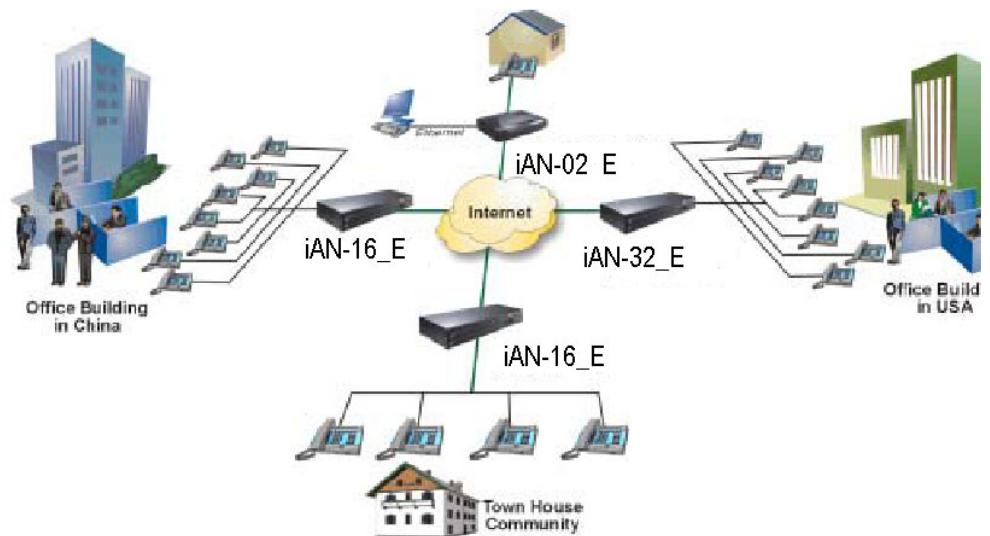
### Overview

The iAN-02EX is a Customer Premises Equipment that enables Voice over IP. It interfaces regular POTS telephones with IP based telephony networks.

It is standalone device which provides a cost effective voice communication over an existing broadband connection.

The iAN-02EX is a standard's based communication devices that deliver true, next-generation voice-over-IP (VoIP) terminations to businesses and residences worldwide. This is designed to address the needs of enterprise companies, small-office environments, and the emerging VoIP managed voice services and local services market by helping companies to cost-effectively turn their analog telephones into IP devices.

**Figure 1** iAN Product Deployment Schematic



*Note: The iAN-16/32\_E is a product from the iAN family with 16 and 32 POTS interfaces*

The iAN-02EX CPE equipment has the following interfaces:

- WAN Interface: 1 RJ45 10/100 Base-TX Auto-Negotiate
- LAN Interface: 1 RJ45 10/100 Base-TX Auto-Negotiate

- Phone Interface: 2 FXS/POTS Interface to connect regular analogue phone
- PSTN Interface: 1 FXO / PSTN Life line Interface (Optional)
- Power Supply Connector

#### Key Features of iAN-02EX:

- IOP (Inter-Operability) with major soft-switch vendors
- Multi-facet signaling supporting MGCP, SIP & H323
- SNMP based EMS for VoIP deployments
- Supports remote software upgrades
- Plug & Play, Auto Configuration / Auto Provisioning
- Auto Switch to PSTN in case of power failure (Optional)

The iAN-02EX box has two Voice ports. Each of the two voice ports on the supports independent telephone numbers, giving you two separate lines. In addition, the internal Ethernet switch allows for a direct connection to a 10/100BASE-T Ethernet network via an RJ-45 interface, with single LAN connectivity for both the iAN-02EX box and a co-located PC or other Ethernet-based device.



*Note: H323 is not available in the factory shipped firmware. Separate firmware is needed for this application.*

---

## Package Contents

Carefully unpack your package and make sure that you have the following items. If you find anything missing, mismatched or damaged, promptly contact your dealer who you purchased your product from for help.

- One VoIP Residential Gateway
- One RJ-11 telephone line for first telephone
- One RJ-11 telephone line for second telephone (optional)
- One RJ-11 telephone line for PSTN backup use (optional)
- One RJ-45 Ethernet cable
- One power adapter
- One user manual

---

## System Requirements

- One RJ-45 Broadband Internet connection via cable modem or ADSL modem
- One PC with 10Mbps, 100Mbps, or 10/100 Mbps Ethernet card installed
- TCP/IP protocol for each PC
- Microsoft Internet Explorer 4.0 or later (5.0 is strongly recommended for web configuration)

- One or two standard touch-tone telephone(s)
- Subscribe to a VoIP service provider for VoIP services

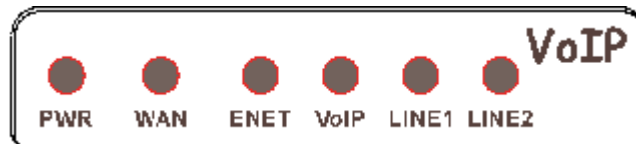


# 2

## HARDWARE INSTALLATION

### Panel & LEDs

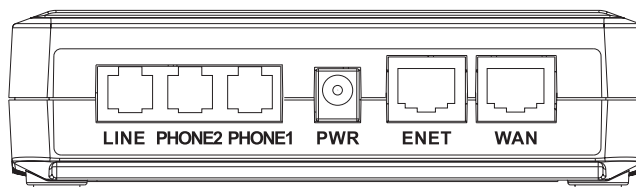
**Figure 2** Front Panel of 2-Port VoIP Gateway



**Table 3** LED

LED	Color	Status	Description
PWR	Green	On	When the 2-port VoIP Gateway is powered on
		Off	No power supply
WAN	Green	Blinking	When data is being transmitted or received
		On	When ADSL connection is established
		Off	When there is no ADSL connection
ENET	Green	Blinking	When data is being transmitted or received
		On	When Ethernet connection is established
		Off	When there is no Ethernet connection
VoIP	Green	On	When VoIP telephone service is ready
		Off	When VoIP telephone service is not ready
LINE1 & LINE2	Green	Blinking	When there is an incoming call (the telephone is ringing)
		On	When the telephone is in use
		Off	Switches to PSTN back-up line

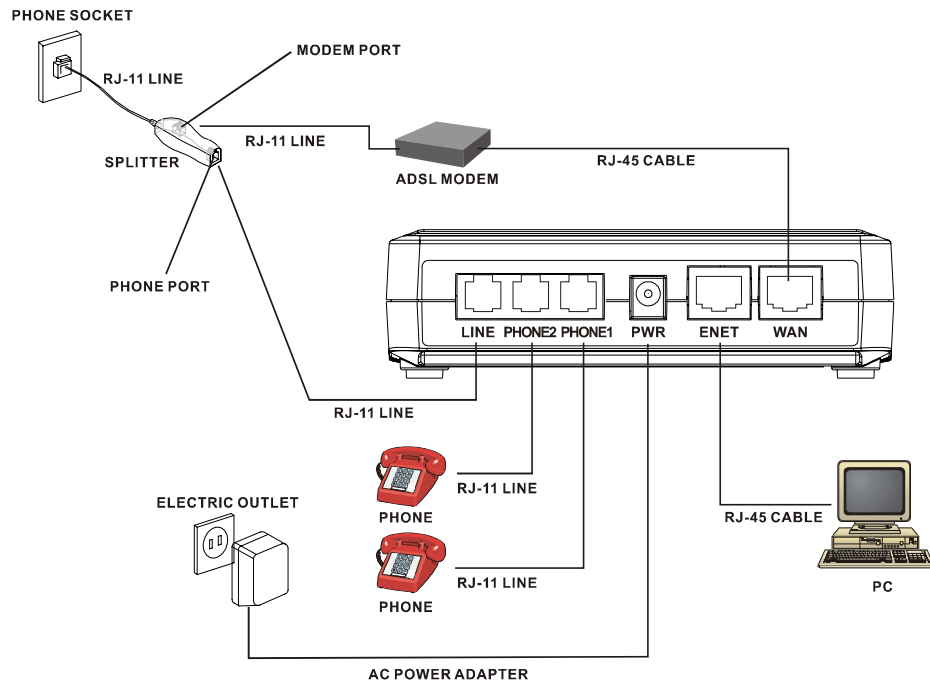
**Figure 3** Rear Panel of 2-Port VoIP Gateway



- LINE: RJ-11 connector, connected to PSTN back-up line
- PHONE1 & PHON2: RJ-11 connectors, connected to IP telephones
- PWR: Power connector, connected to the power adapter packaged with the VoIP Gateway

- **ENET:** Ethernet RJ-45 connector, connected to PC using a RJ-45 Ethernet cable
- **WAN:** Ethernet RJ-45 connector, connected to WAN access device, such as the cable modem or ADSL modem

## Installation Procedure **Figure 4** Installation Diagram



- 1 LINE:** Plug one end of the RJ-11 telephone line into the LINE port and plug the other end into the phone port of the splitter. Then connect the splitter to the phone socket in the wall using a RJ-11 telephone line. The LINE port is for back-up use. The telephone is using VoIP service by default. However, if the 2-port VoIP Gateway loses WAN connection or the VoIP function is not available, the 2-port VoIP Gateway will make the telephone to use PSTN (Public Switched Telephone Network) service.
- 2 PHONE1 & PHONE2:** Plug one end of the RJ-11 telephone line into the PHONE1 or PHONE2 port and plug the other end into the phone socket on a telephone set.
- 3 PWR:** Plug one end of the power adapter into the PWR port and plug the other end into an electric outlet in the wall.
- 4 ENET:** Plug one end of the RJ-45 Ethernet cable into the ENET port and plug the other end into the Ethernet socket of NIC on your PC.
- 5 WAN:** Plug one end of the RJ-45 Ethernet cable into the WAN port and plug the other end into the Ethernet port of the Internet service device, such as the cable modem or ADSL modem. Then connect the cable modem or ADSL modem to the modem port of the splitter using a RJ-11 telephone line.



# TECHNICAL SPECIFICATION

**Table 4** Technical Specifications

Item	Specifications
MANAGEMENT AND PROVISIONING	<p>Automatic System firmware/Configuration download via TFTP/HTTP servers</p> <p>Authentication based on user name, password and login ID</p> <p>Flexibility to use TFTP only, HTTP only or both TFTP/HTTP</p> <p>Configurable TFTP/ HTTP priority order selection</p> <p>TFTP port enable/disable, TFTP port hunting up to 3 ports</p> <p>Configurable TFTP/HTTP feature with enable/disable flags</p> <p>URL based entry for TFTP/HTTP provisioning</p> <p>3 Optional config for provisioning</p> <p>Encryption utility available for Config file for download</p> <p>Auto sensing of TFTP port and disable download function, if Port unavailable</p> <p>2 Logins for Maintenance with Online debug capability with 4 debug levels</p> <p>System Telnet and CLI interface for maintenance operations</p> <p>EMS (Element Management System) support based on SNMP traps</p> <p>Reset to factory default via digit map.</p> <p>Message Log on to Syslog server</p> <p>Enable/Disable WAN provisioning</p>

**Table 4** Technical Specifications

Item	Specifications
VOICE FEATURES	Call hold Configurable (*, #) feature codes Call transfer with/without consultation Call Waiting and per call Call-Waiting Blocking 3 Party Conference Call forward (Always, busy, no answer) DND (Do not disturb) VoIP Speed dial Per Port VoIP Digit Map PSTN Digit Map Configurable PSTN access code Configurable Tone definition Distinctive Ring Fax Caller Number/Name display Caller ID Blocking Per Call Caller ID Blocking Anonymous call rejection Repeat Dialing on busy with configurable timers MWI (Message Wait Indication) with Stutter dial tone support VMWI (Visual Message wait indication) Configurable Hook-flash timing and Jitter buffer values Configurable hold behavior using flash with/without feature code
DATA FEATURES	Configurable Device Mode (Gateway or Bridge) Advanced Routing function Static/Dynamic WAN-IP-Addressing Configurable DHCP range for LAN side MAC cloning, STUN and firewall capability NAT, Port forwarding, IP-Filtering and DMZ VPN Pass through NTP Server capability Fax (Transparent and Fax relay)
INTERFACES	
CUSTOMER SIDE	2 RJ11 FXS Ports, RJ45 connector (10/100Base-T Ethernet, IEEE 802.3)
NETWORK SIDE	1 RJ11 PSTN Port / RJ45 WAN Port / RJ45 LAN Port



**Table 4** Technical Specifications

Item	Specifications
LEDs	Ethernet LAN: 10/100M, Link/Activity WAN: 10/100M, Link/Activity VoIP Ready LINE1: Activity LINE2: Activity Power
<b>SUPPORTED SPECIFICATION AND APPLICATIONS</b>	
<b>DATA NETWORKING</b>	ARP Address Resolution Protocol MAC Address (IEEE 802.3) TCP (RFC 793), UDP (RFC 768) DHCP Client/Server (RFC 2131) IPV4 (RFC 791/RFC 1883) NAT (RFC 3022) STUN (RFC 3489) NTP (RFC 1305) ICMP (RFC 792) PPPoE (RFC-2516) MD5 (RFC 1321) Type of Service (TOS) (RFC 1349) DiffServ (RFC 2475) RTP (RFC 1889/1890), RTCP (RFC 1890) TFTP (RFC 1350), HTTP Client/Server (RFC 2131) Https factory installed certificate ITU-T T.30 Fax mode, ITU-T T.38 Fax Mode PPPoE (RFC 2516) ITU-T T.30 Fax Mode ITU-T T.38 Fax Mode
<b>CALL CONTROL / VOIP FEATURES</b>	SIP (RFC 3261), MGCP and H.323 SIP-Event (RFC-3265) SIP Proxy redundancy A-Records, DNS-SRV RTCP Attribute in SDP (RFC 3605) Wild-Card RSIP definition. Configurable End-Point-Styling. Heart Beat (MGCP) functionality for Call Agents. Disable/Enable Registrar RTP/RTCP (RFC 3550) RTP Payload for DTMF Digits, Telephony Tones and Signals (RFC 2833) Tone Generation (GR-506) and Custom definable. Call ID (Bell Core GR-30, DTMF)

**Table 4** Technical Specifications

<b>Item</b>	<b>Specifications</b>
VOICE ALGORITHMS	G.711 (A-law or mLaw), G.723.1 (6.3 kbps, 5.3 kbps) G.726 (16/24/32/40 kbps), G.729 a/b Line Echo Cancellation [32ms (min) ~ 128ms (max)] Adaptive Jitter Buffer (Up to 90ms jitter) Asymmetrical Codes (Allows upstream and downstream to use different codecs) AGC (Auto Gain Control), AEC (Auto Echo Cancellation) Voice Activity Detection (VAD) and Comfort Noise (CNG) Echo Cancellation G.165/G.168 and Attenuation and Gain Adjustment
SLIC SPECIFICATION	Signaling: Loop Start and Polarity Reversal Ringing source: Internal, 5 REN (Indoor Loops) Loop current: 20 mA
UNIVERSAL POWER ADAPTER	AC adapter: 12 VDC (120 VAC / 60 Hz or 220 VAC / 50 Hz input) Power consumption: 6.0 watts (typical)
UNIT DIMENSIONS	W x D x H: 190mm x 130mm x 30mm Mounting Horizontal or Vertical
WEIGHT	1.9 lbs (Approx.)
ENVIRONMENTAL	
Operating (System Ambient)	0° C to 40° C - 197 to 7000 feet
Humidity	8% to 95% non-condensing
Shipping & Storage	-25° C to 65° C, Low humidity for Low temperatures, 90% at 45° C and 30% at 65° C
REGULATORY COMPLIANCE	CE, FCC part 15 Class B, UL certified

# 4

## CONFIGURING TCP/IP PROTOCOL

The iAN-02EX ATA has two modes of operation to communicate from a PC to the iAN-02EX ATA:

- [Gateway Mode](#)
- [Bridge Mode](#)

The factory default mode is Gateway mode. After the PC is properly configured, the ATA can be accessed with the procedures listed in [Web Browser](#).

---

### Gateway Mode

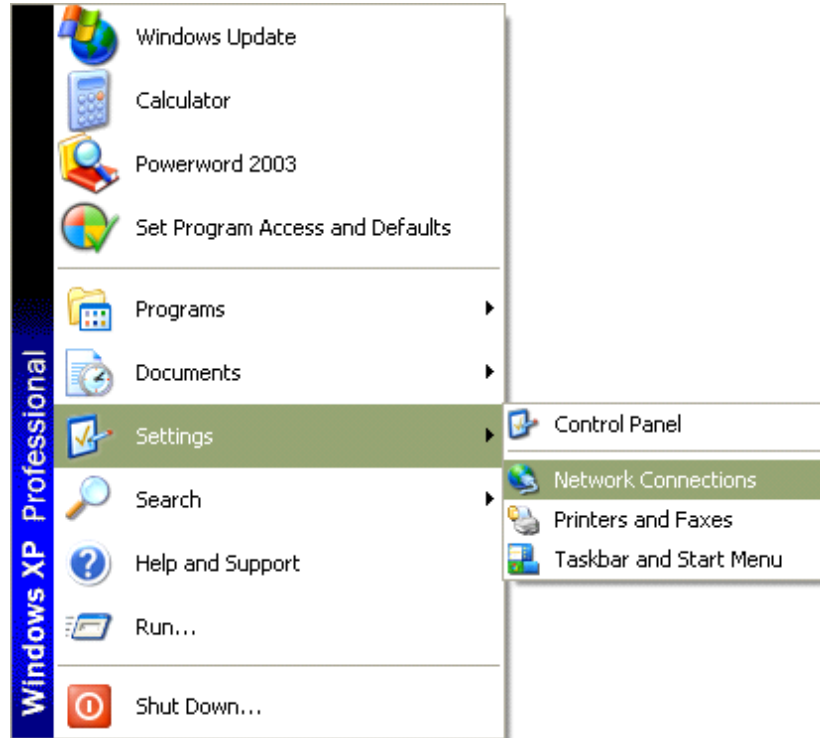
To communicate and configure iAN-02EX, the PC on your LAN must install TCP/IP protocol. Make sure that the TCP/IP protocol of the PC is configured for **Obtain IP address from DHCP** and is connected to the **ENET** (Ethernet) port of the ATA. In doing so the PC obtains an IP address of 172.25.25.2 from the iAN-02EX.

The iAN-02EX assumes an IP address of 172.25.25.1 without network connectivity. This IP address is used for communicating with the iAN-02EX via the Web UI or Telnet, with the PC connected to the ENET port.

The iAN-02EX assumes a DHCP IP address on the WAN side if connected to the network. In this case user can communicate with the same IP address 172.25.25.1 with PC connected to the ENET port. PC in the network can communicate with the DHCP IP address allocated to iAN-02EX.

Following the procedures below to configure TCP/IP protocol for Windows 2000 or Windows XP operating system.

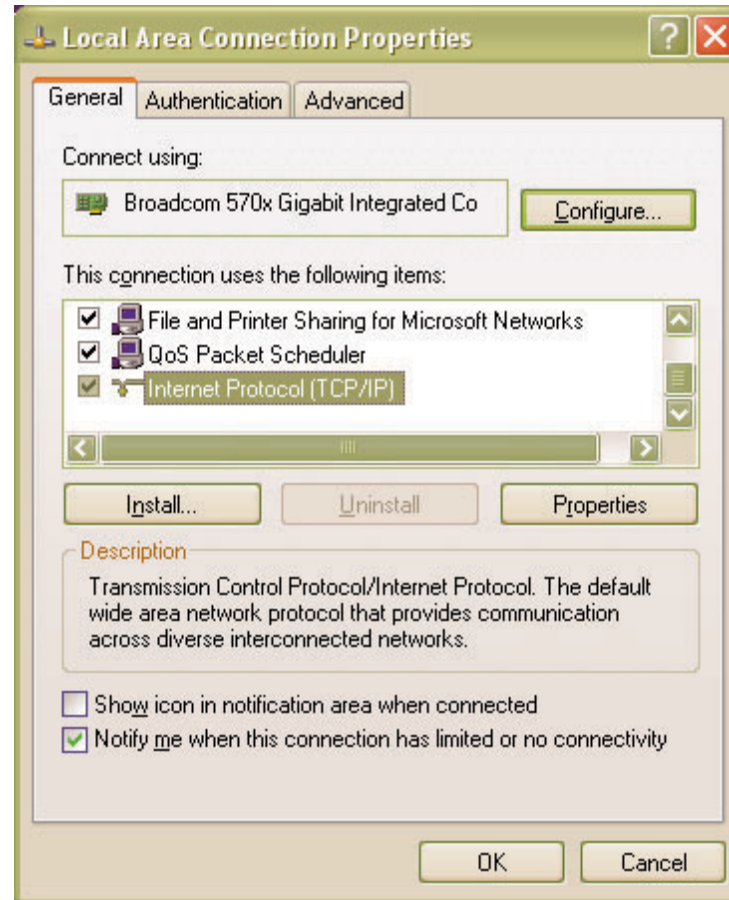
- 1 From the **Start** menu, click **Settings** and then select **Network Connections**.

**Figure 5** Settings - Network Connections - Gateway Mode

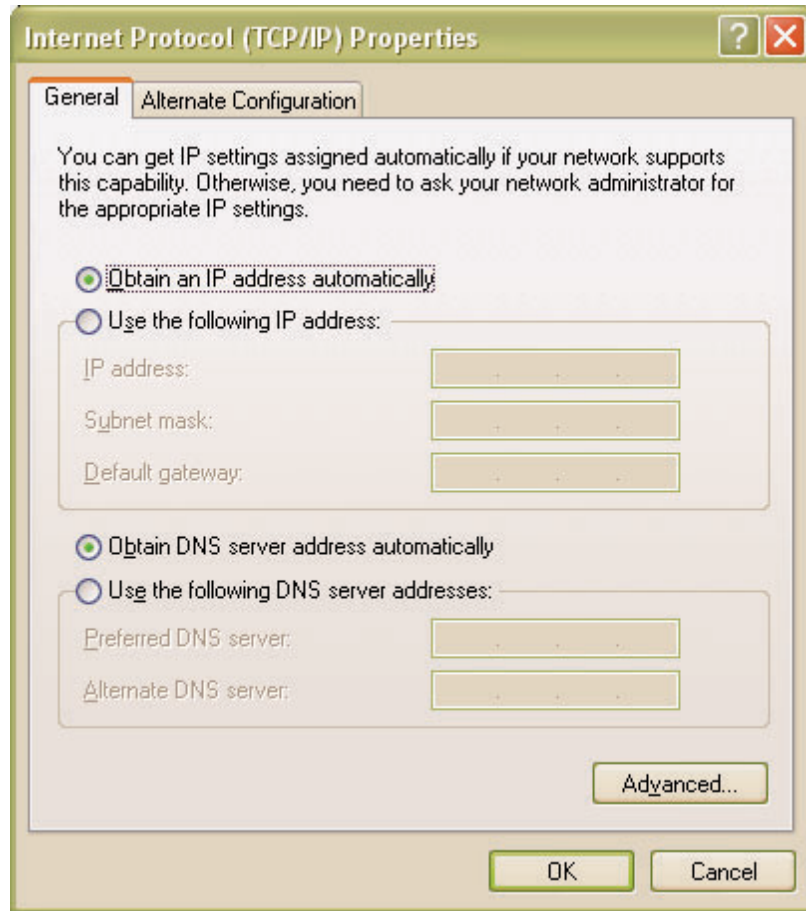
2 Right click **Local Area Connection** and select **Properties**.

**Figure 6** Local Area Connection - Properties - Gateway Mode

3 Select **Internet Protocol (TCP/IP)** and then click **Properties** in [Figure 7](#).

**Figure 7** Local Area Connection Properties - Gateway Mode

- 4 Select the radio button for **Obtain an IP address automatically** in [Figure 8](#) and click **OK** to return to [Figure 7](#). Click **OK** to exit.

**Figure 8** Internet Protocol (TCP/IP) Properties - Gateway Mode

The Configuration for Windows 2000/XP is now completed. Refer to [Web Browser](#) for configuration procedures via web browser.

## Bridge Mode

To communicate and configure iAN-02EX, the PC on your LAN must install TCP/IP protocol. Make sure that the PC is configured with static IP address of 172.25.25.100 and is connected to the **ENET** (Ethernet) port of the ATA. Ensure that the WAN port is not connected.

The iAN-02EX assumes an IP address of 172.25.25.1 without network connectivity. This IP address is used for communicating with the iAN-02EX via the Web UI or Telnet, with the PC connected to the ENET port.

The iAN-02EX assumes a DHCP IP address on the WAN side if connected to the network. In the Bridge mode, the PC that connects to the ENET port also is allocated a DHCP IP address. In this case user can communicate with the PC in the network or PC connected to the ENET port using the DHCP IP allocated to the user.

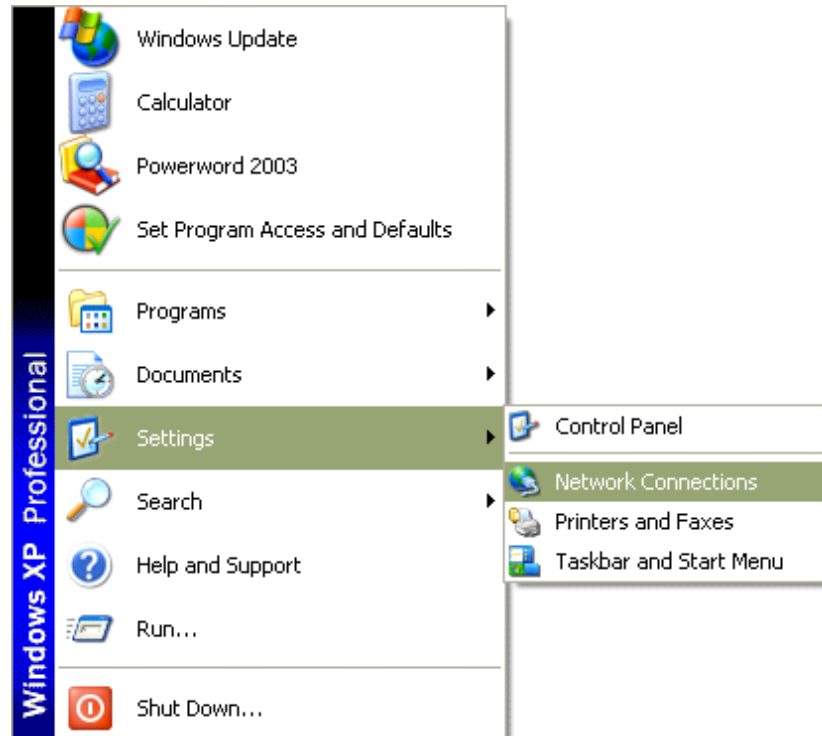


*Note: the ISP normally has to provide 2 IP addresses, one for the ATA and one for the PC connected to the LAN port.*

Following the procedures below to configure TCP/IP protocol for Windows 2000 or Windows XP operating system.

- 1 From the **Start** menu, click **Settings** and then select **Network Connections**.

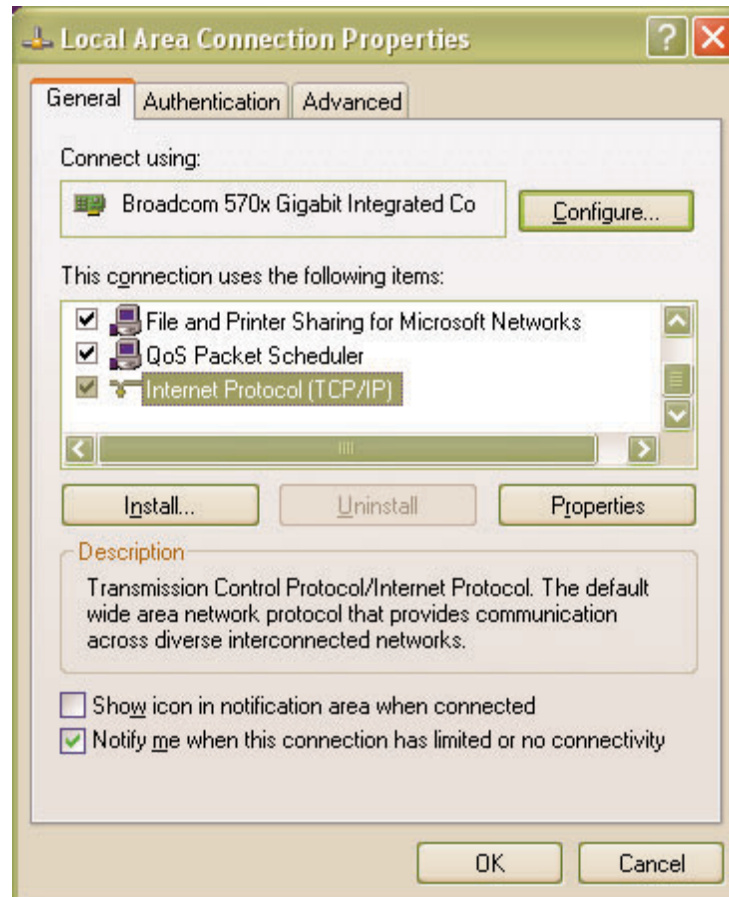
**Figure 9** Settings - Network Connections - Bridge Mode



- 2 Right click **Local Area Connection** and select **Properties**.

**Figure 10** Local Area Connection - Properties - Bridge Mode

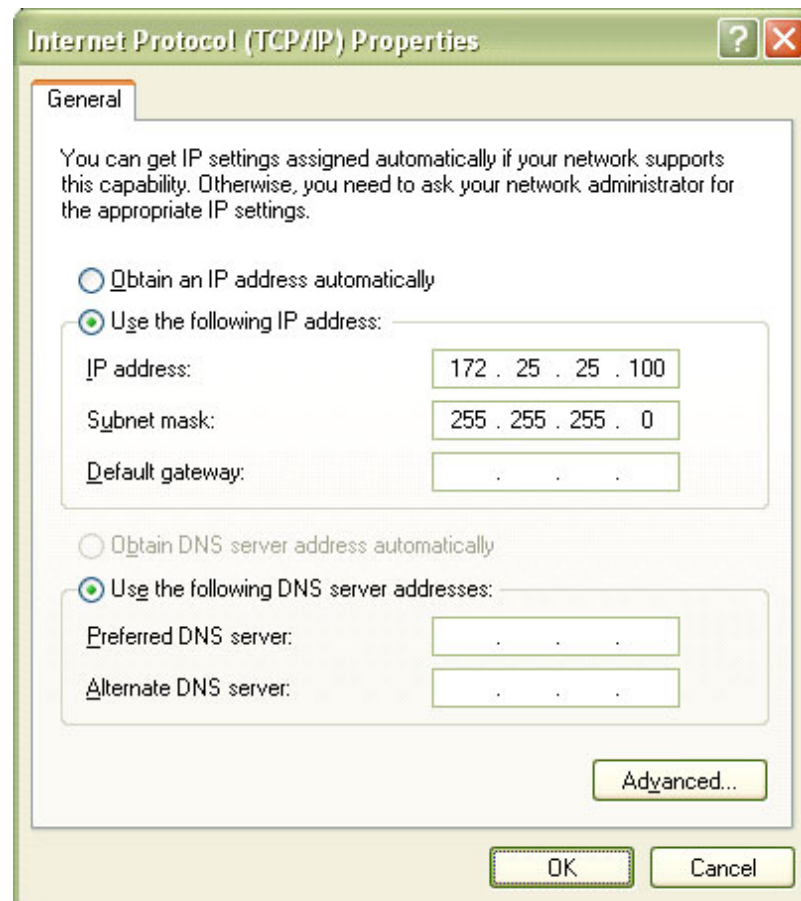
- 3 Select Internet Protocol (TCP/IP) and then click **Properties** in [Figure 11](#).

**Figure 11** Local Area Connection Properties - Bridge Mode



- 4 Select the radio button for Using the following IP address in [Figure 12](#). Set IP address as **172.25.25.100** and set Subnet mask as **255.255.255.0**. Click **OK** to confirm the settings and return to [Figure 11](#). Click **OK** again to exit.

**Figure 12** Internet Protocol (TCP/IP) Properties - Bridge Mode



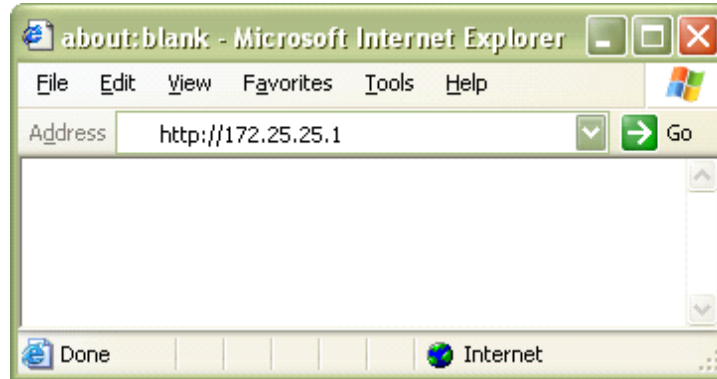
The Configuration for Windows 2000/XP is now completed. Refer to [Web Browser](#) for configuration procedures via web browser.

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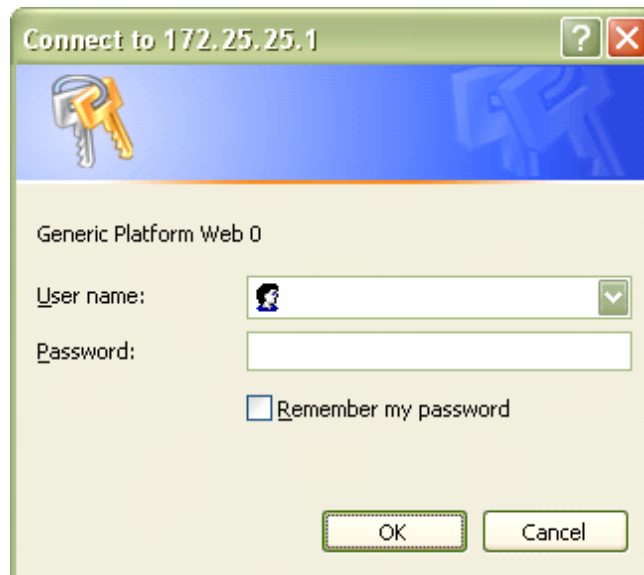
## Web Browser

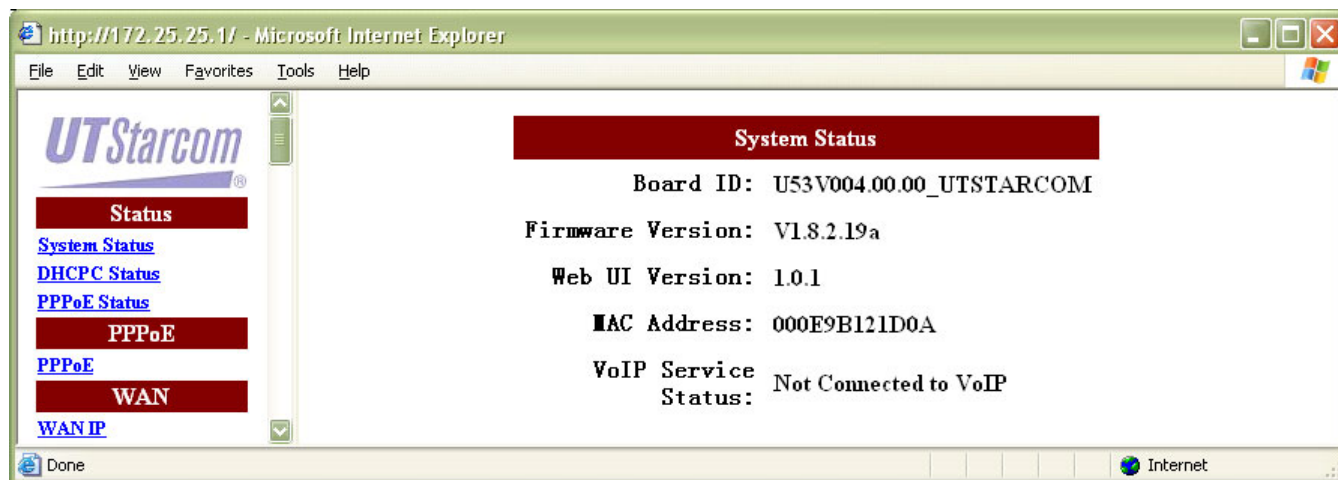
Once the TCP/IP of the PC is properly configured, please proceed the following steps:

- 1 Start a web browser window.
- 2 Enter the default IP address, **172.25.25.1**, of this device in the address box to access the web configuration menu.

**Figure 13** Starting Web Browser Window - Gateway Mode

- 3 [Figure 14](#) prompts for user name and password. The web configuration menu provides two operation modes: user mode and supervisor mode. For user mode, enter the predefined user name as **user** and password as **12345**. For the supervisor mode, enter the predefined user name as **supervisor** and password as **utstar**. Click OK to access the configuration as shown in [Figure 15](#).

**Figure 14** User Name / Password Window - Gateway Mode

**Figure 15** Web Configuration Main Menu - Gateway Mode

Refer to [Chapter 5 - Configuration](#) for more details of web configuration operations.



# 5

## CONFIGURATION

iAN-02EX Gateway implements a Web server allowing user configure this device via the Web interface. This Interface provides comprehensive system management scheme, including system configuration, performance monitoring, system maintenance and administration. Refer to [Table 5](#) for the features and functions available to "Supervisor" vs. "User" privileges.

**Table 5** Feature Lists

Features	Functions	User Level	Supervisor Level
<a href="#">Status</a>	<a href="#">System Status</a>	V	V
	<a href="#">WAN Status</a>	V	
	<a href="#">DHCP Status</a>	V	V
	<a href="#">PPPoE Status</a>	V	V
<a href="#">PPPoE</a>	<a href="#">PPPoE</a>	V	V
<a href="#">WAN</a>	<a href="#">WAN IP</a>	V	V
	<a href="#">Device Mode</a>	V	V
	<a href="#">MTU Rate</a>		V
<a href="#">DOS</a>	<a href="#">Denial of Service</a>		V
<a href="#">NTP</a>	<a href="#">NTP</a>		V
<a href="#">Gateway Mode Settings</a>	<a href="#">LAN Configuration</a>	V	V
	<a href="#">Port Forwarding</a>	V	V
	<a href="#">IP Filter</a>	V	V
	<a href="#">DMZ</a>	V	V
<a href="#">QoS</a>	<a href="#">QoS Configuration</a>		V
	<a href="#">DSCP</a>		V
	<a href="#">VLAN Tag</a>		V
<a href="#">Mac Cloning</a>	<a href="#">Mac Cloning</a>	V	V
<a href="#">PSTN</a>	<a href="#">Switch Key</a>	V	V
	<a href="#">Digit Map</a>	V	V
<a href="#">Provision</a>	<a href="#">Provision</a>		V
<a href="#">Syslog</a>	<a href="#">Syslog</a>		V
<a href="#">Element Management System (EMS)</a>	<a href="#">EMS</a>		V
	<a href="#">SNMP Community</a>		V
	<a href="#">SNMP Trap Target</a>		V

**Table 5** Feature Lists

Features	Functions	User Level	Supervisor Level
<a href="#">VoIP</a>	<a href="#">Protocol</a>		V
	<a href="#">MGCP</a>		V
	<a href="#">User</a>		V
	<a href="#">SIP</a>		V
	<a href="#">Audio Config</a>		V
	<a href="#">RTP</a>		V
	<a href="#">Tone</a>		V
	<a href="#">FAX</a>		V
	<a href="#">STUN</a>		V
	<a href="#">Speed Dial</a>	V	V
	<a href="#">Call Features</a>		V
	<a href="#">Digit Map</a>		V
	<a href="#">Hook Flash</a>		V
	<a href="#">Jitter Buffer</a>		V
<a href="#">Password</a>	<a href="#">Supervisor Password</a>		V
	<a href="#">User Password</a>	V	V
<a href="#">Upgrade</a>	<a href="#">Firmware</a>		V
	<a href="#">Configuration</a>		V
<a href="#">View</a>	<a href="#">Configuration</a>		V
<a href="#">Save</a>	<a href="#">Save Configuration</a>	V	V
	<a href="#">Load Default Settings</a>		V
	<a href="#">Load Default Settings using FXS Ports</a>		V
	<a href="#">Load Default Keypad</a>		V
<a href="#">Reboot</a>	<a href="#">Reboot</a>	V	V

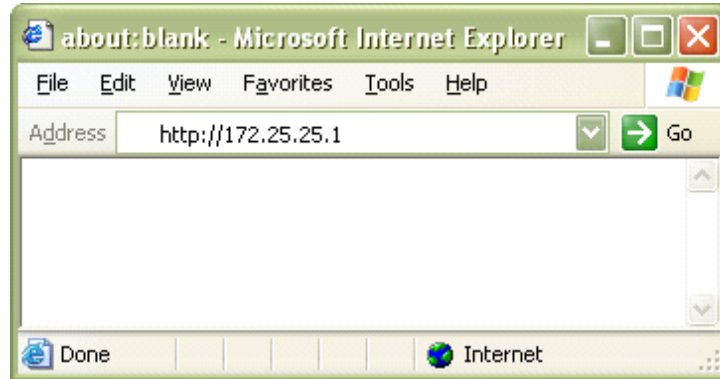


*Note: Unless otherwise noted, this chapter uses Gateway Mode with Supervisor level in all examples. Please note that some sections may not apply to Bridge Mode or User level login.*

## Configuring via Web Browser

Once the TCP/IP of the PC is properly configured, please proceed the following steps:

- 1 Start a web browser window.
- 2 For Gateway mode, enter the default IP address of 172.25.25.1 to access the web configuration menu. For Bridge Mode, enter the default IP address of 172.25.25.1.

**Figure 16** Starting Web Browser Window - Gateway Mode

- 3 [Figure 17](#) prompts for user name and password. The web configuration menu provides two operation modes: user mode and supervisor mode. For user mode, enter the predefined user name as **user** with password as **12345**. For the supervisor mode, enter the predefined user name as **supervisor** with password as **utstar**. Click **OK** to access the configuration as shown in [Figure 18](#).

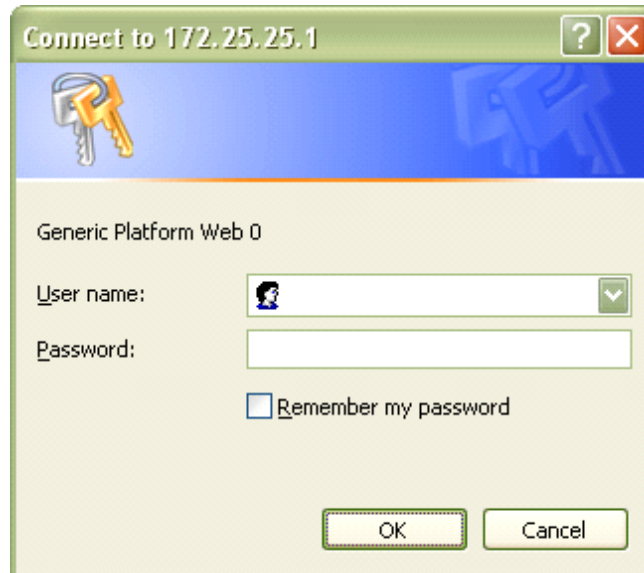
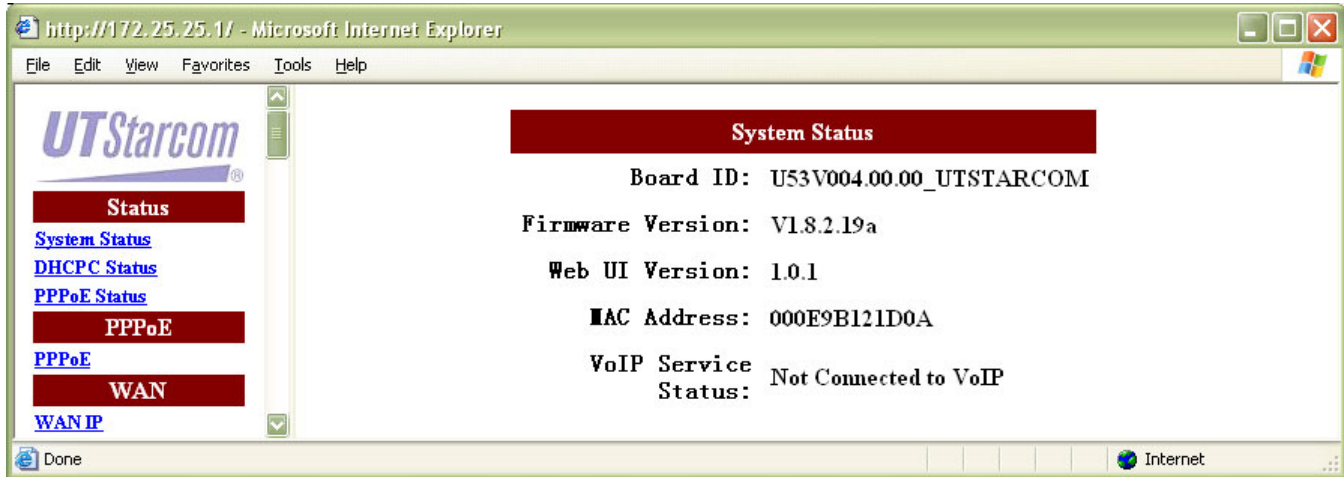
**Figure 17** User Name / Password Window - Gateway Mode

Figure 18 Web Configuration Main Menu - Gateway Mode



*Note: Click **OK** on any page to apply the modification. Navigating to another page without clicking **OK** does not save any modifications and the configuration are ignored. After making all necessary settings, you **MUST Save** the configurations and then **Reboot** for the new settings to take effect. Refer to [Save](#) and [Reboot](#) for more information.*

## Status

The Status provision contains the following sections:

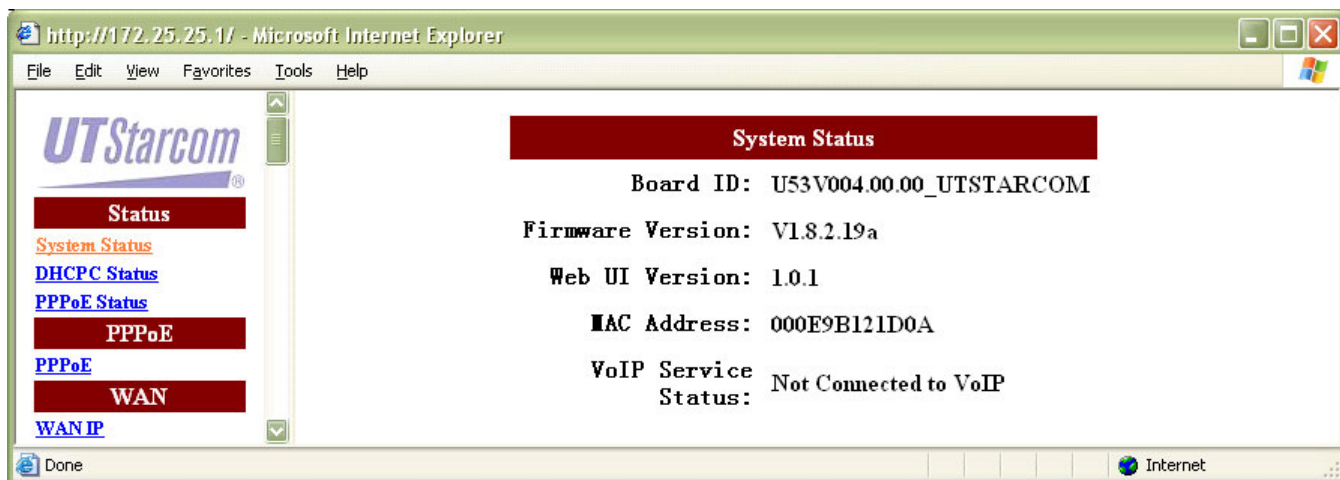
- [System Status](#)
- [WAN Status](#)
- [DHCPC Status](#)
- [PPPoE Status](#)

### System Status

Click **System Status** in the **Status** section. [Figure 19](#) prompts for current system status. Refer to [Table 6](#) for more information of the parameters.



**Figure 19** Status - System Status



**Table 6** Status - System Status Field Description

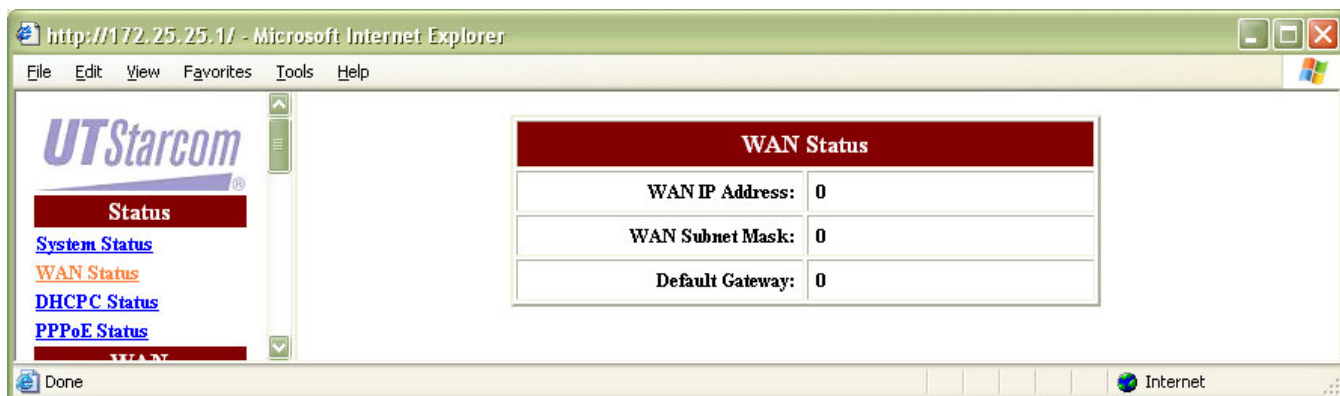
Field	Description
Board ID	The ID number of this module
Firmware Version	The current firmware version number
Web GUI Version	The current Web UI version number
MAC Address	The unique hardware number of this module
VoIP Service Status	The current VoIP connection status
	Value range: Connected to VoIP / Not Connected to VoIP.

**WAN Status** Click **WAN Status** in the **Status** section. [Figure 20](#) prompts for current WAN status. Refer to [Table 7](#) for more information of the parameters.



*Note: This section is applicable for User mode only. It is not applicable for Supervisor mode.*

**Figure 20** Status - WAN Status



**Table 7** Status - WAN Status Field Description

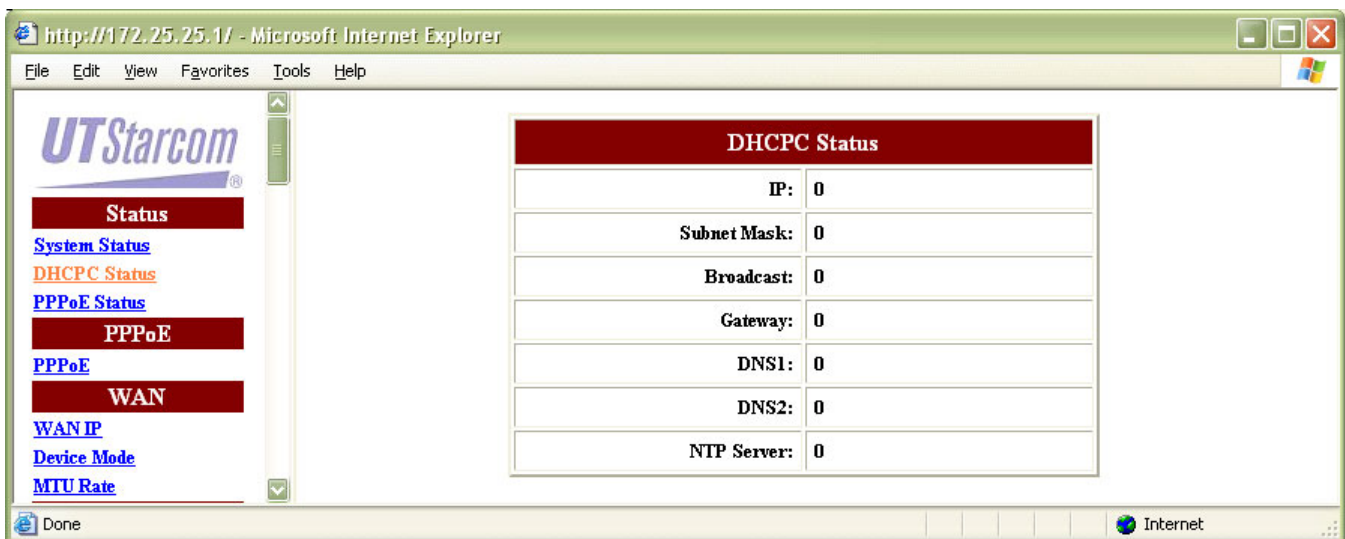
Field	Description
WAN IP Address	The IP address of the WAN
WAN Subnet Mask	The subnet mask of the WAN
Default Gateway	The gateway address of the WAN



*Note: The parameters contain meaningful data only when static IP address scheme is used for WAN connection. All parameters are 0 or null when static IP is not used. Refer to [WAN IP](#) for WAN connection mode configuration.*

**DHCP Status**

Click **DHCP Status** in the **Status** section. [Figure 21](#) prompts for current DHCP status. Refer to [Table 8](#) for more information of the parameters.

**Figure 21** Status - DHCP Status**Table 8** Status - DHCP Status Field Description

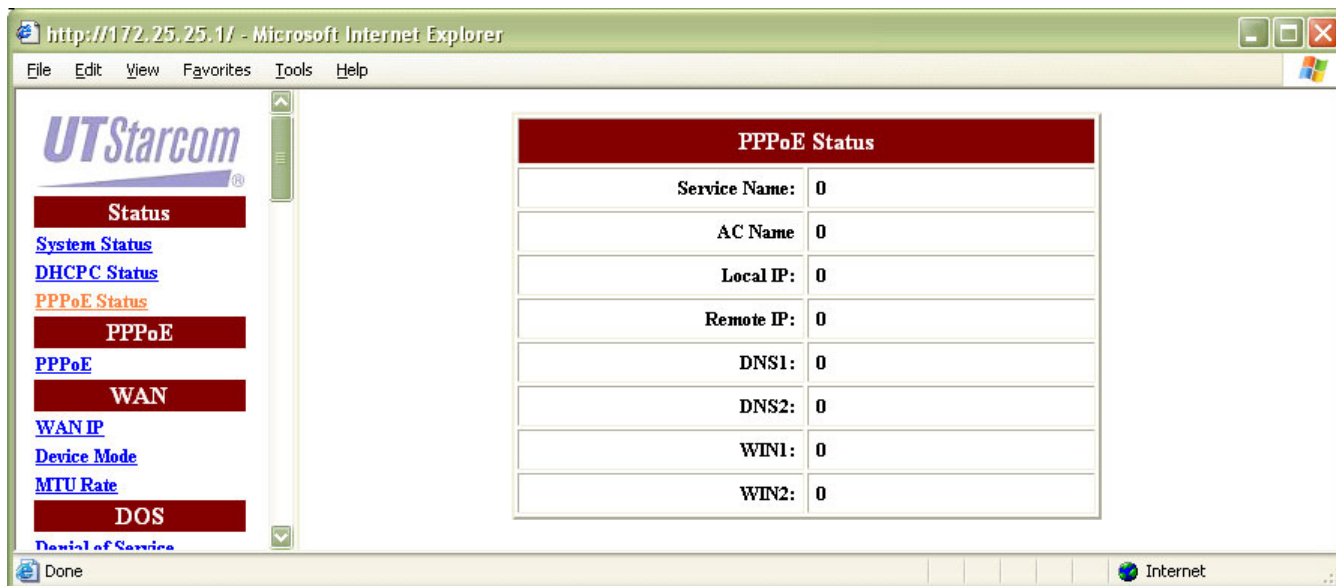
Field	Description
IP	The IP address of the iAN-02EX VoIP gateway
Subnet Mask	The subnet mask of the iAN-02EX VoIP gateway
Broadcast	The DHCP broadcast address
Gateway	The gateway address of the iAN-02EX VoIP gateway
DNS1	The IP address of domain name server 1
DNS2	The IP address of domain name server 2
NTP Server	The IP address of network time protocol server



*Note: The parameters contain meaningful data only when DHCP scheme is used for WAN connection. All parameters are 0 or null when DHCP is not used. Refer to [WAN IP](#) for WAN connection mode configuration.*

**PPPoE Status** Click **PPPoE Status** in the **Status** section. [Figure 22](#) prompts for current PPPoE status. Refer to [Table 9](#) for more information of the parameters.

**Figure 22** Status - PPPoE Status



**Table 9** Status - PPPoE Status Field Description

Field	Description
Service Name	The service group name
AC Name	Specific server account details
Local IP	The Client IP address
Remote IP	The Server IP address
DNS1	The IP address of domain name server 1
DNS2	The IP address of domain name server 2
WIN1	The IP address of WIN Server 1
WIN2	The IP address of WIN Server 2



*Note: The parameters contain meaningful data only when PPPoE scheme is used for WAN connection. All parameters are 0 or null when PPPoE is not used. Refer to [WAN IP](#) for WAN connection mode configuration.*

## PPPoE

**PPPoE** A valid pair of user name and password is required when PPPoE mode is selected for obtaining the WAN IP address for the iAN-02EX VoIP gateway.

Click **PPPoE** in the **PPPoE** section. [Figure 23](#) prompts for current PPPoE status. Refer to [Table 10](#) for more information of the parameters.

Figure 23 PPPoE - PPPoE

Table 10 PPPoE - PPPoE Field Description

Field	Description
Username	User name for PPPoE registration recognized by the Internet service provider
Password	Password for PPPoE registration recognized by the Internet service provider

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: Refer to [WAN IP](#) for PPPoE mode configuration and refer to [PPPoE Status](#) for PPPoE status.*

## WAN

The WAN port is the connection of the iAN-02EX module to the existing broadband device such as cable modem or ADSL CPE. The WAN provision contains the following sections:

- [WAN IP](#)
- [Device Mode](#)
- [MTU Rate](#)

**WAN IP** iAN-02EX supports three methods of obtaining the WAN IP address; static, DHCP or PPPoE. Click **WAN IP** in the **WAN** section. [Figure 24](#) prompts for configuration. Refer to [Table 11](#) for more information of the parameters.

Figure 24 WAN - WAN IP

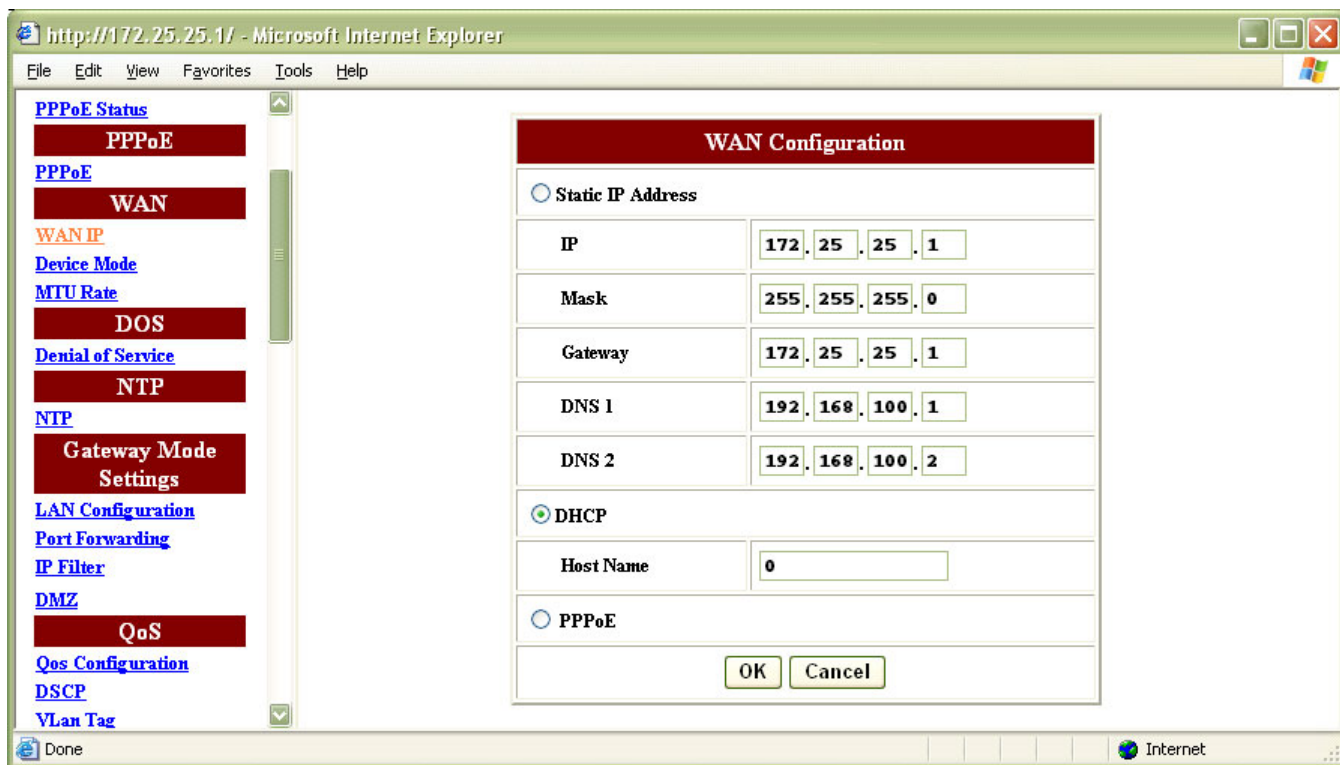


Table 11 WAN - WAN IP Field Description

Field	Description
Static IP Address	To configure a static IP address.
IP	The static IP address of the iAN-02EX VoIP gateway Default: 171.25.25.1
Mask	The subnet mask of the iAN-02EX VoIP gateway Default: 255.255.255.0
Gateway	The network gateway address of the iAN-02EX VoIP gateway Default: 172.25.25.1
DNS 1	The IP address of domain name server 1. Default: 192.168.100.1
DNS 2	The IP address of domain name server 2. Default: 192.168.100.2
DHCP	To obtain an IP address through DHCP. Default connection mode.
Host Name	The name of the DHCP host. Default: 0
PPPoE	To obtain an IP address through PPPoE.

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: Refer to [DHCP Status](#) for PPPoE status.*

### Device Mode

iAN-02EX has two operational modes: Bridge mode and Gateway mode. With bridge mode, iAN-02EX acts as a transparent bridge to pass traffic between the module and an end-user device. The WAN port and the LAN (ENET) port share the same IP address. With gateway mode, iAN-02EX acts as a NAT device and so that a group of users can use a private IP address in a LAN environment. The WAN port and the LAN (ENET) port have distinct IP addresses.

Click **Device Mode** in the **WAN** section. [Figure 25](#) prompts for configuration. Refer to [Table 12](#) for more information of the parameters.

**Figure 25** WAN - Device Mode



**Table 12** WAN - Device Mode Field Description

Field	Description
Bridge	The LAN port (ENET) is bridged to the WAN Port. NAT function is disabled.
Gateway	NAT is applied between the LAN (ENET) and WAN Port. Default mode.

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

### MTU Rate

Click **MTU Rate** in the **WAN** section. [Figure 26](#) prompts for configuration. Refer to [Table 13](#) for more information of the parameters.

Figure 26 WAN - MTU Rate

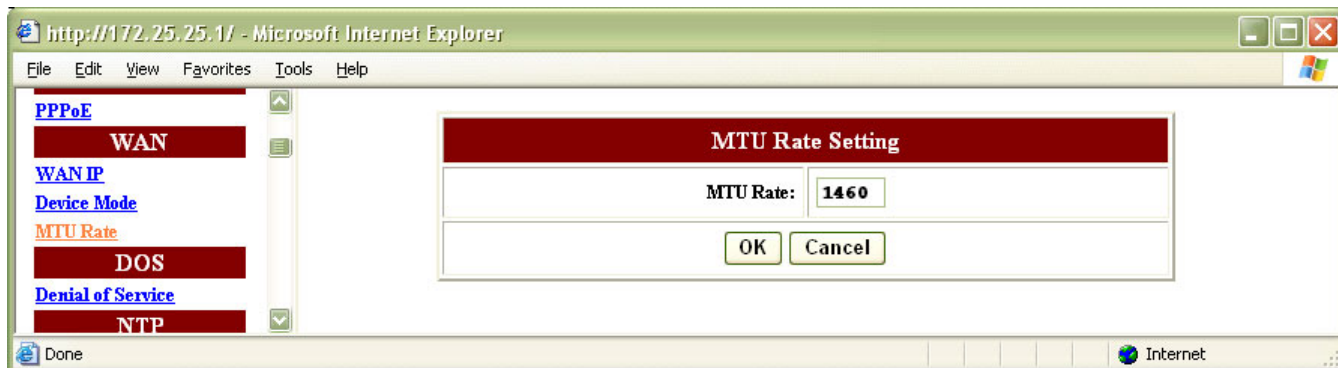


Table 13 WAN - MTU Rate Field Description

Field	Description
MTU Rate	Specify the network MTU rate Default: 1460

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

## DOS

DOS (Denial of service) provides access control for RTP packets, web/telnet provisioning, etc.

**Denial of Service** Click **Denial of Service** in the **DOS** section. [Figure 27](#) prompts for configuration. Refer to [Table 14](#) for more information of the parameters.

Figure 27 DOS - Denial of Service



**Table 14** DOS - Denial of Service Field Description

Item	Description
RTP Source Check	Enable / disable RTP source checking. When enabled, RTP packets with source ip/port not presented in remote SDP are dropped.
Ping Reply	Enable / disable ping reply to ICMP request
Web Provisioning	Enable / disable web provisioning from WAN side. For Gateway mode only.
Telnet Provisioning	Enable / disable telnet provisioning from WAN side. For Gateway mode only.

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

---

## NTP

NTP (network time protocol) is a protocol that allows local computers to synchronize the clocks. When a NTP client initiates a time request exchange with the NTP server, the client can adjust its local clock to exactly match the clock at the server's computer. Accurate time information is critical for monitoring the device with system log.

The device will synchronize itself with an external NTP server automatically when one of the following conditions occurs:

- Rebooting the device
- The **Expires** time having run out

**NTP** Click **NTP** in the **NTP** section. [Figure 28](#) prompts for configuration. Refer to [Table 15](#) for more information of the parameters.



Figure 28 NTP - NTP

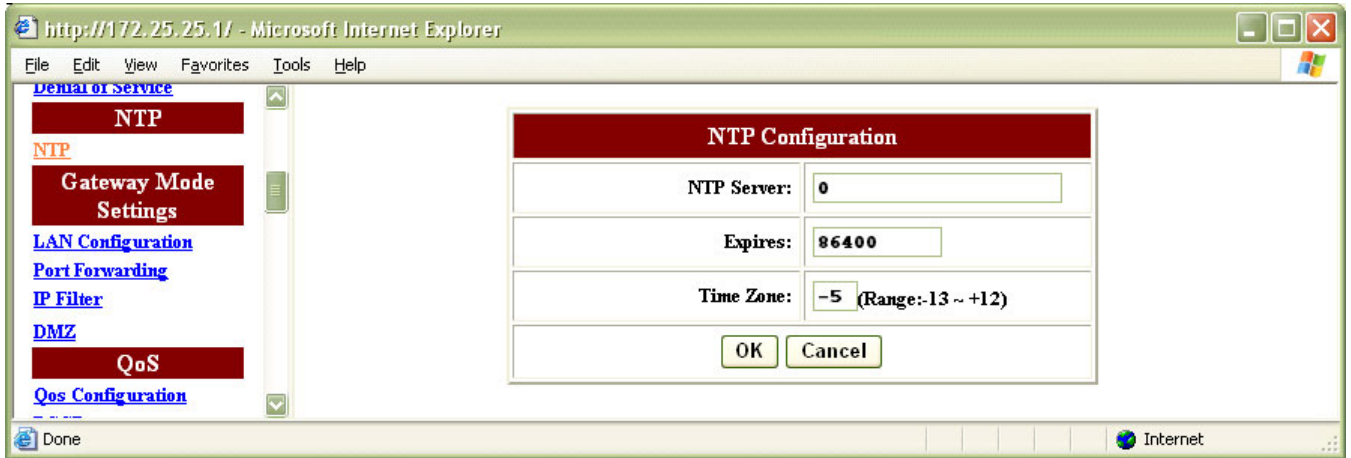


Table 15 NTP - NTP Field Description

Item	Description
NTP Server	The IP address of the network time protocol server.
Expires	The period that the VoIP gateway retrieves time from NTP server. Default: 86400 seconds
Time Zone	The time difference between the local time and GMT. Default: -5

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: The Time Zone does not adjust automatically to the North America daylight saving time. Adjust the value manually when needed. -4 is the time zone with daylight saving and -5 is without daylight saving. The value can also be modified through the configuration file.*

## Gateway Mode Settings

The Gateway Mode Settings provision contains the following sections:

- [LAN Configuration](#)
- [Port Forwarding](#)
- [IP Filter](#)
- [DMZ](#)



*Note: The functions described in this section apply only to Gateway mode. Refer to [Device Mode](#) for device mode configuration.*

## LAN Configuration

When the module operates in the Gateway mode, it supports the NAT (NAPT) feature. It means the WAN and LAN interfaces are located in different network segments and therefore the data traffic needs to be routed between the two interfaces.

To properly communicate with iAN-02EX, an IP address must also be assigned to the LAN port of the user's PC. There are 2 ways to assign a proper IP address to the user PC's LAN port:

- Manual configuration of the user PC: This is required if the user configures the iAN-02EX WAN port with a static IP address as described in [WAN IP](#).
- Dynamic IP assignment with DHCP: iAN-02EX can act as a DHCP server which dynamically assigns an IP address to user's PC located in the LAN-side network.

Click **LAN Configuration** in the **Gateway Mode Settings** section. [Figure 29](#) prompts for configuration. Refer to [Table 16](#) for more information of the parameters.

**Figure 29** Gateway Mode Settings - LAN Configuration

The screenshot shows the 'LAN IP Configuration' and 'DHCP Configuration' sections of the Gateway Mode Settings. The LAN IP Configuration section includes the following fields:

LAN IP:	172 . 25 . 25 . 1
LAN Mask:	255 . 255 . 255 . 0
LAN Gateway:	172 . 25 . 25 . 1

The DHCP Configuration section includes the following fields:

Status:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Mode:	<input checked="" type="radio"/> Auto <input type="radio"/> Manual
Pool Start IP:	172 . 25 . 25 . 2
Pool End IP:	172 . 25 . 25 . 21
Default Gateway:	172 . 25 . 25 . 1
DNS 1:	172 . 25 . 25 . 1
DNS 2:	0 . 0 . 0 . 0
Domain:	.com
Lease Time:	86400

Buttons: OK, Cancel

**Table 16** Gateway Mode Settings - LAN Configuration Field Description

Item	Description
LAN IP Configuration	
LAN IP	The LAN IP address Default: 172.25.25.1
LAN Netmask	The LAN netmask Default: 255.255.255.0
LAN Gateway	The LAN gateway IP address. Default: 172.25.25.1
DHCP Configuration	
Status	To enable/disable DHCP server's dynamic IP address assignment. Default: Enable
Mode	To automatically obtain or manually assign the DNS server address. Default: Auto
Pool Start IP	The starting IP address of the IP address pool. Default: 172.25.25.1
Pool End IP	The ending IP address of the IP address pool. Default: 172.25.25.21
Default Gateway	The default network gateway IP address. Default: 172.25.25.1
DNS 1	The IP address of domain name server 1. Configurable with Manual mode. Default: 172.25.25.1
DNS 2	The IP address of domain name server 2. Configurable with Manual mode. Default: 0.0.0.0
Domain	The domain name. Default: .com
Lease Time	The time duration for which the settings will be in effect. Default: 86400 seconds

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

### Port Forwarding

A NATP application creates a firewall between LAN and WAN. A firewall keeps unwanted traffic away from user computers in the LAN. A tunnel can be created through user firewall so that a distant server on the Internet can communicate with one of the user computers in the LAN via a single port.

Click **Port Forwarding** in the **Gateway Mode Settings** section. [Figure 30](#) prompts for configuration. Refer to [Table 17](#) for more information of the parameters.

**Figure 30** Gateway Mode Settings - Port Forwarding



**Table 17** Gateway Mode Settings - Port Forwarding Field Description

Field	Description
Forwarding Rule	
tcp / udp / both	Forward the packets based on tcp, udp or both
Forward Port	The port number of the tcp or udp packets the user wants to check against with the configured rules.
To Private IP	The IP Address of the user's PC on the LAN-side network where packets of matching criteria will be forwarded to.
ID	The ID of the port-forwarding rule from the rule table.
Rule Table	
ID	A unique ID number assigned by the system.
Type	NAPT Port Forwarding
Public IP	The originating IP address to be forwarded from.
Private IP	The destination IP address to be forwarded to
Forward Port	The originating port to be forwarded from.

Configure the parameters accordingly and click **Add** to create a new entry. Click **Refresh** to obtain the latest configuration information.

Enter the corresponding ID number listed in the table and click **Delete** to remove the entry.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



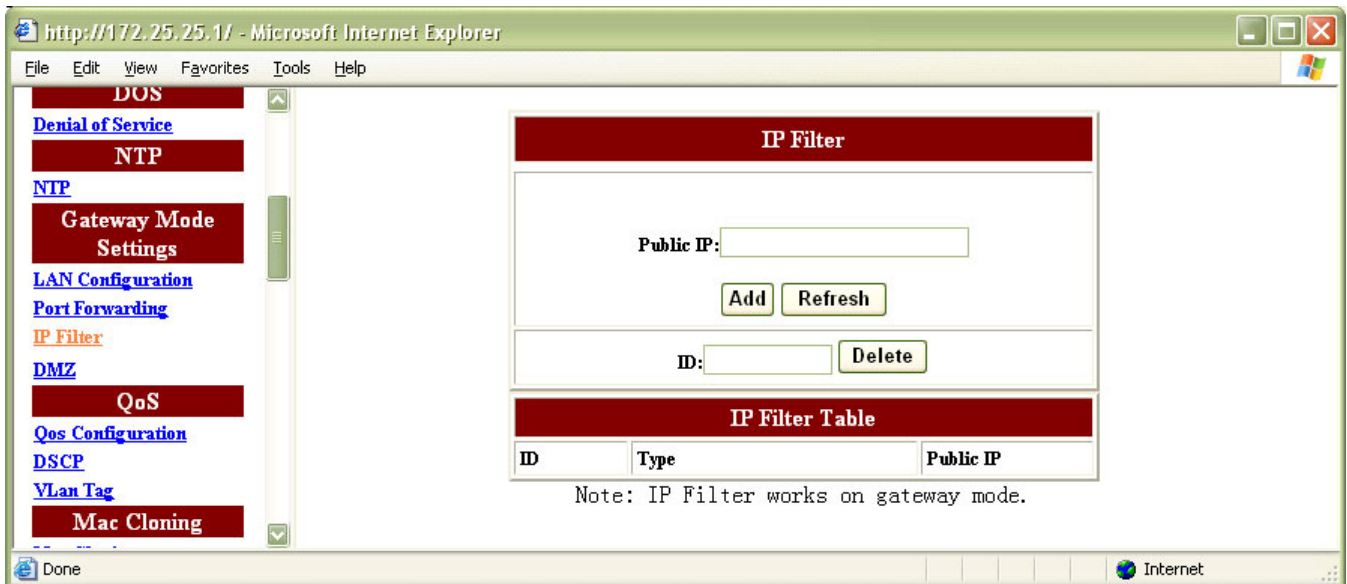
*Note: Rule ID # 10 is a module default entry. Do not delete this entry.*

## IP Filter

iAN-02EX provides the option to block access from the IP addresses specified in the IP filter.

Click **IP Filter** in the **Gateway Mode Settings** section. [Figure 31](#) prompts for configuration. Refer to [Table 18](#) for more information of the parameters.

**Figure 31** Gateway Mode Settings - IP Filter



**Table 18** Gateway Mode Settings - IP Filter Field Description

Field	Description
IP Filter	
Public IP	The public IP address to be blocked.
ID	The ID of the filter rule from the IP filter table.
IP Filter Table	
ID	A unique ID number assigned by the system.
Type	IP filter.
Public IP	The public IP address to be blocked.

Configure the parameters accordingly and click **Add** to create a new entry. Click **Refresh** to obtain the latest configuration information.

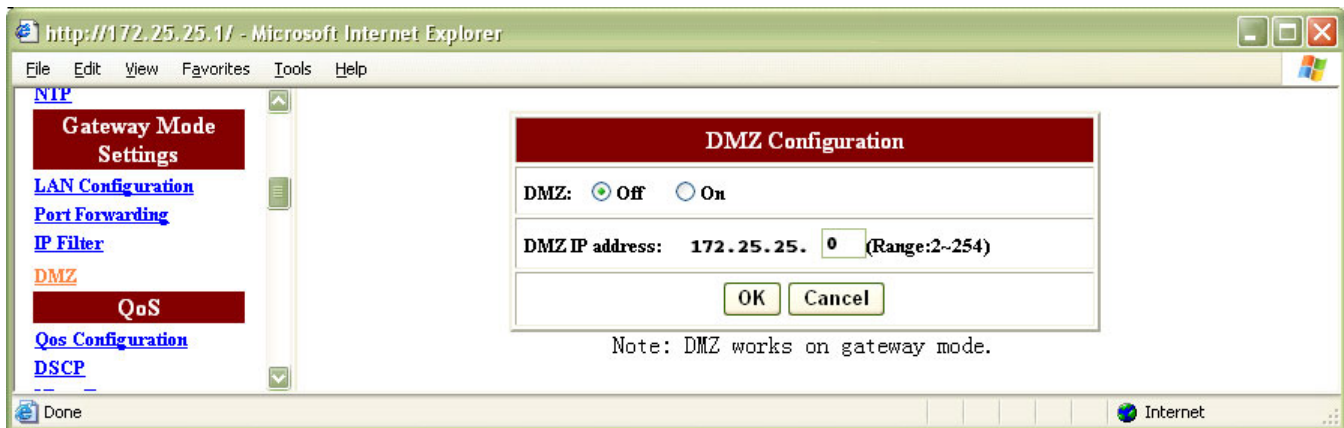
Enter the corresponding ID number listed in the table and click **Delete** to remove the entry.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**DMZ** DMZ (De-Militarized Zone) is a firewall feature governing real-time information exchanged through the VOIP gateway device. DMZ allows a single computer on the LAN side network to expose all of its ports to the Internet, which means the exposed computer is no longer behind the firewall. When a packet enters the VOIP gateway, the packet is transferred to the DMZ if it is not filtered nor port-forwarded.

Click **DMZ** in the **Gateway Mode Settings** section. [Figure 32](#) prompts for configuration. Refer to [Table 19](#) for more information of the parameters.

**Figure 32** Gateway Mode Settings - DMZ



**Table 19** Gateway Mode Settings - DMZ Field Description

Field	Description
DMZ	Off: Disable DMZ. Default. On: Enable DMZ
DMZ IP Address	The IP address of the DMZ

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

## QoS

The QoS configuration contains the following sections:

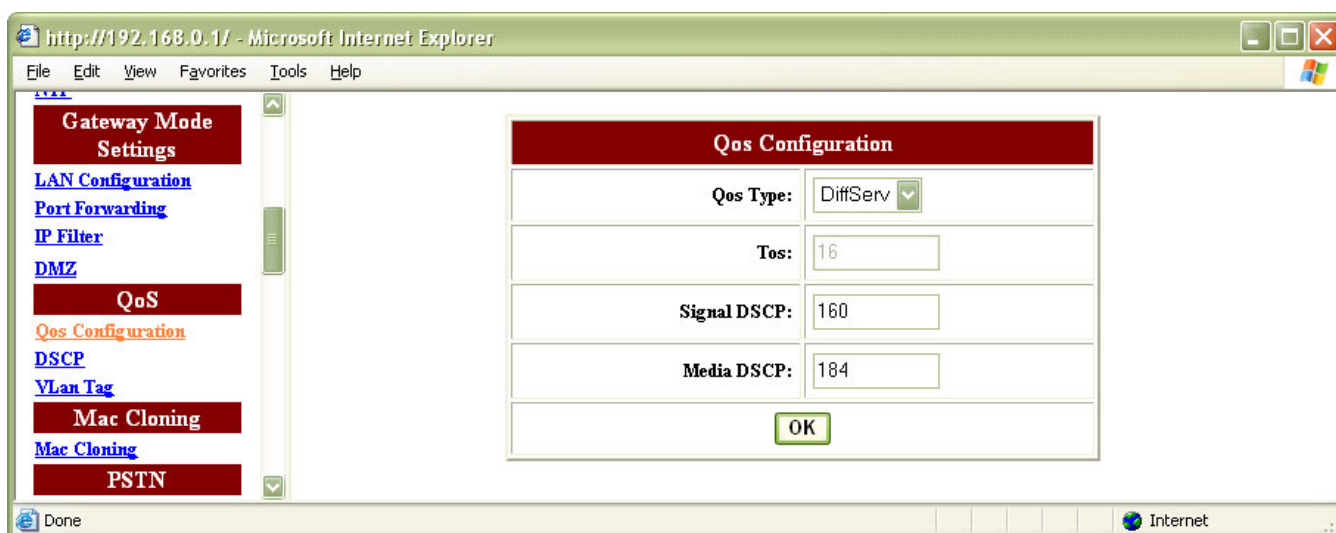
- [QoS Configuration](#)

- [DSCP](#)
- [VLAN Tag](#)

**QoS Configuration** iAN-02EX supports the function of attaching ToS (Type of Service) or DSCP (Differentiated Services Code Point) information on outgoing packets so these packets may be processed with higher priority.

Click **QoS Configuration** in the **QoS** section. [Figure 33](#) prompts for configuration. Refer to [Table 20](#) for more information of the parameters.

**Figure 33** QoS - QoS Configuration



**Table 20** QoS - QoS Configuration Field Description

Field	Description
QoS Type	Disable No QoS / packet priority to be placed on outgoing packets
	Diff Serv Use DiffServer as packet priority mechanism Default.
	Tos Use TOS marking as packet priority mechanism
Tos	TOS value. This parameter is applicable only if the QoS type is Tos. Default: 16
Signal DSCP	The diffserve priority value for signaling packets. This parameter is applicable only if the QoS type is DiffServ. Default: 160
Media DSCP	The diffserve priority value for media / RTP packets. This parameter is applicable only if the QoS type is DiffServ. Default: 184

Configure the parameters accordingly. Click **OK** to confirm the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**DSCP** iAN-02EX provides the option to retain or remove the outgoing packet priority for ToS.

Click **DSCP** in the **QoS** section. [Figure 34](#) prompts for configuration. Refer to [Table 21](#) for more information of the parameters.

**Figure 34** QoS - DSCP



**Table 21** QoS - DSCP Field Description

Field	Description
Trusted	Retain the DSCP priority associated with outgoing packets. Default.
Un-Trusted	Remove the DSCP priority associated with outgoing packets.

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: Refer to [QoS Configuration](#) for ToS configuration.*

**VLAN Tag** Click **VLAN Tag** in the **QoS** section. [Figure 35](#) prompts for configuration. Refer to [Table 22](#) for more information of the parameters.



Figure 35 QoS - Vlan Tag

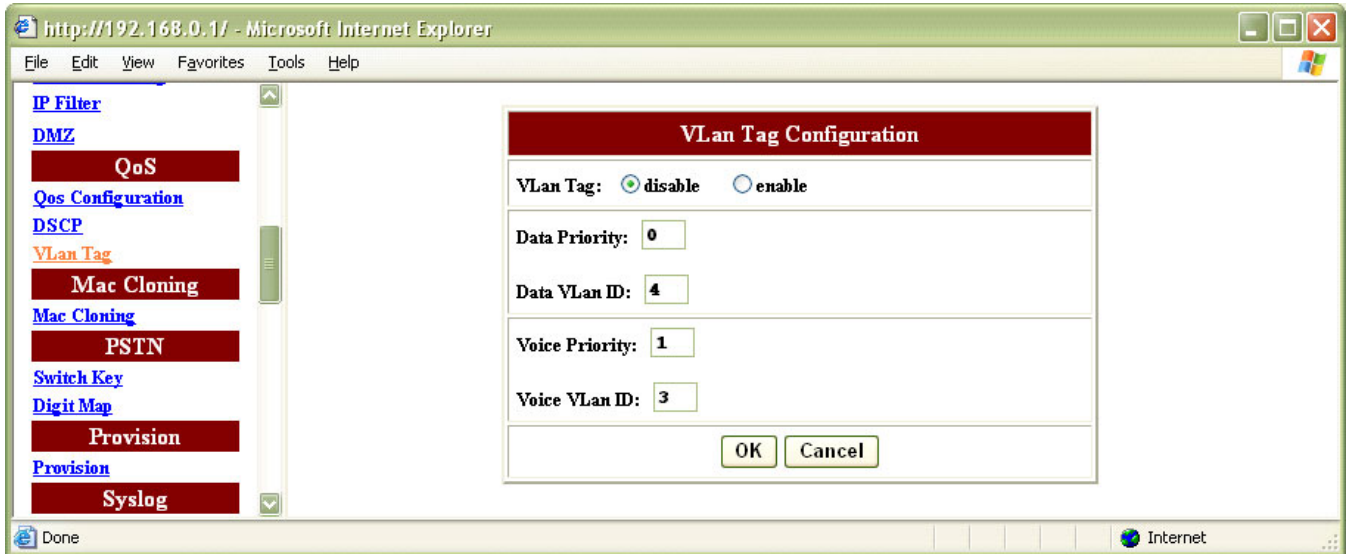


Table 22 QoS - Vlan Tag Field Description

Field	Description
Vlan Tag	To disable/enable Vlan tag Default: Disable
Data Priority	The priority value for data packet Default: 0
Data Vlan ID	The data Vlan ID Default: 4
Voice Priority	The priority value for voice packet Default: 1
Voice Vlan ID	The voice Vlan ID Default: 3

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

## Mac Cloning

MAC cloning is to present a user defined MAC address to the WAN. It is useful when the ISP has restrictions on the MAC address.

### Mac Cloning

Click **Mac Cloning** in the **Mac Cloning** section. [Figure 36](#) prompts for configuration. Refer to [Table 23](#) for more information of the parameters.

**Figure 36** Mac Cloning - Mac Cloning**Table 23** Mac Cloning - Mac Cloning Field Description

Field	Description
Mac Cloning	To disable/enable MAC cloning Default: Disable
Mac Address	The Mac address to be assigned to the WAN. Default: 000000000000

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

## PSTN

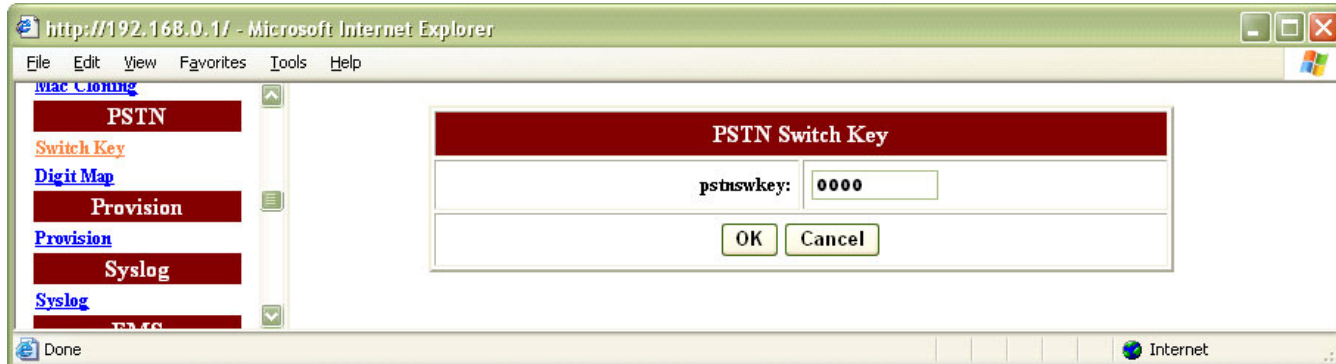
The PSTN section is applicable ONLY if there is PSTN connectivity on the Line port of the iAN-02EX VoIP Gateway. The PSTN configuration contains the following sections:

- [Switch Key](#)
- [Digit Map](#)

### Switch Key

This function allows the users to set the PSTN access number / switch number. Normally, the telephone is using VoIP service unless the VoIP service is not available. However, the user can manually switch from VoIP mode to PSTN mode by entering 4-digit switch key.

Click **Switch Key** in the **PSTN** section. [Figure 37](#) prompts for configuration. Refer to [Table 24](#) for more information of the parameters.

**Figure 37** PSTN - Switch Key**Table 24** PSTN - Switch Key Field Description

Field	Description
Pstnswkey	The PSTN switch key for swathing from VoIP mode to PSTN mode. Default: 0000

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**Digit Map** This function allows the users to set PSTN digit map. Normally the telephone is using VoIP service unless the VoIP service is not available. However, the user can set up a list of numbers with specific prefix and total length to switch from VoIP mode to PSTN mode. The module supports up to 10 PSTN digit maps.

Click **Digit Map** in the **PSTN** section. [Figure 38](#) prompts for configuration. Refer to [Table 25](#) for more information of the parameters.

**Figure 38** PSTN - Digit Map**Table 25** PSTN - Digit Map Field Description

Item	Description
PSTN Digitmap	
Prefix	Enter the prefix of the telephone number to be added/modified/deleted
Length	Enter the total length of the telephone number. The length is ranged from 0~64. "0" means the length is not fixed.
Digit Map Table	
No.	The digit map ID number.
Prefix	The prefix of the telephone number.
Length	The length of the telephone number.

Configure the parameters accordingly and click **Add / Modify** to create / modify an entry.



*Note: The modify function only allows length modification of an existing digit map. To modify the prefix for an existing digit map, delete the current digit map and create a new one.*

Enter the corresponding Prefix number listed in the table and click **Delete** to remove the entry. Click **Refresh** to obtain the latest configuration information.

Save the configuration and Reboot the module for the new configuration to take effect.

## Provision

iAN-02EX VoIP Gateway supports download of provisioning and configuration data from a server on the network. The Gateway downloads the configuration from provision server and compares the parameters of the downloaded setting

and the existing local setting. If the downloaded setting parameter is newer, then it will overwrite the existing local setting parameters.

**Provision** Click **Provision** in the **Provision** section. [Figure 39](#) prompts for configuration. Refer to [Table 26](#) for more information of the parameters.

**Figure 39** Provision - Provision

**Table 26** Provision - Provision Field Description

Item	Description
Provision Priority	The priority of the provision server. Default: TFTP First
TFTP Server Address	The IP address or URL of the TFTP provision server. Default: devicecfg.private.net/devicecfg/utstarcom/config
TFTP Server Port	The port numbers of the TFTP provision server. When enabled, port 1 is required and port 2 & 3 are optional. When specified, port 2 is used if port 1 is not available. Port 3 is used if port 1 and port 2 are not available. Default: 69, 100, 200

**Table 26** Provision - Provision Field Description

Item	Description
HTTP Server Address	The IP address or URL of the HTTP provision server. Default: devicecfg.private.net/devicecfg/utstarcom/config
HTTP Server Port	The port numbers of the HTTP provision server. Default: 80
Group	The group the VoIP gateway belongs to. The maximum length is 64. Default: 0
Expires	The period (in seconds) that the VoIP gateway retrieves configuration files from Provision server. The valid period for this device's IP address assigned by DHCP server or PPPoE server. Enter the value provided by user's ISP. Default: 3600 seconds
TFTP Upgrade Server Address	The IP address or URL of the TFTP upgrade server. Default: devicecfg.private.net/firmware/utstarcom
TFTP Upgrade Server Port	The port numbers of the TFTP upgrade server. Default: 69
HTTP Upgrade Server Address	The IP address or URL of the HTTP upgrade server. Default: devicecfg.private.net/firmware/utstarcom
HTTP Upgrade Server Port	The port numbers of the HTTP upgrade server. Default: 80
Sync Check	Enable/Disable SIP proxy to trigger sync check event. When enabled, ATA reboots and starts the default provisioning process if SIP proxy triggers sync check event. Default: Disable Note: Authentication option will be supported in future release.

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



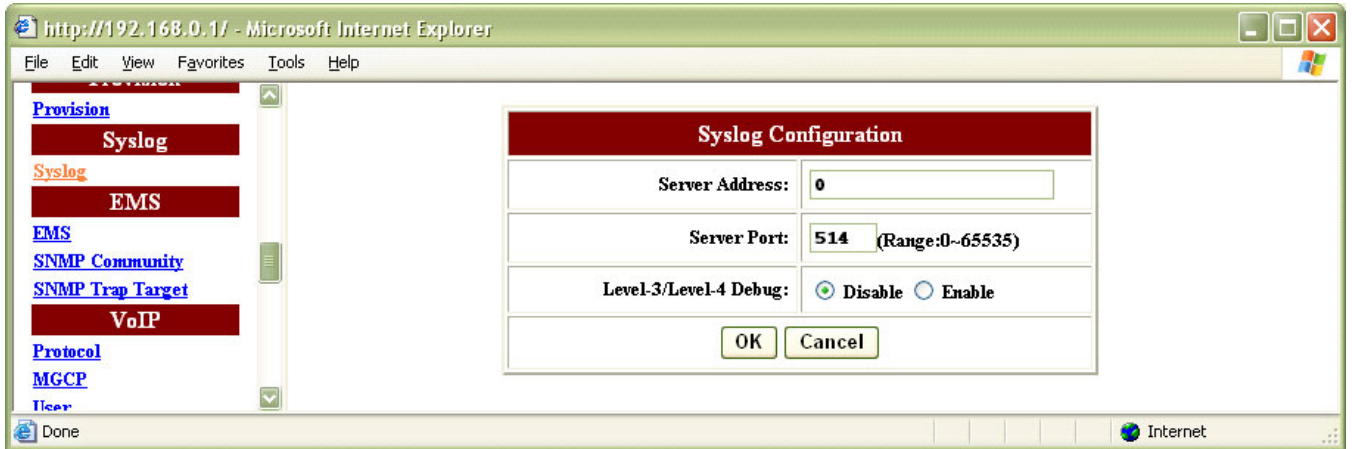
Refer to [Appendix B](#) for more information of provision procedures and rules.

## Syslog

This iAN-02EX VoIP Gateway supports sending system log (sending UDP packets via Syslog port (514)) and keeping log messages in Log server.

**Syslog** Click **Syslog** in the **Syslog** section. [Figure 40](#) prompts for configuration. Refer to [Table 27](#) for more information of the parameters.

**Figure 40** Syslog - Syslog



**Table 27** Syslog - Syslog Field Description

Item	Description
Server Address	The IP address of syslog server. Default: 0, disable syslog server
Server Port	The port number of syslog server. Default: 514
Level-3/Level-4 Debug	Disable / enable sending level-3/level-4 debug messages to syslog server Default: Disable

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

Save the configuration and Reboot the module for the new configuration to take effect.

**Element Management System (EMS)**

The EMS configuration contains the following sections:

- [EMS](#)
- [SNMP Community](#)
- [SNMP Trap Target](#)

////////////////////////////////////

**EMS** Click **EMS** in the **EMS** section. [Figure 41](#) prompts for configuration. Refer to [Table 28](#) for more information of the parameters.

Figure 41 EMS - EMS

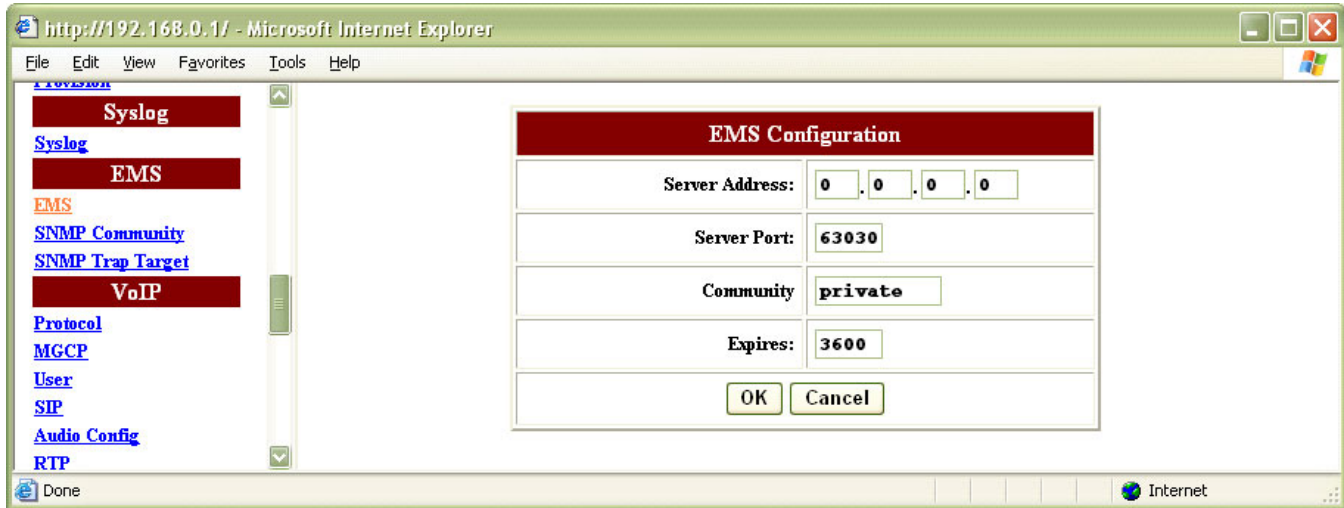


Table 28 EMS - EMS Field Description

Item	Description
Server Address	The IP Address of the EMS server 0: Disable syslog server
Server Port	The port number of the EMS server Default: 63030
Community	The community used by the EMS server Value range: Public community / Private community Default: private
Expires	The period that the VoIP Gateway sends keeping-alive message to EMS server. This is to check the connection status in case the VoIP Gateway is accidentally disconnected from the EMS server. Default: 3600 seconds

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

### SNMP Community

Click **SNMP Community** in the **EMS** section. [Figure 42](#) prompts for configuration. Refer to [Table 29](#) for more information of the parameters.



Figure 42 EMS - SNMP Community

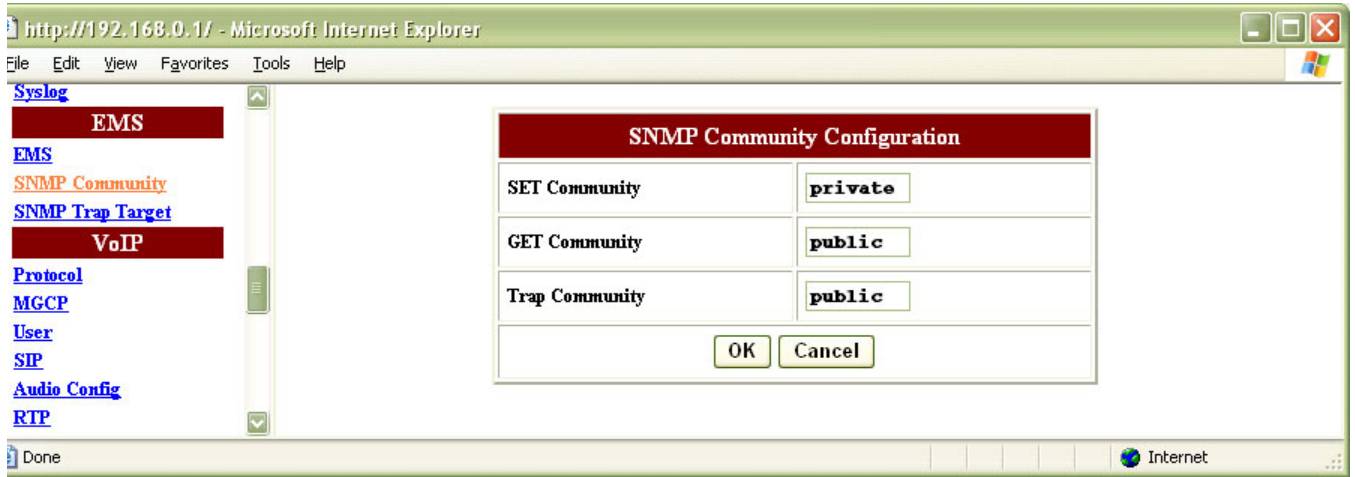


Table 29 EMS - SNMP Community Field Description

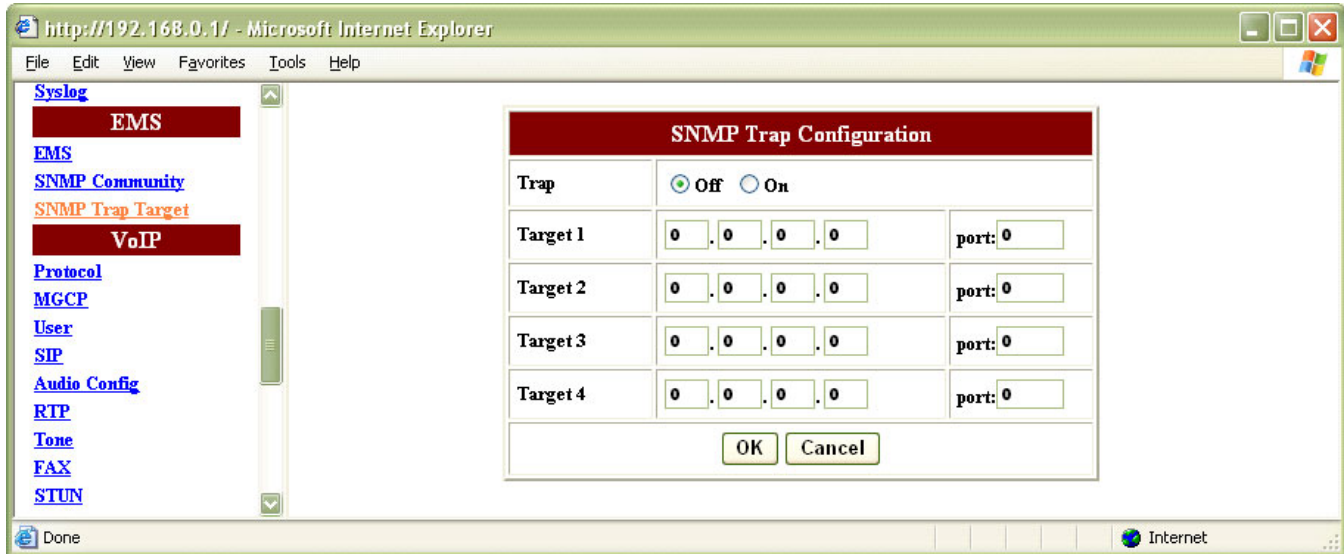
Item	Description
Set Community	The community for the set function on EMS. Default: private
Get Community	The community for the get function on EMS. Default: public
Trap Community	The Community used when the user processes the traps. Default: public

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

### SNMP Trap Target

Click **SNMP Community** in the **EMS** section. [Figure 43](#) prompts for configuration. Refer to [Table 30](#) for more information of the parameters.

**Figure 43** EMS - SNMP Community**Table 30** EMS - SNMP Trap Target Field Description

Field	Description
Trap	Disable / enable SNMP trap Default: Off
Target 1~ 4	Specify the IP address to which the traps of the VOIP
Port 1~ 4	Specify the Port to which the traps of the VOIP Gateway will be sent

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

Save the configuration and Reboot the module for the new configuration to take effect.

## VoIP

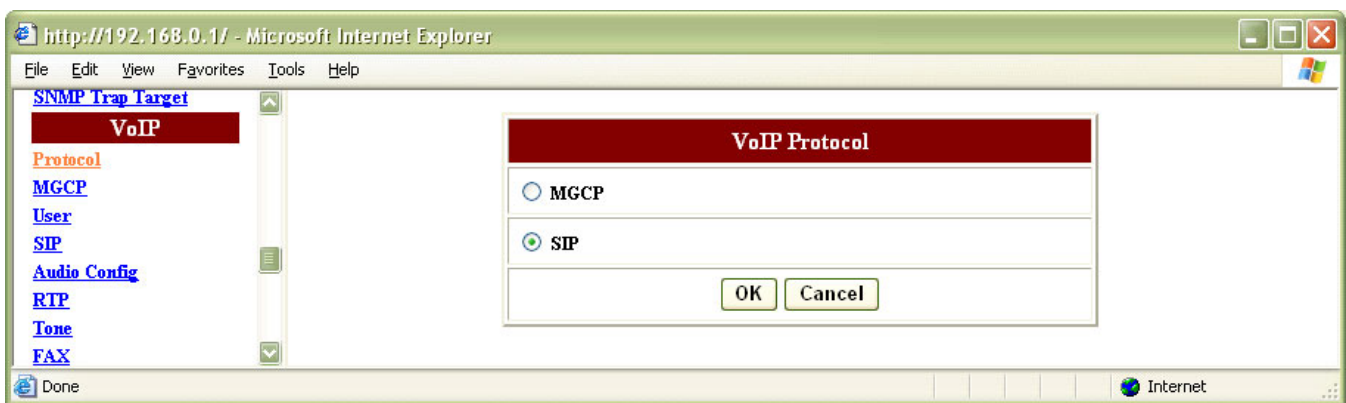
The VoIP configuration contains the following sections:

- [Protocol](#)
- [MGCP](#)
- [User](#)
- [SIP](#)
- [Audio Config](#)
- [RTP](#)
- [Tone](#)
- [FAX](#)
- [STUN](#)

- [Speed Dial](#)
- [Call Features](#)
- [Digit Map](#)
- [Hook Flash](#)
- [Jitter Buffer](#)

**Protocol** Click **Protocol** in the **VoIP** section. [Figure 44](#) prompts for configuration. Refer to [Table 31](#) for more information of the parameters.

**Figure 44** VoIP - Protocol



**Table 31** VoIP - Protocol Field Description

Field	Description
MGCP	MGCP voice signaling protocol
SIP	SIP voice signaling protocol Default.

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**MGCP** Click **MGCP** in the **VoIP** section. [Figure 45](#) prompts for configuration. Refer to [Table 32](#) for more information of the parameters.

Figure 45 VoIP - MGCP

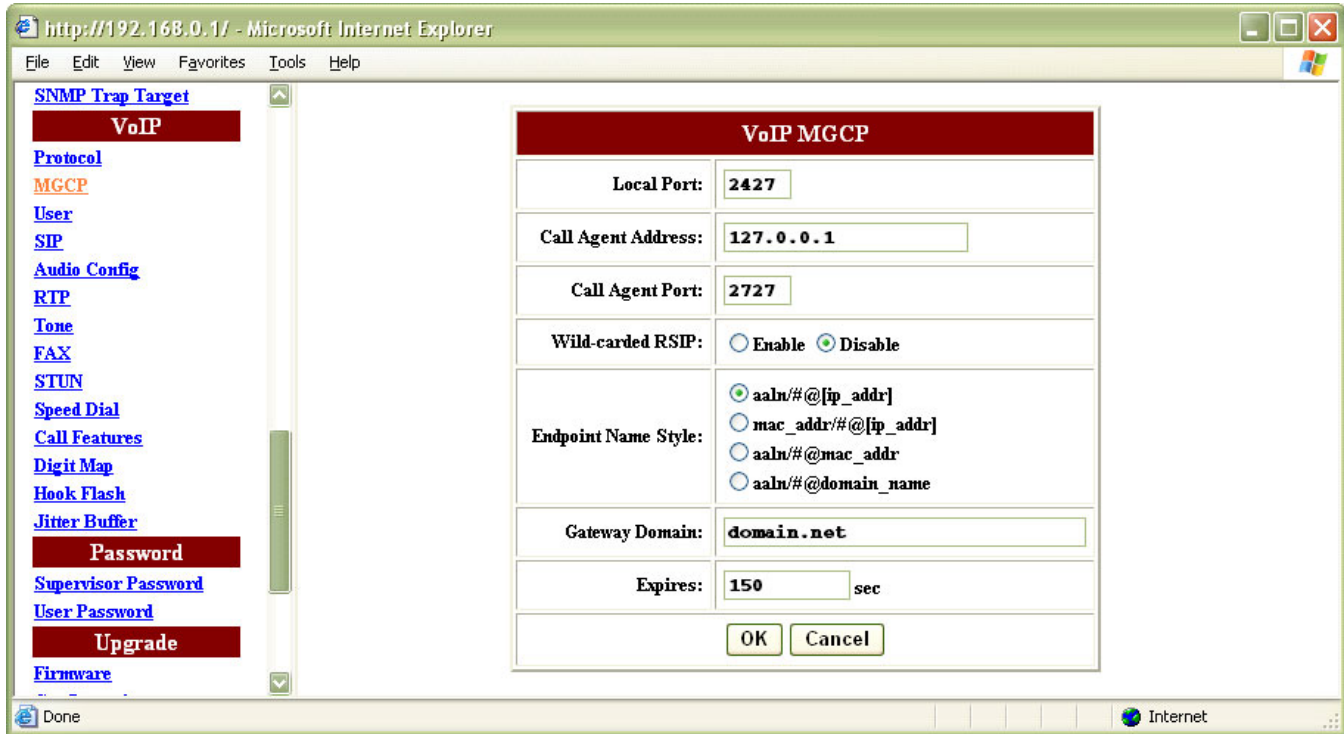


Table 32 VoIP - MGCP Field Description

Item	Description
Local Port	This port number to receive/send data from/to the call agent. Default: 2427
Call Agent Address	The IP address of call agent. Default: 127.0.0.1
Call Agent Port	This port number to receive/send data from/to the VoIP gateway. Default: 2727
Wild-carded RSIP	Enable / disable wild carded RSIP Default: disable
Endpoint Name Style	Style: aaln/#@[ip_addr], mac_addr/#@[ip_addr], aaln/#@mac_addr, aaln/#@domain_name. Default: aaln/#@[ip_addr]
Gateway Domain	The domain name of the gateway Default: domain.net
Expires	The period that the VoIP gateway sends keeping-alive message to the call agent. This is check the connection status in case the VoIP gateway is accidentally disconnected from the call agent. Default: 150 seconds.

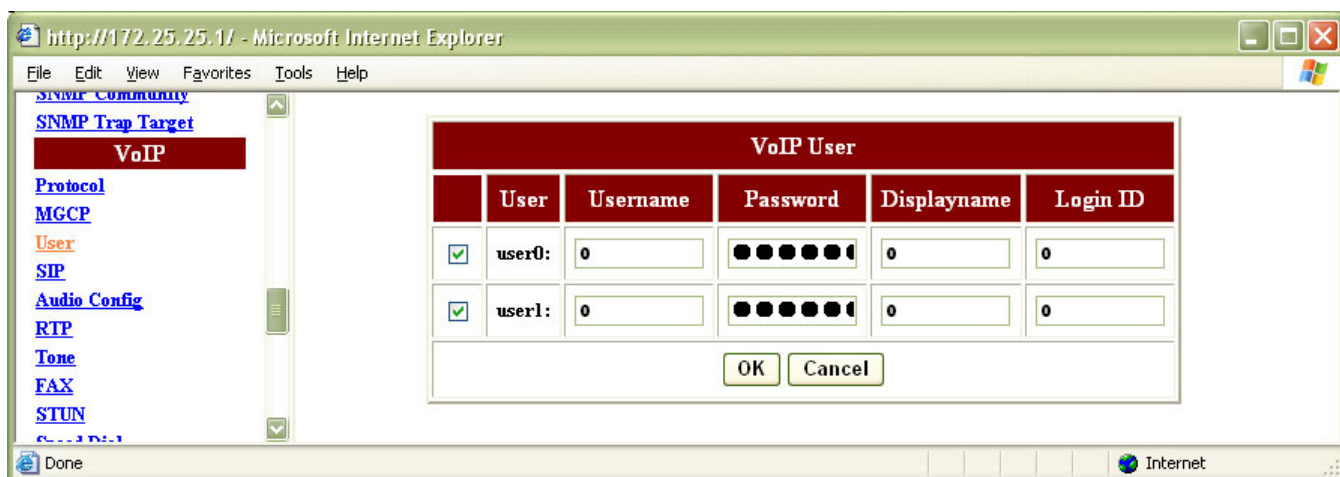
Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**i** Note: Refer to [Protocol](#) for disable/enable MGCP mode.

**User** Click **User** in the **VoIP** section. [Figure 46](#) prompts for configuration. Refer to [Table 33](#) for more information of the parameters.

**Figure 46** VoIP - User



**Table 33** VoIP - User Field Description

Protocol	Description
User Check Box	To select/deselect the user
Username	The name (or phone number) of the user
Password	The password for this user
Display name	The user name to be displayed
Login ID	The ID for this user

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**i** Note: Certain SIP proxies use login ID for authentication purpose. Configure the login ID as specified by SIP proxy. If login ID is not required, keep the login ID as 0.

**SIP** Click **SIP** in the **VoIP** section. [Figure 47](#) prompts for configuration. Refer to [Table 34](#) for more information of the parameters.

Figure 47 VoIP - SIP

http://172.25.25.1/ - Microsoft Internet Explorer

File Edit View Favorites Tools Help

**VoIP SIP**

Local Port: 5060

Proxy Address: 0

Proxy Port: 5060

Registrar Address: 0

Registrar Port: 5060

Outbound Proxy Address: 0

Outbound Proxy Port: 5060

Expires: 3600

SIP Domain: 0

Subject: Call Invite

T1 Timer: 300

DNS SRV:  Enable  Disable

OK Cancel

It is recommended that the Expires field to be no less than 60 (seconds).

Done Internet

Table 34 VoIP - SIP Field Description

Item	Description
Local Port	The port number of the SIP stack. Default: 5060
Proxy Address	The IP address of SIP proxy Default: 0, disable
Proxy Port	The port number used by SIP Proxy Default: 5060
Registrar Address	The IP Address of Registration server. Registration Server is often the same as SIP Proxy Server. Default: 0, disable
Registrar Port	The port number of Registration server. Default: 5060
Outbound Proxy Address	Specifies the IP Address of SIP Outbound Proxy server. Default: 0, disable

**Table 34** VoIP - SIP Field Description

Item	Description
Outbound Proxy Port	Specifies the port number of SIP Proxy server. Generally the default is 5060.
Expires	The period (in seconds) that the VoIP Gateway sends keeping-alive message to Registration server. This is to check the connection status in case the VoIP Gateway is accidentally disconnected from the Registration server. Default: 3600
SIP Domain	The domain name for the URL to be registered. Default: 0
Subject	The content of the subject header in outgoing INVITE message. This is used to indicate the title of the call. Default: Call_Invite
T1 Timer	Default: 300
DNS SRV	To enable / disable DNS service. When enabled, ATA handles DNS-SRV as the first priority and if it fails, ATA will do DNS-A records. Default: Disabled

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: The following values needs to be configured accordingly before disabling the register:*

- *The value of registrar address/port is 0.*
- *The value of proxy address cannot be 0.*

**Audio Config** Click **Audio Config** in the **VoIP** section. [Figure 48](#) prompts for configuration. Refer to [Table 35](#) for more information of the parameters.

Figure 48 VoIP - Audio Config



Table 35 VoIP - Audio Config Field Description

Item	Description
Port Index	Port 1 / Port 2
Codec Rate	The period (in milliseconds) that the VoIP Gateway sends voice packets to call party. This value must be a multiple of 10. Default: 20
Preferred Codec	The preferred method of voice compression on per port basis. Default: G.729A
VAD (Voice Activity Detection)	Enable: sending packets only while the user is speaking. This will save the bandwidth but cause time delay. Disable: sending packets no matter the user is speaking or not. This will improve the voice quality to be more smoothly but increase more traffic load. Default: Enable
DTMF Tx Method	
RFC-2833	Enable/disable RFC-2833 on per port basis. If both RFC-2833 and SIP-INFO are disabled, ATA takes DTMF pass through. Default: Enable
SIP INFO	Enable/disable SIP info on per port basis. If both RFC-2833 and SIP-INFO are disabled, ATA takes DTMF pass through. Default: Disable

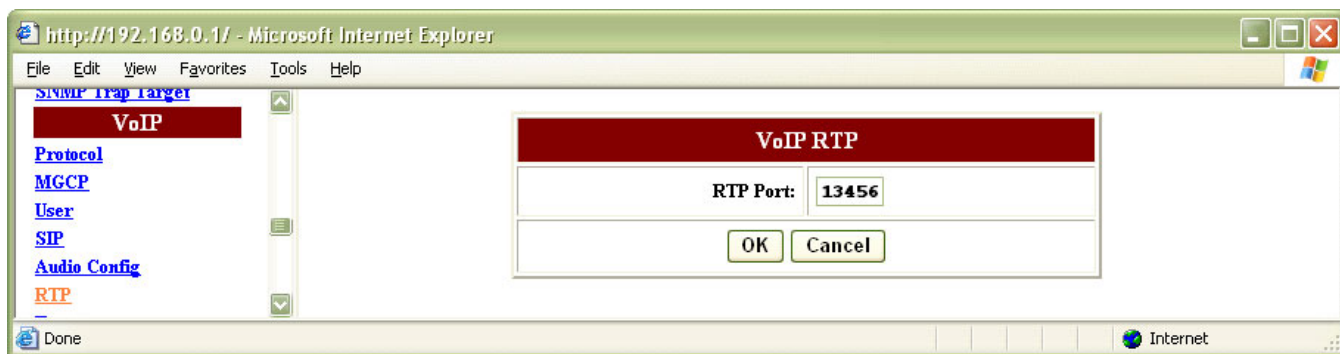
Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.



[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**RTP** Click **RTP** in the **VoIP** section. [Figure 49](#) prompts for configuration. Refer to [Table 36](#) for more information of the parameters.

**Figure 49** VoIP - RTP



**Table 36** VoIP - RTP Field Description

Item	Description
RTP Port	RTP port number Default: 13456

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**Tone** iAN-02EX supports configuration of pre-configured audible tones based on the geographical location.

Click **Tone** in the **VoIP** section. [Figure 50](#) prompts for configuration. Refer to [Table 37](#) for more information of the parameters.

Figure 50 VoIP - Tone

Table 37 VoIP - Tone Field Description

Item	Description
Country Tones	Custom Specific Tone North America
Rx Gain (dB)	Adjusts the receiving audio gain to be higher or lower. Default: 0
Tx Gain (dB)	Adjusts the transmitting audio gain to be higher or lower. Default: 0

**Table 37** VoIP - Tone Field Description

Item	Description
Ring	<p>The ringing cadence.</p> <p>&lt;ontime,offtime (in milliseconds)&gt;</p> <p>Select the tone from the drop down box for DR1 to DR8. DR1 to DR5 are preconfigured and DR6 to DR8 can be modified.</p> <ul style="list-style-type: none"> <li>■ DR1 &lt;2000, 4000&gt;</li> <li>■ DR2 &lt;800, 400, 800, 4000&gt;</li> <li>■ DR3 &lt;400, 200, 400, 200, 800, 4000&gt;</li> <li>■ DR4 &lt;300, 200, 1000, 200, 300, 4000&gt;</li> <li>■ DR5 &lt;500, 500&gt;</li> <li>■ DR6 &lt;2000, 4000&gt;</li> <li>■ DR7 &lt;2000, 4000&gt;</li> <li>■ DR8 &lt;2000, 4000&gt;</li> </ul>
Dial Tone	<p>The dialing tone pattern. Adjustable when the country tone is Custom Specific Tone.</p> <ul style="list-style-type: none"> <li>■ &lt;ontime,offtime (in milliseconds),freq1,freq2 (in Hz)&gt;</li> </ul>
Busy Tone	<p>The busy tone pattern. Adjustable when the country tone is Custom Specific Tone.</p> <ul style="list-style-type: none"> <li>■ &lt;ontime,offtime (in milliseconds),freq1,freq2 (in Hz)&gt;</li> </ul>
Ring back Tone	<p>The ringing back tone pattern. Adjustable when the country tone is Custom Specific Tone.</p> <ul style="list-style-type: none"> <li>■ &lt;ontime,offtime (in milliseconds),freq1,freq2 (in Hz)&gt;</li> </ul>
Call Waiting Tone	<p>The call waiting tone pattern.</p> <ul style="list-style-type: none"> <li>■ &lt;ontime,offtime (in milliseconds),freq1,freq2 (in Hz)&gt;</li> </ul> <p>Select the tone from the drop down box for WT1 to WT4:</p> <ul style="list-style-type: none"> <li>■ WT1 &lt;300, 10000, 440, 0&gt;</li> <li>■ WT2 &lt;100, 100, 100, 10000, 440, 0&gt;</li> <li>■ WT3 &lt;100, 100, 100, 100, 100, 10000, 440, 0&gt;</li> <li>■ WT4 &lt;100, 100, 300, 100, 100, 10000, 440, 0&gt;</li> </ul>



**Note:**

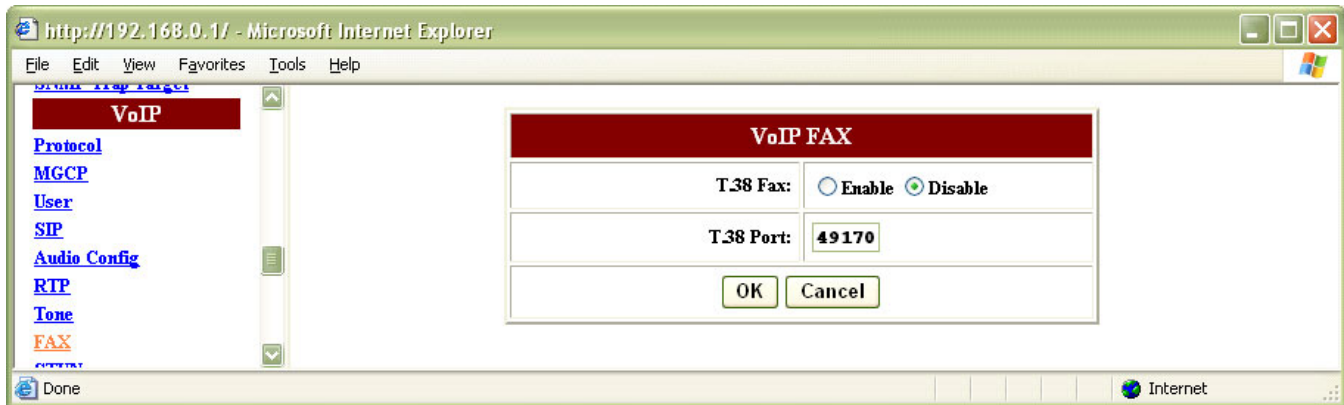
- *If the country tone is set to North America, the dial tone, busy tone and ringback tone cannot be modified. If the country tone is set to Custom Specific Tone, the ring tone (RT1 - RT8) and call waiting tone (WT1 - WT4) are grayed out.*
- *DR1 - DR8 are defined as per Telcordia specification GR-506.*
- *DR6 - DR8 are user specific and can be customized.*
- *WT1 - WT4 are defined as per Telcordia specification GR-30.*

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**FAX** Click **Fax** in the **VoIP** section. [Figure 51](#) prompts for configuration. Refer to [Table 38](#) for more information of the parameters.

**Figure 51** VoIP - Fax



**Table 38** VoIP - FAX Field Description

Item	Description
T.38 Fax	Enable/disable data-resending mechanism in case of any missing data during transmission Default: Enable
T.38 Port	The port number for for sending/receiving T.38 packets Default: 49170

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**STUN** iAN-02EX supports simple traversal of user datagram protocol (UDP) through network address translation (STUN). This function allows application to discover the presence and the types of NATs and firewalls between itself and the public Internet. It also provides the ability for applications to determine the public IP address allocated by the NAT.

Click **Stun** in the **VoIP** section. [Figure 52](#) prompts for configuration. Refer to [Table 39](#) for more information of the parameters.

Figure 52 VoIP - Stun

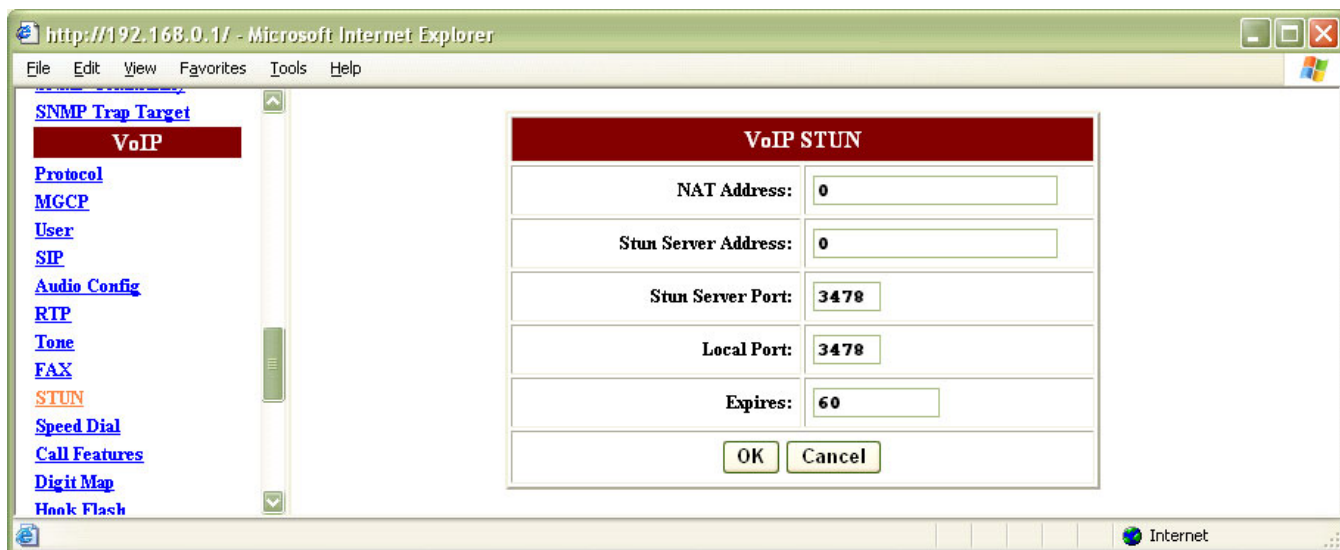


Table 39 VoIP - STUN Field Description

Item	Description
NAT Address	The IP address of NAT firewall. Default: 0
Stun Server Address	The IP address of STUN (Simple Traversal of User Datagram) server. Default: 0
Stun Server Port	The port number of STUN server. Default: 3478
Local Port	The local port number of STUN client. Default: 3478
Expires	The period that the VoIP Gateway sends STUN message to STUN server. This is to check the connection status in case the VoIP gateway is accidentally disconnected from STUN server. Default: 60 seconds

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**Speed Dial** The speed dial is used to set up a list of telephone numbers and SIP addresses for the frequently called callee. In this list, a shorter number is assigned to the called party instead of original phone numbers or addresses. The module supports up to 10 speed dial numbers.

Click **Speed Dial** in the **VoIP** section. [Figure 53](#) prompts for configuration. Refer to [Table 40](#) for more information of the parameters.

**Figure 53** VoIP - Speed Dial

The screenshot shows a web browser window with the URL <http://192.168.0.1/>. The page is titled 'VoIP' and has a sidebar with various configuration options. The main content area is titled 'VoIP Speed Dial' and contains the following elements:

- A 'Number:' input field.
- A 'Destination:' input field.
- Buttons for 'Add/Modify', 'Delete', and 'Refresh'.
- A 'Speed Dial Table' with the following data:
 

No.	Number	Destination
1	3	7327675200

**Table 40** VoIP - Speed Dial Field Description

Item	Description
VoIP Speed Dial	
Number	The speed dial number of the call party.
Destination	The SIP address or PSTN number of the called party
Speed Dial Table	
No.	The ID number for a speed dial entry
Number	The assigned speed dial number for a called party.
Destination	The full address of the called party.

Configure the parameters accordingly and click **Add / Modify** to create / modify an entry.



*Note: The modify function only allows destination modification of an existing speed dial. To modify the number for an existing speed dial, delete the current speed dial and create a new one.*

Enter the corresponding speed dial number listed in the table and click **Delete** to remove the entry. Click **Refresh** to obtain the latest configuration information.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

### Call Features

Click **Call Features** in the **VoIP** section. [Figure 54](#) prompts for configuration. Refer to [Table 41](#) for more information of the parameters.

Figure 54 VoIP - Call Feature

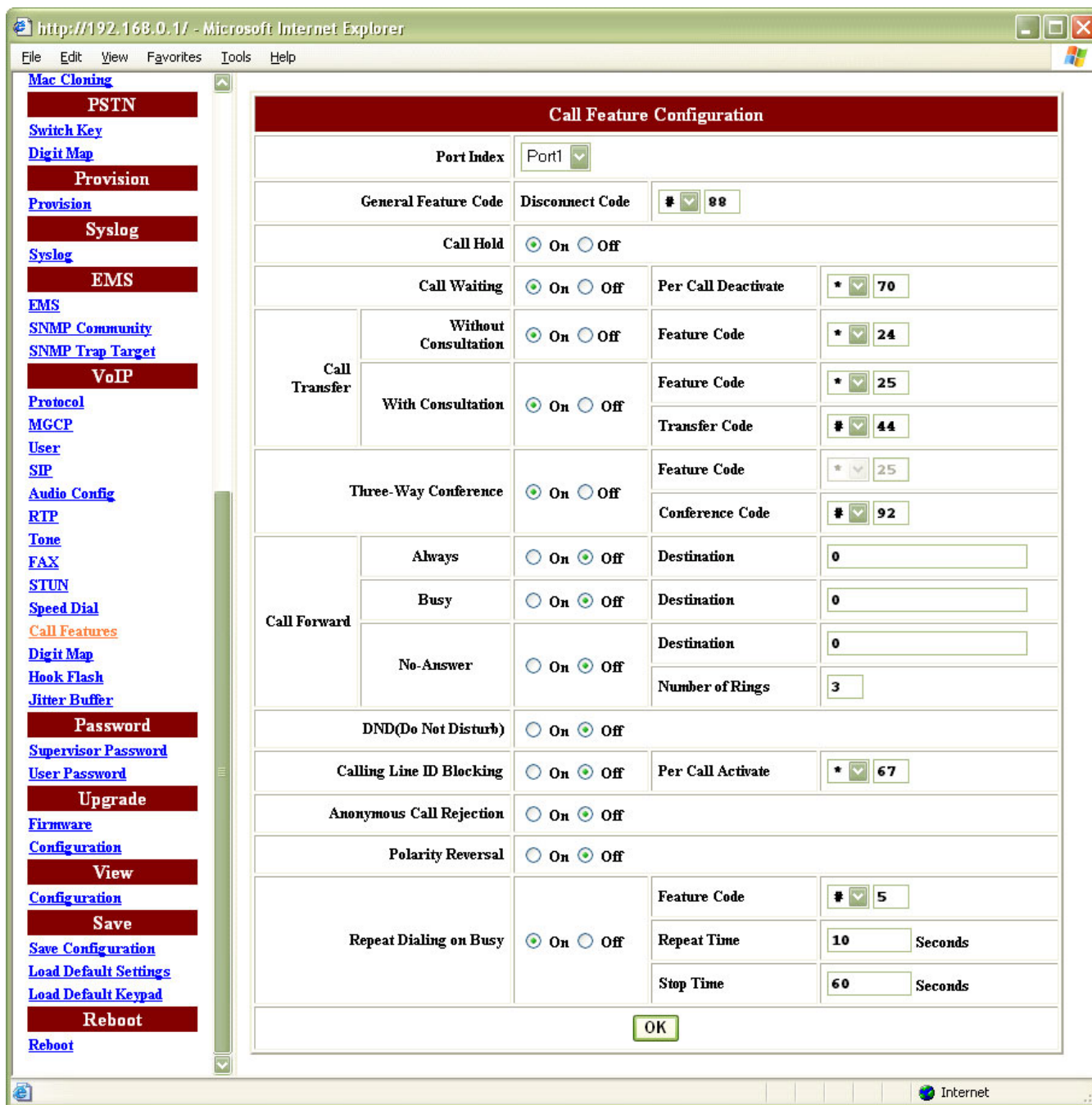


Table 41 VoIP - Call Feature Field Description

Field	Description
Port Index	Port 1 or Port 2
General Feature Code	Disconnect Code
Call Hold	Enable/disable the Call Hold feature. This must be supported by the Call Agent.

**Table 41** VoIP - Call Feature Field Description

Field	Description
Call Waiting	Enable/disable the Call waiting tone Per Call Deactivate: disactivate call waiting for 1 call
Call Transfer (CT)	Without Consultation CT to another station without prior talking to the receiving station by pressing flash and then dialing the Feature Code and the end station number
	With Consultation CT to another station with prior talking to the receiving station by pressing flash and then dialing the Feature Code and consulting the the end station if the station wants to take the call perform transfer using the Feature Code.
Three-Way Conference	Enable/disable the 3-way conference feature.
Call Forwarding	Always Enable/disable the Call Forwarding Always. On - Code used to enable Call Forwarding Always on a per call basis from the PSTN Phone Off - Code used to disable Call Forwarding Always on a per call basis from the PSTN Phone Destination - The destination telephone number the call needs to be forwarded if CF is always turned on
	Busy Enable/disable the Call Forwarding Busy. On - Code used to enable Call Forwarding Busy on a per call basis from the PSTN Phone Off - Code used to disable Call Forwarding Busy on a per call basis from the PSTN Phone Destination - The destination telephone number the call needs to be forwarded if Port is busy
	No-Answer Enable/disable the Call Forwarding No-Answer. On - Code used to enable Call Forwarding No-Answer on a per call basis from the PSTN Phone Off - Code used to disable Call Forwarding No-Answer on a per call basis from the PSTN Phone Destination - The destination telephone number the call needs to be forwarded if Port is not answered Number of Ring - Number of rings after which call is forwarded
DND (Do Not Disturb)	Enable/disable the DND feature
Calling Line ID Blocking	Enable/disable the Calling Line ID Blocking feature Per Call Deactivate: disactivate calling line ID blocking for 1 call
Anonymous Call Rejection	Enable/disable the Anonymous Call Rejection feature
Priority Reversal	Enable/disable the Priority Reversal feature (Currently not available in this release).
Repeat Dialing On Busy	Enable/disable the Repeat Dialing On Busy feature (Currently not available in this release)
	Repeat time - The time to repeat the dialing Stop Time - The time to stop repeating dialing

Configure the parameters accordingly. Click **OK** to confirm the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: The features mentioned above are subject to SIP-Proxy or Soft switch support; therefore some features may not work when enabled.*



*Note: For the features to work properly, call flows of the SIP-Proxy and call agent (softswitch) are needed for customization.*



**Digit Map** In contrast to the PSTN digit map, the VOIP digit map allows VOIP calls made with leading digits and length matching the rules specified to be dialed out immediately.

Click **Digit Map** in the **VoIP** section. [Figure 55](#) prompts for configuration. Refer to [Table 42](#) for more information of the parameters.

**Figure 55** VoIP - Digit Map

The screenshot shows the 'Digit Map Configuration' web page. The 'Port number' is set to 'port1'. The 'Leading Digits' and 'Length' fields are empty. Below the configuration fields are 'Add', 'Modify', and 'Delete' buttons. The 'Digit Map Rule' section contains a table with the following data:

Length	Leading Digits
4	1111
11	1
3	911
3	411
4	*

The 'Other Rule' section has 'Send #' set to 'Enable'.

**Table 42** VoIP - Digit Map Field Description

Item	Description
Port Number	Port 1 / Port 2
Leading Digits	The prefix or leading digits of the telephone number(s) to be dialed.
Length	The total length of the telephone number. "0" means the length is not fixed.
Send #	Enable: send the digit number at end of dial string is sent to the SIP-Proxy. Disable: the digit number at end of dial string is taken as a terminator. Default: Enable

Configure the parameters accordingly and click **Add** to create a new entry.

Select an entry in the **Digit Map Rule** table and modify the parameters accordingly. Click **Modify** to confirm the modification.

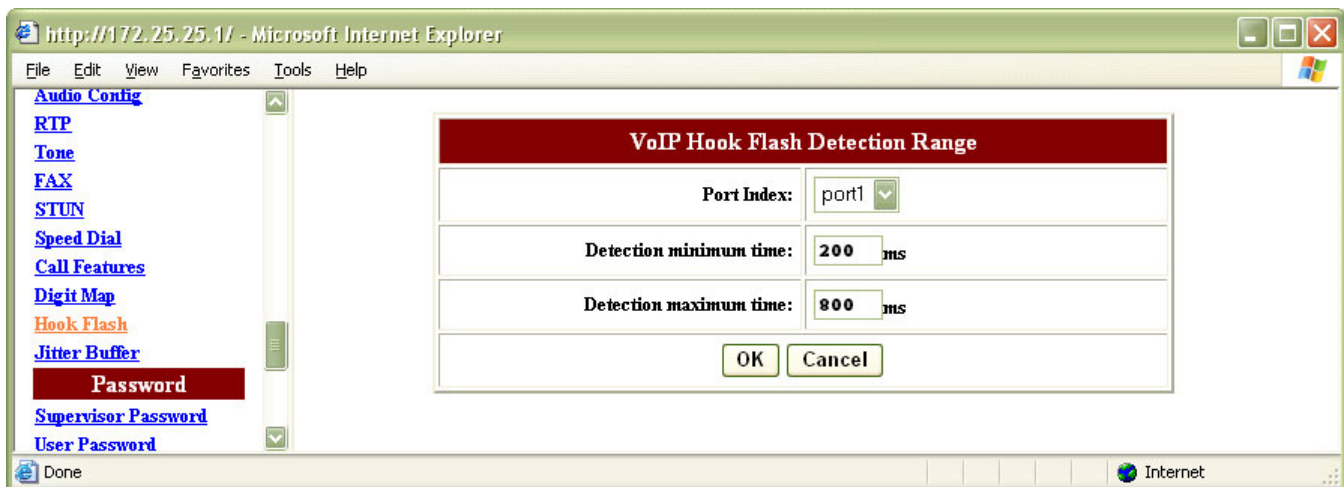
Select an entry in the **Digit Map Rule** table and click **Delete** to remove the entry.

Configure **Send #** and click **OK** to confirm the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**Hook Flash** Click **Hook Flash** in the **VoIP** section. [Figure 56](#) prompts for configuration. Refer to [Table 43](#) for more information of the parameters.

**Figure 56** VoIP - Hook Flash



**Table 43** VoIP - Hook Flash Field Description

Protocol	Description
Port Index	Port 1 / Port 2
Detection Minimum Time	The minimum time to detect hook flash Default: 200 ms
Detection Maximum Time	The maximum time to detect hook flash Default: 800 ms

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

**Jitter Buffer** Click **Jitter Buffer** in the **VoIP** section. [Figure 57](#) prompts for configuration. Refer to [Table 44](#) for more information of the parameters.

**Figure 57** VoIP - Jitter Buffer



**Table 44** VoIP - Jitter Buffer Field Description

Protocol	Description
Jitter Buffer Minimum Time	The minimum jitter that the adaptive jitter buffer can handle Value range: 5 - 150 ms
Jitter Buffer Maximum Time	The maximum jitter that the adaptive jitter buffer can handle Value range: 5 - 150 ms
Jitter Buffer Target Time	This is the adaptive jitter buffer which attempts to hold the packets to the target holding time. This is the minimum delay the jitter buffer that adds to the system. Value range: 5 - 150 ms

Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

## Password

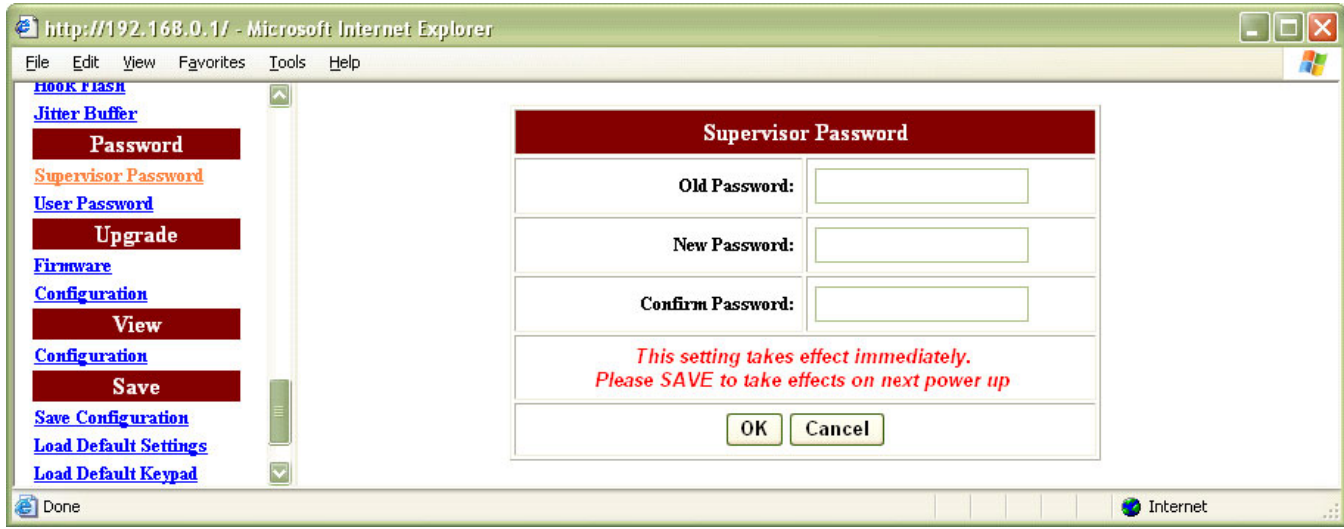
The Password configuration contains the following sections:

- [Supervisor Password](#)
- [User Password](#)

### Supervisor Password

Click **Supervisor Password** in the **Password** section. [Figure 58](#) prompts for configuration.

Figure 58 Password - Supervisor Password

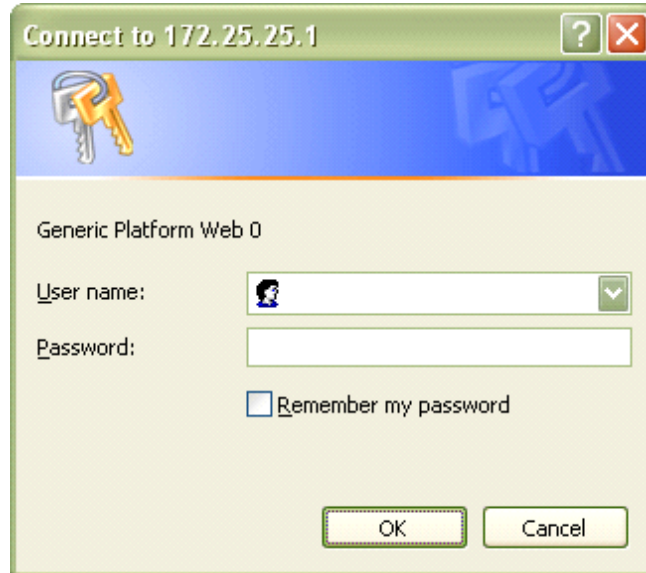


Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification. [Figure 59](#) prompts for modification confirmation.

Figure 59 Password - Supervisor Password - Confirmation



Click **OK** in [Figure 59](#) and the system requires the user to re-login with the new supervisor password as shown in [Figure 60](#). Enter the new password and click **OK** to login.

**Figure 60** Password - Supervisor Password - Re-login

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



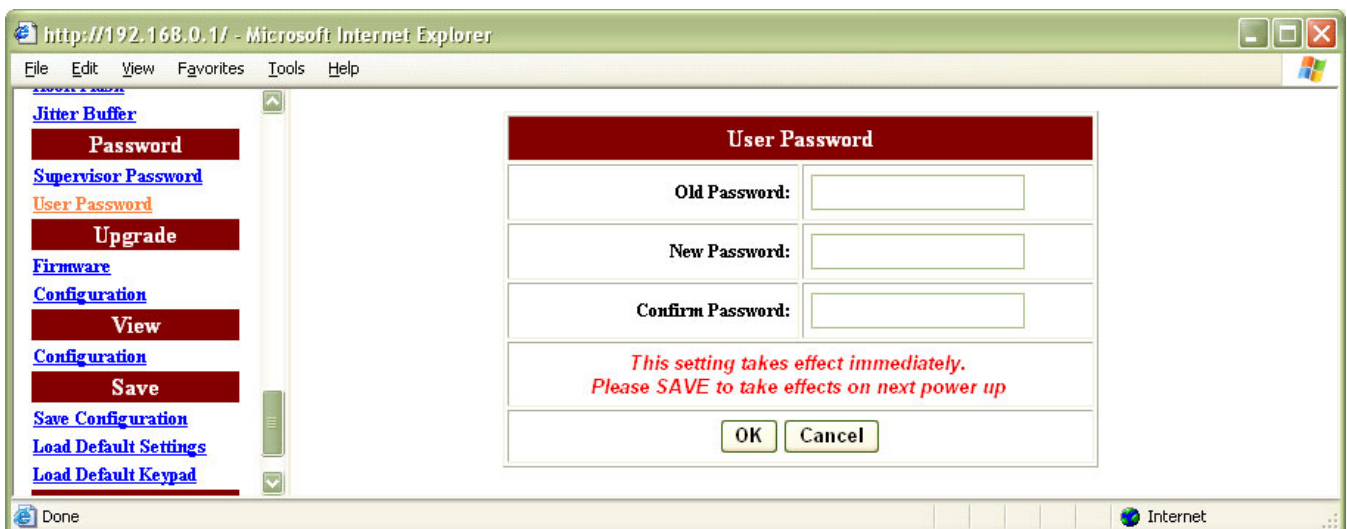
*Note: The password will be used for authentication. It is strongly recommended that the user resets the default password for administrative security.*



*Note: The default supervisor password is **utstar**.*

**User Password**

Click **User Password** in the **Password** section. [Figure 61](#) prompts for configuration.

**Figure 61** Password - User Password

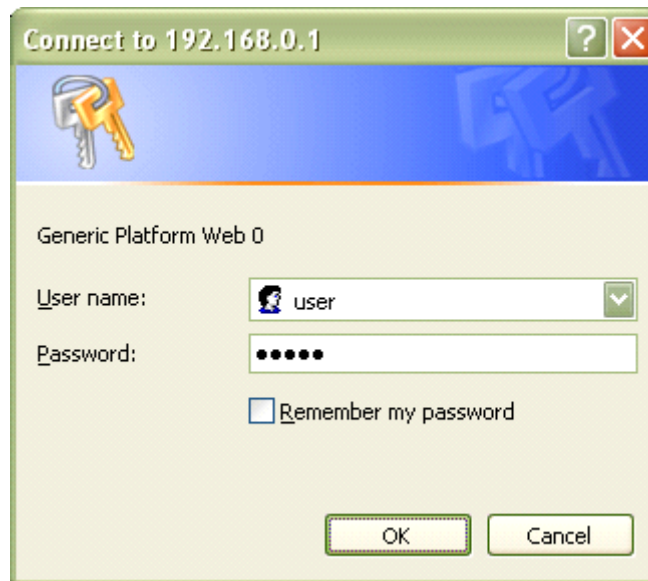
Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification. [Figure 62](#) prompts for modification confirmation.

**Figure 62** Password - User Password - Confirmation



Click **OK** in [Figure 62](#). If currently the ATA is in user mode, the system requires the user to re-login with the new user password as shown in [Figure 63](#). Enter the new password and click **OK** to login.

**Figure 63** Password - User Password - Re-login



[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.



*Note: The password will be used for authentication. It is strongly recommended that the user resets the default password for administrative security.*



*Note: The default user password is **12345**.*

## Upgrade

The Upgrade configuration contains the following sections:

- [Firmware](#)
- [Configuration](#)

**Firmware** This feature allows the user to upgrade the firmware on the iAN-02EX VoIP Gateway from the web browser. The firmware on the iAN-02EX VoIP Gateway is stored on FLASH ROM.

Download the new firmware to the local machine. Click **Firmware** in the **Upgrade** section. [Figure 64](#) prompts for configuration. Click **Browse** to locate the new firmware on the local machine and click **Upgrade** to start the process.

**Figure 64** Upgrade - Firmware



After the upgrade is completed, [Reboot](#) the module for the new configuration to take effect.



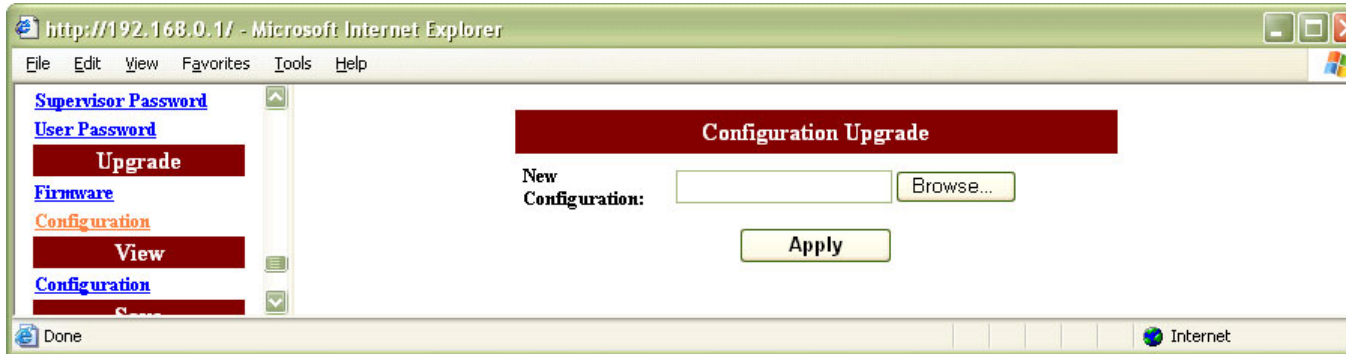
*Note: Do not power off the unit during the upgrade process.*

## Configuration

This feature allows the user to upgrade the configuration file on the iAN-02EX VoIP Gateway from the web browser. The configuration on the iAN-02EX VoIP Gateway is stored on FLASH ROM.

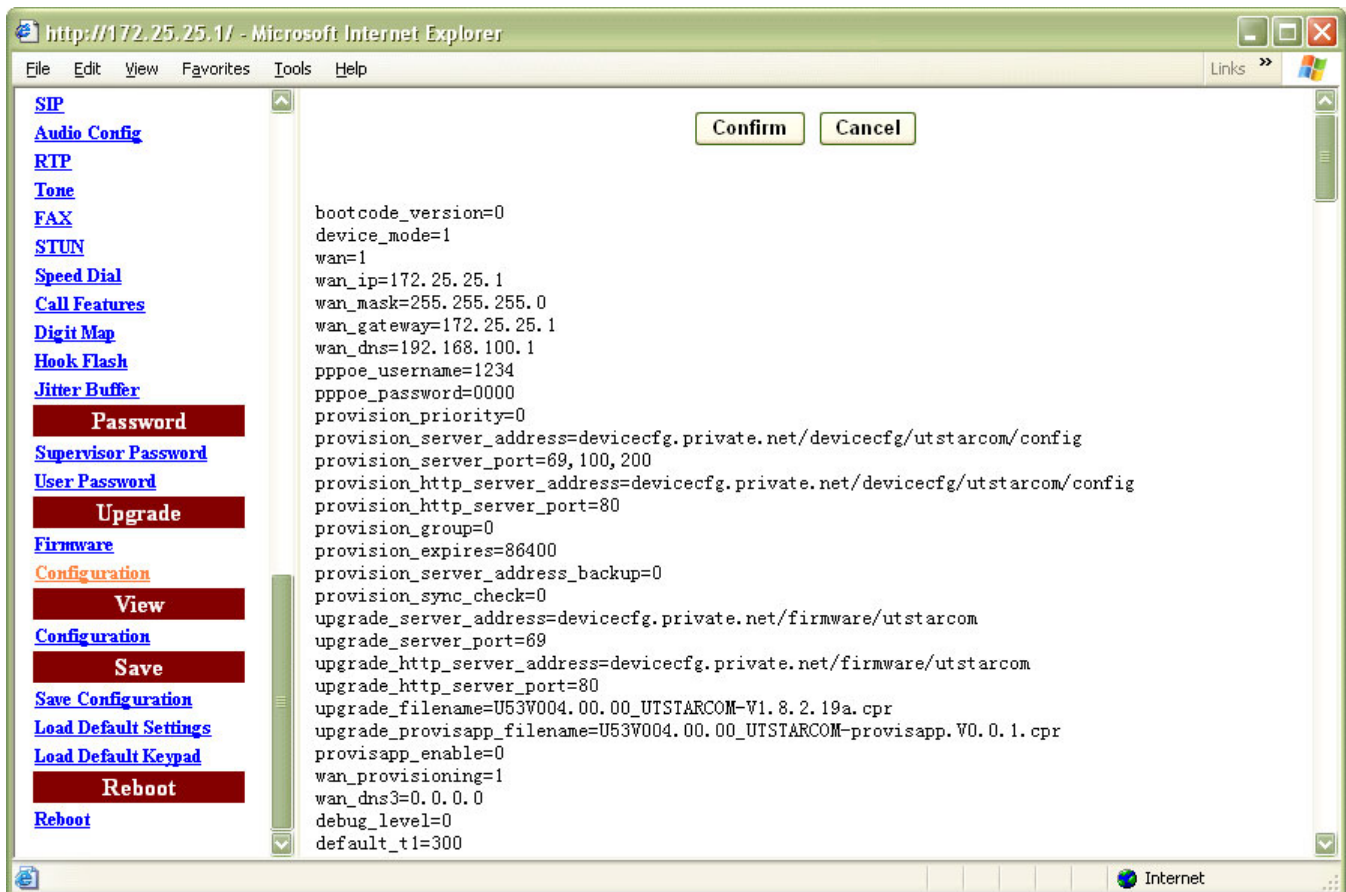
Download the new configuration file to the local machine. Click **Configuration** in the **Upgrade** section. [Figure 65](#) prompts for configuration. Click **Browse** to locate the new configuration on the local machine and click **Apply**.

Figure 65 Upgrade - Configuration



Click **Confirm** in [Figure 66](#) to confirm the upgrade or **Cancel** to cancel.

Figure 66 Upgrade - Configuration File - Apply



After the upgrade is completed, [Reboot](#) the module for the new configuration to take effect.



*Note: Do not power off the unit during the upgrade process.*



**View**

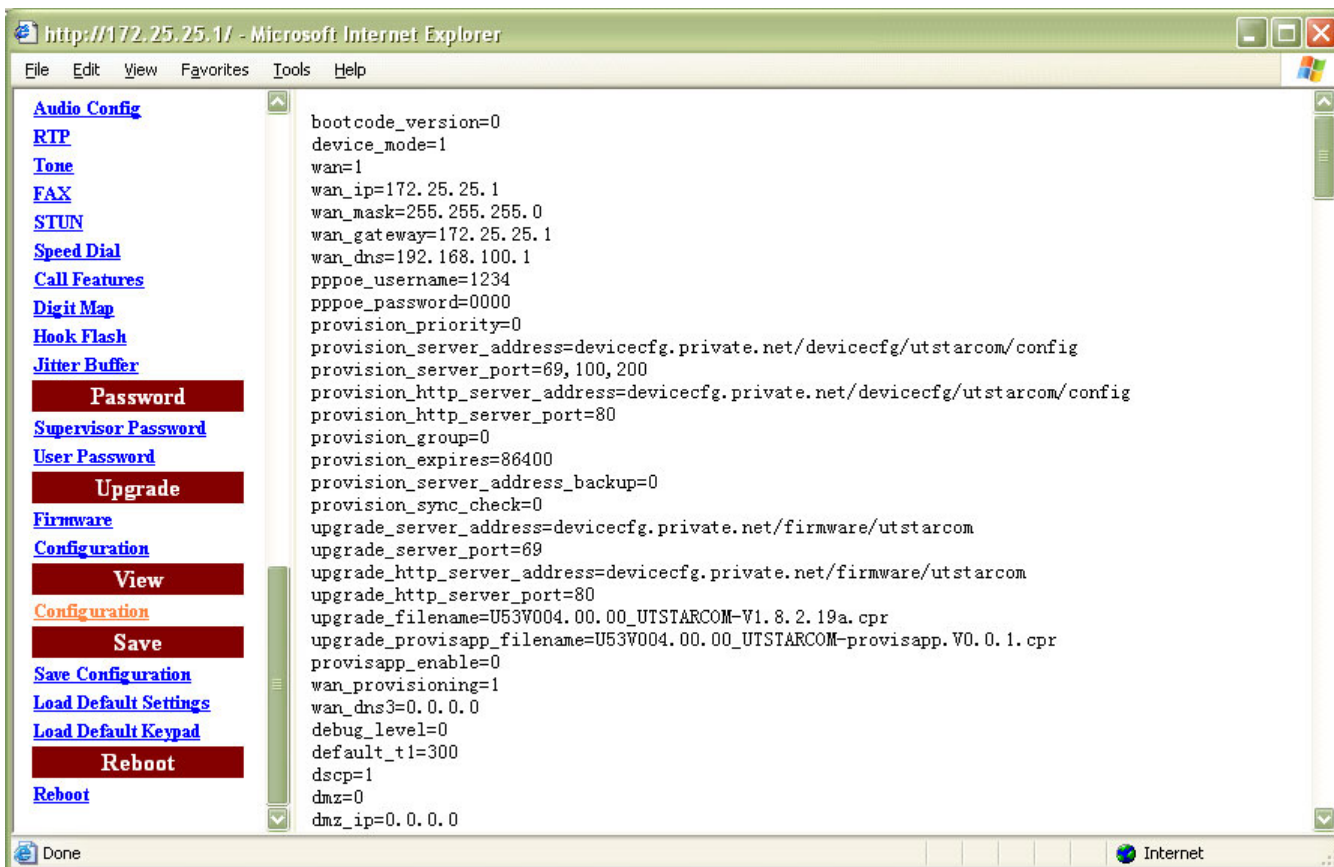
The abconfig.cfg contains all the configuration information of the ATA. User can modify the configuration with the

**Configuration** Click **Configuration** in the **View** section. Click the configuration file listed in [Figure 67](#) to display the details shown in [Figure 68](#).

**Figure 67** View - Configuration



**Figure 68** View - Configuration - abconfig.cfg



Right click **abconfig.cfg** in [Figure 67](#) and click **Save Target As** to backup the configuration file to a local directory. The backup file is displayed in [Figure 69](#). Refer to [Appendix C.- Default Value and Value Range](#) for the default settings.

**Figure 69** View - Configuration - abconfig.cfg.txt

## Save

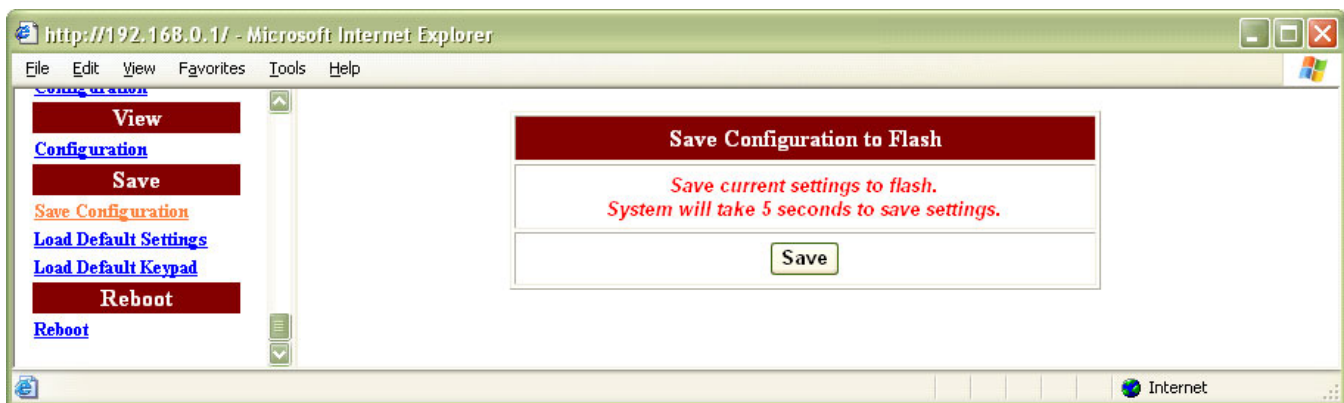
The Save configuration contains the following sections:

- [Save Configuration](#)
- [Load Default Settings](#)
- [Load Default Settings using FXS Ports](#)
- [Load Default Keypad](#)

### Save Configuration

Whenever there's new configuration or modification, the user ***MUST*** save the new configuration data and then restart the device for the new settings to take effect.

Click **Save Configuration** in the **Save** section. [Figure 70](#) prompts for confirmation. Click **Save** to write the new configuration data into the FLASH Memory immediately.

**Figure 70** Save - Save Configuration

[Reboot](#) the module for the new configuration to take effect.

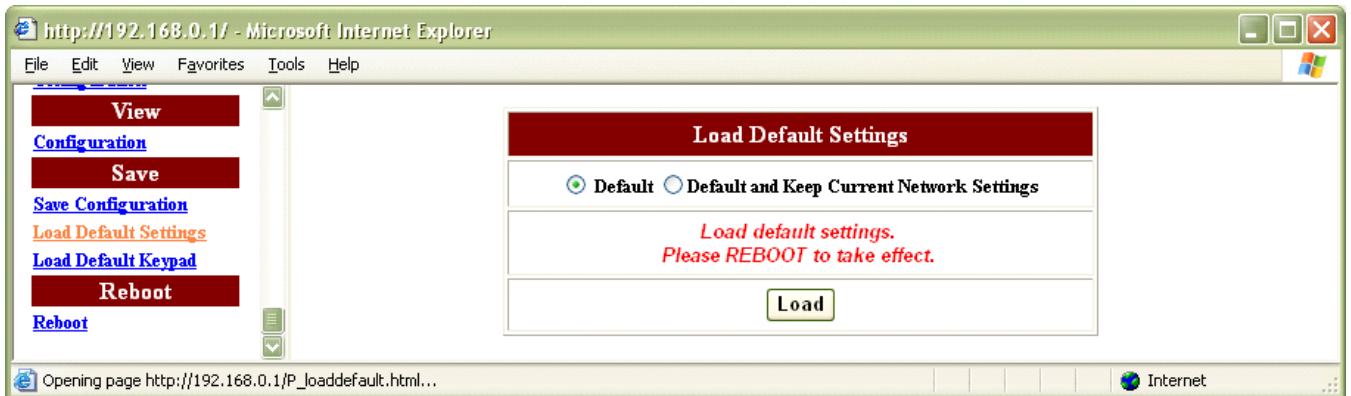


*Note: Do not power off the unit during the save process.*

## Load Default Settings

Click **Load Default Settings** in the **Save** section. [Figure 71](#) prompts for configuration. Refer to [Table 45](#) for more information of the parameters.

**Figure 71** Save - Load Default Settings



**Table 45** Save - Load Default Settings Field Description

Field	Description
Default	Load all default values that includes all network related fields
Default and Keep Current Settings	Load all default values while excluding the following network related fields: WAN: <ul style="list-style-type: none"> <li>■ Wan Type (Static IP/DHCP/PPPoE)</li> <li>■ IP address</li> <li>■ Mask address</li> <li>■ Gateway IP address</li> </ul> LAN: <ul style="list-style-type: none"> <li>■ IP address</li> <li>■ Mask address</li> <li>■ Gateway IP address</li> <li>■ DNS1 IP address</li> <li>■ DNS2 IP address</li> </ul>

Click **Load** to load the configuration data immediately.

[Reboot](#) the module for the new configuration to take effect.



*Note: Do not power off the unit during the load process.*

## Load Default Settings using FXS Ports

iAN-02EX also supports the function to restore to default settings using the FXS ports.

From the ATA simply dial **\*#322867973738**. The ATA will restore the default settings and reboot automatically.

This access is pre-configured on the ATA and cannot be changed. After reboot, the ATA will restore the default values. This is useful in the event of the service operator is unable to telnet or access the Web-base management of the ATA. This feature is available even if network is not available on the ATA.

**Load Default Keypad** Click **Load Default Keypad** in the **Save** section. [Figure 72](#) prompts for configuration.

**Figure 72** Save - Load Default Keypad



Configure the parameters accordingly. Click **OK** to confirm the modification or click **Cancel** to discard the modification.

[Save](#) the configuration and [Reboot](#) the module for the new configuration to take effect.

## Reboot

**Reboot** Click **Reboot** in the **Reboot** section. [Figure 73](#) prompts for confirmation.

**Figure 73** Reboot - Reboot

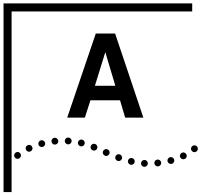


Click **Reboot** to restart the system and update the configuration data stored in the FLASH Memory.



*Note: Do not power off the unit during the reboot process.*





## TROUBLESHOOTING

This section provides possible problems that may be encountered while using the iAN-02EX VoIP Gateway and suggested solutions to them. If you follow the suggested solutions below but the iAN-02EX VoIP Gateway still does not work properly, contact technical support for further advice.

**Q:** Power LED does not light up.

- **S:** First check the AC adapter rating. The input rating must meet the specification of the country. The AC adapter must be DC 10V/1.2A output.
- **S:** If the AC adapter output is correct. The problem will be on the VoIP Gateway. Please replace the VoIP Gateway.

**Q:** Ethernet interface cannot work.

- **S:** Make sure the Ethernet adapter card installed in the PC is workable. The technician can use Hub/Switch to test it.
- **S:** Make sure the Ethernet cable is workable, and the connection between PC and the VoIP Gateway is secure.

**Q:** Broadband access cannot work.

- **S:** Make sure the Ethernet cable is workable, and the connection between Broadband device and the VoIP Gateway is secure.
- **S:** Check the DHCP or PPPoE server setting. You have to enter correct username and password for PPPoE registration.

**Q:** Cannot download the proper configuration file.

- **S:** Check if the connection between Provisioning Server and the VoIP Gateway is secure.
- **S:** Check if the file name and setting of Provisioning file are correct.

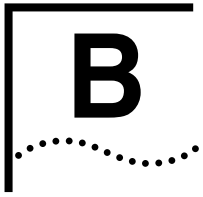
**Q:** VoIP LED does not light up.

- **S:** Check if configuration file indicates correct IP address and information of Soft-Switch.
- **S:** Check if the VoIP Gateway is able to connect to Soft-Switch.
- **S:** Check if the authorization content between the VoIP Gateway and Soft-Switch are the same.

**Q:** Cannot use PSTN backup line.

- **S:** Disconnect the VoIP Gateway from the power supply and then check if PSTN backup line is workable.
- **S:** Check the settings of "PSTN switch key and digit map" are correct.





# IAN-02EX PROVISIONING METHODOLOGY

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## Provisioning overview

UTStarcom iAN-02EX supports extensive device provisioning mechanisms. This includes firmware upgrade and configuring parameters modification on the device.

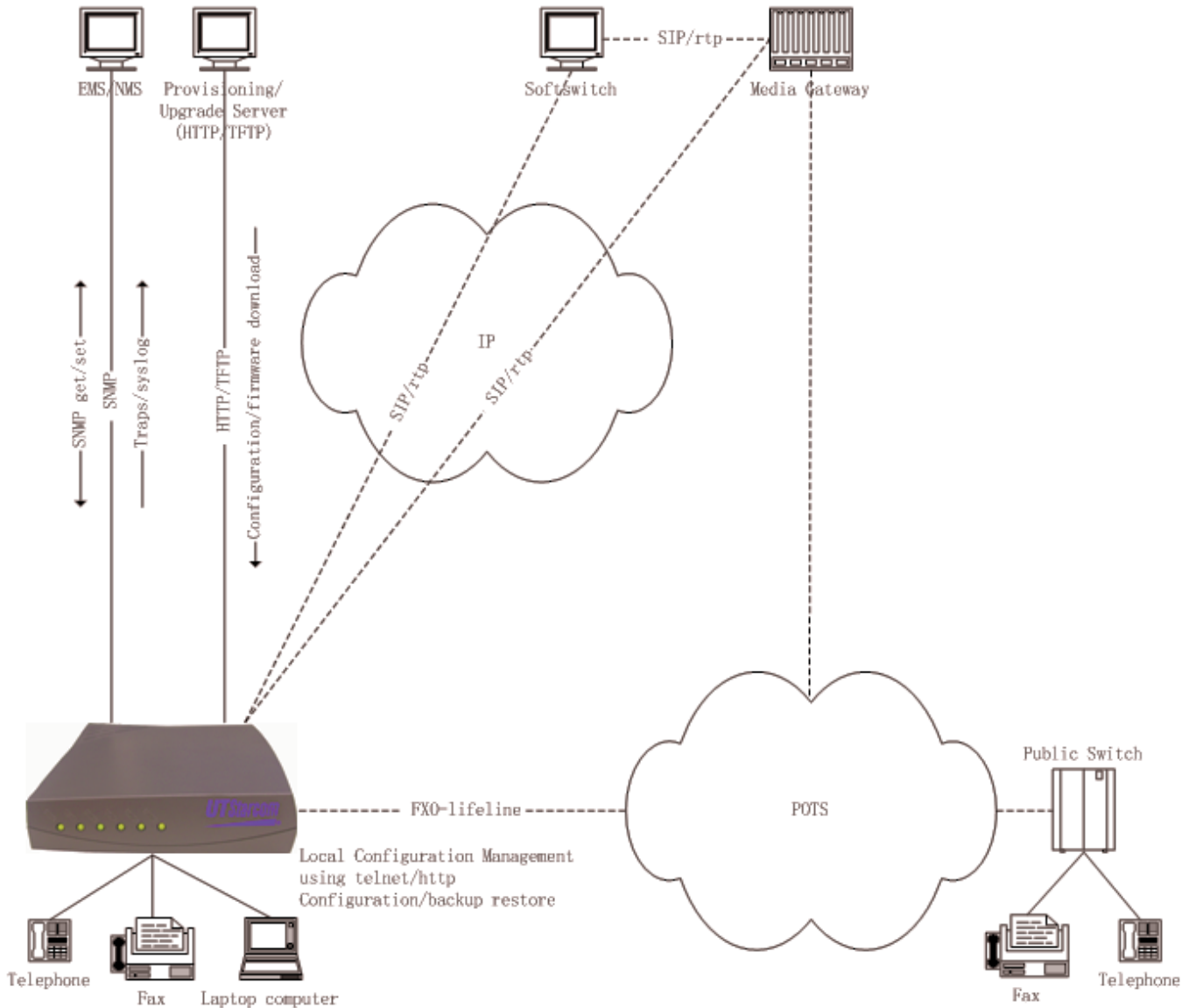
The devices are generally provisioned independently using the following methods.

- a** Using the HTTP/TFTP provisioning/Upgrade server via the WAN side access connection of ATA towards the network.
- b** Using the GUI "firmware upgrade tab" and "Config upgrade tab" via the laptop/desktop computer connected to LAN side of the ATA.
- c** Using the TFTP server and Telnet Console via the laptop/desktop computer connected to the LAN side of the ATA.

Typical provisioning/upgrade scenario is as shown in [Figure 74](#).

**Figure 74** Provisioning / Upgrade Scenario

### iAN-02EX Provisioning



In this mechanism, the device configuration/firmware can be defined on a centralized server called the Provisioning/Upgrade server (Refer section 3).

This configuration/firmware can be downloaded to the device manually or can be fetched from the device periodically. The device configuration can be defined in a flat file format (Refer section 3.8.4.), which can be either encrypted or non-encrypted ((Refer section 3.8)

## Provisioning Features

The UTStarcom iAN-02EX supports two main features in its design.

- a Remote Configuration - Auto upgrade of ATA (Analog Telephone Adapter) configuration using remote Provisioning server and configuration files.
- b Remote Firmware Upgrade - Auto upgrade of ATA firmware using remote Upgrade Server and firmware file.

The Provisioning and Upgrade servers can use both TFTP/HTTP protocol in order to transact the configuration and firmware files to the ATA.

The rules and provisioning methodology are explained in the subsequent sections.

### GUI Settings for Provisioning/Upgrade Server

[Figure 75](#) shows the provisioning tab on the GUI.

**Figure 75** Provisioning / Upgrade Server GUI Settings

Provision Configuration	
Provision Priority:	<input type="radio"/> TFTP First <input checked="" type="radio"/> HTTP First
TFTP Server Address:	devicecfg.private.ne
TFTP Server Port:	69, 100, 200 <port1>,[port2],[port3]
HTTP Server Address:	devicecfg.private.ne
HTTP Server Port:	80
Group:	0
Expires:	86400
TFTP Upgrade Server Address:	devicecfg.private.ne
TFTP Upgrade Server Port:	69
HTTP Upgrade Server Address:	devicecfg.private.ne
HTTP Upgrade Server Port:	80
SYNC Check:	<input checked="" type="radio"/> Disable <input type="radio"/> Enable <input type="radio"/> Authentication
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

User needs to setup the provisioning / Upgrade servers and ports in order to start up the process. The detailed description of the provisioning process is as described in [Chapter 5](#).

Following are the default values used for provisioning/upgrade server.

- Provisioning priority defines the provisioning/upgrade server priority example HTTP protocol first, TFTP protocol second.  
Default value=0 [HTTP first and TFTP second]
- Provisioning TFTP Server Address is set to default UTStarcom provisioning server.  
This server is used for transacting all configuration files using TFTP protocol.  
Default values=devicecfg.private.net/devicecfg/utstarcom/config
- Provisioning TFTP server ports are set to port 69 (1st-Priority), port 100 (2nd-Priority) and port 200(3rd Priority). These are TFTP ports used on the TFTP servers and their order of priority.  
Default values=69,100,200
- Provisioning HTTP Server Address is set to default UTStarcom, provisioning server.  
This server is used for transacting all configuration files using HTTP protocol.  
Default values=HTTP Address:  
devicecfg.private.net/devicecfg/utstarcom/config
- Provisioning HTTP server port is set to 80.  
This is the HTTP port to be used for the HTTP Provisioning server.  
Default values=80
- User enters Group name in the group field. This information is used in the group configuration file.  
Default values=0
- Provisioning expiry timer is set currently to 86400 seconds (24 hours). This implies that the ATA will restart its next provisioning cycle after this provisioning timer expires.
- Upgrade TFTP Server Address is set to default UTStarcom, provisioning server.  
This server is used for transacting the firmware file using TFTP protocol.  
Default values= devicecfg.private.net/firmware/utstarcom
- Upgrade TFTP server port is set to 69.  
This is the TFTP port to be used for the TFTP Upgrade server.  
Default values=69
- Upgrade HTTP Server Address is set to the default UTStarcom provisioning server.  
This server is used for transacting the firmware file using HTTP protocol.  
Default values=devicecfg.private.net/firmware/utstarcom
- Upgrade HTTP server port is set to 80.  
This is the HTTP port to be used for the HTTP Upgrade server.

Default values=80

- Sync Check is a feature where the SIP proxy initiates a sync check event in a SIP message. The ATA restarts the entire provisioning process to keep in sync with the provisioning and upgrade servers. The Authentication feature is utilized to authenticate the requesting ATA. Currently this feature has been disabled on the ATA's. In order to activate this feature, the SIP-Proxy should support this feature.



*Note: Factory shipped V1.8.2.2a version does not have these provisioning features. User has to upgrade the unit to V1.8.2.19a or later version in order to utilize these provisioning features.*

## Provisioning Process rules

### Auto-Configuration

The UTStarcom iAN-02EX supports remote auto configuration updates using remote provisioning (HTTP/TFTP) server. It has the capability to access a remote Provisioning HTTP or TFTP server and download the configuration files and perform auto updates.

### Brief description on HTTP/TFTP Provisioning servers

#### TFTP Provisioning servers

Provisioning TFTP server can be defined as either an IP-address or a URL.

User has the flexibility to disable HTTP and TFTP. This could be achieved by putting the values as, HTTP/TFTP server=0

#### Port hunting feature

3 ports can be defined for TFTP servers. If timeout occurs on one port then the ATA will hunt the remaining 2 ports as defined by the user.

During the hunting process the ATA will look for the 3 configuration files on all 3 ports.

If it finds the configuration file on one port then it will not look for this configuration file in the remaining 2 ports. This is done in order to reduce the total provisioning time.

If the value for a particular port is zero, then the port will not be tried.

If all configuration files/Firmware files are received during this process, the TFTP port hunting system will not try an HTTP configuration file search.

### HTTP Provisioning servers

Provisioning HTTP server can be defined either as an IP-address or a URL.

HTTP will have only one port e.g. port 80 or 8080. If the value for this particular port is zero, then the port will not be tried and the HTTP process will not occur.

User has the flexibility to disable TFTP and only enable HTTP. This could be achieved by putting the value as, TFTP server=0

If all configuration files/Firmware files are received during this process, then the HTTP port hunting system will not try a TFTP configuration file search.

### **Selection Priority for HTTP or TFTP servers**

User can define the priority for provisioning. Following are the priorities available for configuration using the definition mentioned in the HTTP/TFTP provisioning/upgrade server definition.

- HTTP 1st, TFTP 2nd
- TFTP 1st, HTTP 2nd
- HTTP only
- TFTP only

### **Frequency of Upgrade**

The frequency of auto updates can be set depending on the provisioning expiry timer.

The time for next update is calculated from the last reboot of the ATA.

Provisioning process is generally started in the following conditions.

- 1 Always on "power on".
- 2 After expiry timer defined by user.
- 3 On Sync check request from SIP-Proxy.

### **Provisioning Server configuration files**

User will have 3 Sets of files on the TFTP/HTTP server. Mainly the Provisioning (TFTP/HTTP) servers will contain these file e.g. General, MAC and Group file.

User can place these Configuration files on the Provisioning server for each ATA in separate directory as defined in the URL.

The General and group files will not be encrypted and they will only have general and group information depending on the area they are installed.

The MAC file is always encrypted and will have all critical data required by the ATA, which needs to be protected.

The iAN-02EX ATA supports three types of Configuration files:

- General Configuration File: This is used to configure all the general parameters of the ATA.
- Group Configuration File: This is used to configure the parameters that are similar to a specific group of ATAs. The GUI interface of the ATA has a field to set the group to which the ATA belongs and then the ATA can download the group specific configuration from the group specific cfg file.
- MAC address specific Configuration File: This is used to configure the unique parameters specific to a particular ATA.



*Note: In case of the same parameter is in any of these files, the priority order is highest for MAC address specific configuration file, followed by the group configuration file, the last being the general configuration file.*

*Internally the ATA maintains one configuration file, which contains parameters taken from all of the above configuration files.*

## File format of the configuration File

### General Configuration File naming convention

The General file contains only the general information of the ATA. It is represented as: U53V005.00.00\_UTSTARCOM-GENERAL.CFG.

File format is as follows:

<Board id>\_<company>-<General>.cfg

Example: U53V005.00.00\_UTSTARCOM-GENERAL.CFG

<Board id>= U53V005.00.00

<Company>=UTSTARCOM

<Type>=GENERAL

This file should include the general settings that are applicable to all units deployed.

The ATA compares the board ID and the company name fields on the cfg file to that which is set in the hardware. If it matches then ONLY the ATA considers this configuration file authentic and downloads it and takes the configuration parameters.

If there is a change in the parameter values compared to what is stored in the ATA, the ATA makes changes to the configuration and performs an auto reboot to bring the new configuration into effect.

### Group Configuration File

The Group file contains the group information for a set of ATA's. It is represented as: U53V005.00.00\_UTSTARCOM- ISELIN.CFG.

File format is as follows:

```
<Board id>_<company>-<group name>.cfg  
<Board id>= U53V005.00.00  
<Company>=UTSTARCOM  
<Type>=Group
```

Example: U53V005.00.00\_UTSTARCOM-ISELIN.CFG

This file should include the settings that are common to a specific group of users.

Any parameter value in this file supersedes the value from the GENERAL.cfg, in case of duplications.

The ATA compares the board ID and the company name fields on the cfg file to that which is set in the hardware. If it matches then ONLY the ATA considers this configuration file authentic and downloads it and takes the configuration parameters.

If there is a change in the parameter values compared to what is stored in the ATA, the ATA makes changes to the configuration and performs an auto reboot to bring the new configuration into effect.

### MAC address specific Configuration File

The MAC file contains the encrypted information using the MAC ID as the key. The MAC file is represented as:  
U53V005.00.00\_UTSTARCOM-00028A59FF35.CFG.

File format is as follows:

```
<Board id>_<company>-<device MAC>.cfg  
<Board id>= U53V005.00.00  
<Company>=UTSTARCOM  
<Type>=MAC ID example 00028A59FF35
```

This file should include settings that are specific to a particular ATA.

For example this MAC file is used to encrypt the username and password for SIP proxy/registrar. This file will be used to set the telephone number for each subscriber.



Please note that this file needs to be encrypted before putting it on the provisioning server.

UTStarcom provides an encryption engine (crypt.exe). The encryption key is the MAC address of the specified device. This program is available for lab testing only as it is limited to encrypting one file at a time.

After encryption the file name changes from .cfg to .enc. Rename this file as a CFG file.

**Encryption Engine** UTStarcom supplies the MD5 based encryption engine "Crypt.exe" which can run in a windows environment. Other variants for different operating systems like Linux or Sun Solaris are also available.

#### **Provisioning mechanism with MD5 based crypto utility:**

- 1 This is used only for the Mac-specific configuration files. The other .cfg files are kept in .cfg format (plain- text format) on the provisioning server.
- 2 Use the ATA MAC as the secret key.

For example use "00028A59FF26" to encrypt the file.

Then create the filename as:

U53V005.00.00\_UTSTARCOM-00028A59FF26.CFG

After encryption the file is called \*.ENC

U53V005.00.00\_UTSTARCOM -00028A59FF26.ENC

- 3 The ATA will then use its own MAC for decryption and will update the ATA with the new configuration settings.

#### **Usage of the Simple Crypt Utility on a Windows platform:**

- 1 Only for test convenience and has the limitation of encrypting one file at a time.
- 2 Click File->Settings to determine whether creating new (en, de) crypted file or just overwriting the source file.

#### **Encryption tools**

The encryption tools/kits are available on the Windows; Linux or Sun Solaris platforms. Please contact your UTStarcom, Inc Network Consultant or Sales representative for further details and files.

#### **Sample configuration file <abconfig.cfg> for firmware version "V1.8.2.19a".**

```
bootcode_version=V1.6.7
```

```
device_mode=1
```

```
wan=1
```

```
wan_ip=172.25.25.1
wan_mask=255.255.255.0
wan_gateway=172.25.25.1
wan_dns=192.168.100.1
wan_dns3=0.0.0.0
pppoe_username=1234
pppoe_password=0000
provision_priority=0
provision_server_address=devicecfg.private.net/devicec
fg/utstarcom/config
provision_server_port=69,100,200
provision_http_server_address=devicecfg.private.net/de
vicecfg/utstarcom/config
provision_http_server_port=80
provision_group=0
provision_expires=86400
provision_server_address_backup=0
provision_sync_check=0
upgrade_server_address=devicecfg.private.net/firmware/
utstarcom
upgrade_server_port=69
upgrade_http_server_address=devicecfg.private.net/firm
ware/utstarcom
upgrade_http_server_port=80
upgrade_filename=U53V004.00.00_UTSTARCOM-V1.8.2.19a.cp
r
upgrade_provisapp_filename=U53V004.00.00_UTSTARCOM-pro
visapp.V0.0.1.cpr
provisapp_enable=1
wan_provisioning=1
debug_level=0
default_t1=300
dscp=1
dmz=0
dmz_ip=0.0.0.0
dhcp_start=172.25.25.2
dhcp_end=172.25.25.21
```

```
dhcp_mode=auto
dhcp_df_gw=172.25.25.1
dhcp_dns=172.25.25.1
dhcp_dns2=0.0.0.0
dhcp_hostname=0
dhcp_wins=172.25.25.1
dhcp_domain=.com
dhcp_lease_time=86400
dhcp_resrv_ip=192.168.100.100
dhcp_resrv_mac=00-00-00-00-00-00
dos_rtp_check=1
dos_ping_reply=1
dos_http_serv_enable=1
dos_telnet_serv_enable=1
ems_server_address=0
ems_server_port=63030
ems_community=private
ems_expires=3600
factoryreset=.*#322867973738
lan_ip=172.25.25.1
lan_mask=255.255.255.0
lan_gateway=172.25.25.1
lan_dns1=192.168.100.1
lan_dns2=192.168.100.2
lan_proto=dhcp
mac_spoofing_enable=0
mac_spoofing_mac_address=000000000000
network_mtu_rate=1460
ntp_server_address=0
ntp_timezone=-5
ntp_expires=86400
pstn_switchkey=0000
pstn_offhookdelaytime=1
port_forward_1=tcp,0.0.0.0,0
port_forward_2=tcp,0.0.0.0,0
```

```
port_forward_3=tcp,0.0.0.0,0
port_forward_4=tcp,0.0.0.0,0
port_forward_5=tcp,0.0.0.0,0
port_forward_6=tcp,0.0.0.0,0
port_forward_7=tcp,0.0.0.0,0
port_forward_8=tcp,0.0.0.0,0
port_forward_9=tcp,0.0.0.0,0
port_forward_10=tcp,0.0.0.0,0
supervisor_password=utstar
snmp_sendtrap=0
snmp_get=public
snmp_set=private
snmp_trap=public
snmp_target1=0.0.0.0
snmp_target2=0.0.0.0
snmp_target3=0.0.0.0
snmp_target4=0.0.0.0
snmp_port1=0
snmp_port2=0
snmp_port3=0
snmp_port4=0
syslog_server_address=0
syslog_server_port=514
syslog_lvl34_debug=0
user_password=12345
voip_protocol=1
voip_service_line0=1
voip_user_user0_loginid=0
voip_user_user0_username=0
voip_user_user0_password=0
voip_user_user0_displayname=0
voip_user_user0_prefix=0
voip_service_line1=1
voip_user_user1_loginid=0
voip_user_user1_username=0
```

```
voip_user_user1_password=0
voip_user_user1_displayname=0
voip_user_user1_prefix=0
voip_mgcp_localport=2427
voip_mgcp_callagent_address=127.0.0.1
voip_mgcp_callagent_port=2427
voip_mgcp_wildrsip=0
voip_mgcp_epid=domain.net
voip_mgcp_epidstyle=0
voip_mgcp_expires=150
voip_callfeature_enable=1
voip_callfeature_wotransfer_en1=1
voip_callfeature_hold_en1=1
voip_callfeature_wait_en1=1
voip_callfeature_wttransfer_en1=1
voip_callfeature_alertinfo_en1=0
voip_callfeature_wait_disccode1=#88
voip_callfeature_waiting_percall_deact1=*70
voip_callfeature_foraways_num1=0
voip_callfeature_foraways_en1=0
voip_callfeature_forbusy_num1=0
voip_callfeature_forbusy_en1=0
voip_callfeature_forno_num1=0
voip_callfeature_forno_en1=0
voip_callfeature_for_ringnum1=3
voip_callfeature_alertinfo_num1=0
voip_call_second_feccode1=*25
voip_callfeature_wotransfer_feccode1=*24
voip_callfeature_wtransfer_trancode1=#44
voip_callfeature_waiting_act1=*99
voip_callfeature_waiting_deact1=#99
voip_callfeature_foraways_act1=*75
voip_callfeature_foraways_deact1=#75
voip_callfeature_forbusy_act1=*76
voip_callfeature_forbusy_deact1=#76
```

```
voip_callfeature_forno_act1=*77
voip_callfeature_forno_deact1=#77
voip_callfeature_dnd_en1=0
voip_callfeature_blockclid_en1=0
voip_callfeature_blockclid_percall_act1=*67
voip_callfeature_rej_priv_en1=0
voip_callfeature_conference_en1=1
voip_callfeature_conference_code1=#92
voip_callfeature_busyredial_en1=1
voip_callfeature_busyredial_code1=#5
voip_callfeature_busyredial_repeat1=10
voip_callfeature_busyredial_stop1=60
voip_callfeature_polarity_reversal_en1=0
voip_callfeature_wotransfer_en2=1
voip_callfeature_hold_en2=1
voip_callfeature_wait_en2=1
voip_callfeature_wttransfer_en2=1
voip_callfeature_alertinfo_en2=0
voip_callfeature_wait_disccode2=#88
voip_callfeature_waiting_percall_deact2=*70
voip_callfeature_foraways_num2=0
voip_callfeature_foraways_en2=0
voip_callfeature_forbusy_num2=0
voip_callfeature_forbusy_en2=0
voip_callfeature_forno_num2=0
voip_callfeature_forno_en2=0
voip_callfeature_for_ringnum2=0
voip_callfeature_alertinfo_num2=0
voip_call_second_feccode2=*25
voip_callfeature_wotransfer_feccode2=*24
voip_callfeature_wtransfer_trancode2=#44
voip_callfeature_waiting_act2=*99
voip_callfeature_waiting_deact2=#99
voip_callfeature_foraways_act2=*75
voip_callfeature_foraways_deact2=#75
```

```
voip_callfeature_forbusy_act2=*76
voip_callfeature_forbusy_deact2=#76
voip_callfeature_forno_act2=*77
voip_callfeature_forno_deact2=#77
voip_callfeature_dnd_en2=0
voip_callfeature_blockclid_en2=0
voip_callfeature_blockclid_percall_act2=*67
voip_callfeature_rej_priv_en2=0
voip_callfeature_conference_en2=1
voip_callfeature_conference_code2=#92
voip_callfeature_busyredial_en2=1
voip_callfeature_busyredial_code2=#5
voip_callfeature_busyredial_repeat2=10
voip_callfeature_busyredial_stop2=60
voip_callfeature_polarity_reversal_en2=0
voip_sip_with_sdp=1
voip_sip_localport=5060
voip_sip_proxy_address=0
voip_sip_proxy_port=5060
voip_sip_registrar_address=0
voip_sip_registrar_port=5060
voip_sip_outbound_address=0
voip_sip_outbound_port=5060
voip_sip_expires=3600
voip_sip_domain=0
voip_sip_subject=Call_Invite
voip_sip_proxyrequire=0
voip_sip_dnssrv=0
voip_sip_redundancy=1
voip_sip_authenticate=0
voip_codec_rate_user0=20
voip_codec_rate_user1=20
voip_codec_prefer_user0=2
voip_codec_prefer_user1=2
voip_codec_vad_user0=1
```

```
voip_codec_vad_user1=1
voip_rtp_port=13456
voip_rtp_qos_type=1
voip_rtp_qos_tos=16
voip_qos_dscp_media=184
voip_qos_dscp_signal=160
voip_endpoint_rxgain=0
voip_endpoint_txgain=0
voip_endpoint_ring=2000,4000
voip_endpoint_ring_dr6=2000,4000
voip_endpoint_ring_dr7=2000,4000
voip_endpoint_ring_dr8=2000,4000
voip_endpoint_ring_field=0
voip_endpoint_dialtone=1000,0,350,440
voip_endpoint_busytone=500,500,480,620
voip_endpoint_ringbacktone=2000,4000,440,480
voip_endpoint_callwaittone=300,10000,440,0
voip_endpoint_callwaittone_field=0
voip_endpoint_flash_user0=200,800
voip_endpoint_flash_user1=200,800
voip_fax_t38=0
voip_fax_t38port=49170
voip_stun_nataddress=0
voip_stun_server_address=0
voip_stun_server_port=3478
voip_stun_localport=3478
voip_stun_expires=60
voip_country=12
voip_digitmap1=1111|1xxxxxxxxxx|911|411|*x.#
voip_digitmap2=1111|1xxxxxxxxxx|911|411|*x.#
voip_send_#1=1
voip_send_#2=1
voip_nte_user0=1
voip_nte_user1=1
voip_info_user0=0
```



```
voip_info_user1=0
voip_jitterbufMin=0
voip_jitterbufMax=150
voip_jitterbufTarget=0
vlan_tag_priority_port0=0
vlan_tag_priority_port1=0
vlan_tag_vlan_id_port0=4
vlan_tag_vlan_id_port1=4
vlan_tag_enable=0
vlan_tag_add_port0=0
vlan_tag_add_port1=0
vlan_tag_remove_port0=0
vlan_tag_remove_port1=0
vlan_tag_replace_port0=0
vlan_tag_replace_port1=0
vlan_tag_voice_priority=1
vlan_tag_voice_vlan_id=3
```

## Firmware Upgrade

The UTStarcom iAN-02EX supports remote firmware upgrade using HTTP or TFTP servers. The frequency of auto updates can be set using the provisioning expiry timer.

Firmware is the main software image, which the ATA needs to perform all tasks in real time. Firmware upgrades are required for adding new features or to resolves bugs.

The ATA supports a mechanism to remotely access a HTTP or TFTP server and download a new firmware image.

The ATA verifies the file name as mentioned in the .cfg file to authenticate board id of the ATA and the firmware image. After a successful download the ATA performs an auto reboot to bring the new firmware image into effect.

During the period of firmware upgrade three LEDs on the unit blink simultaneously. In the event of an unsuccessful firmware download the ATA continues to function on the old image.

In order to enable remote Firmware upgrade, the items below are essential:

- 1 Make sure upgrade\_server\_address and upgrade\_filename are included in the config file to be downloaded to the device.

- 2 Ensure that the firmware filename follows the format <board\_id>-<version>.cpr.
- 3 Make sure that the filename version matches the actual version of the firmware.

For example: V2.8.2.19a must have the file name <board\_id>- V2.8.2.19a.cpr

### File naming convention

The file naming convention is expressed as follows:

Example: U53V004.00.00\_UTSTARCOM-V1.8.2.Xa.cpr

<Board id>\_<company>.cpr  
 <Board id>= U53V005.00.00  
 <Company>=UTSTARCOM  
 <.cpr>= firmware file extension.

The user will have to place this file on the Upgrade Server at the specific location where the ATA will download this file.

Example: UTSI generic release is called V1.8.2.Xa.

Note: The GUI does not allow entry of the firmware file name, this can be configured only by CLI or using the configuration file on the ATA.

### Provisioning Default Values

The default provisioning priority is HTTP first priority, TFTP second priority. It has been noticed in the field that the provisioning of configuration files and firmware is faster when using the HTTP protocol.

TFTP Address: devicecfg.private.net/devicecfg/utstarcom/config

TFTP ports 69, 100, 200

HTTP Address: devicecfg.private.net/devicecfg/utstarcom/config

HTTP port 80

TFTP upgrade Server Address: devicecfg.private.net/firmware/utstarcom

TFTP ports 69

HTTP Upgrade Server Address: devicecfg.private.net/firmware/utstarcom

HTTP port 80

### UTStarcom, Provisioning Default Flag Values

Provision\_priority=0

Provision\_server\_address=devicecfg.private.net/devicecfg/utstarcom/config

```
Provision_server_port=69,100,200
Provision_http_server_address=devicecfg.private.net/devicecfg/utstarcom/c
onfig
Provision_http_server_port=80
Provision_group=0
Provision_expires=86400
Provision_server_address_backup=0
Provision_sync_check=0
Upgrade_server_address=devicecfg.private.net/firmware/utstarcom
Upgrade_server_port=69
Upgrade_http_server_address=devicecfg.private.net/firmware/utstarcom
Upgrade_http_server_port=80
Upgrade_filename=U53V004.00.00_UTSTARCOM-V1.8.2.19a.cpr
```

### **Sample Provisioning Flow Behavior**

In the default provisioning process the Provisioning/Upgrade HTTP servers have been given priority over the Provisioning/Upgrade TFTP servers.

By default, the ATA will be using the default UTStarcom, Inc provisioning servers.

Provisioning/Upgrade HTTP servers are enabled on port 80

Provisioning/Upgrade TFTP servers are enabled on 3 ports. They are 69, 100 and 200.

Configuration group file feature is not used during the provisioning configuration file search.

Expiry, by default, is set to 24 hours (86400 seconds).

Sync feature has been disabled in this flow.

Firmware upgrade is done for the file defined in the upgrade\_filename flag.

### **Provisioning Flow**

#### **1 Step1:**

ATA will first check the provisioning flag set in the current configuration.  
By default the ATA will look for HTTP server.

#### **2 Step2:**

ATA will look for general, group (currently disabled) and MAC [Encrypted] configuration file from the HTTP server. If these files are received by the ATA the subsequent TFTP configuration file search is stopped.

**3 Step3:**

Once these files are received the ATA will compare the configuration within the ATA and reboot to assume the new configuration.

**4 Step4:**

After the completion of configuration file update, the ATA will recheck the 3-configuration files status and proceed for the Upgrade firmware process. The ATA will check the current firmware version and if required will download the new firmware and reboot when the download is complete.

**5 Step5:**

If the HTTP server is not available for some reason the system will go into the TFTP configuraiton file provisioning.

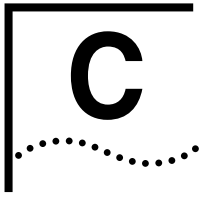
During this operation the ATA will look for the 3 configuration files on each port. If the configuraiton file is available on one port the same configuration file is not tried again on subsequent ports.

If the port value is zero on any given port then that particular port will not be tried.

Once these files are received the ATA will compare the configuration within the ATA and reboot to assume the new configuration.

**6 Step6:**

After the completion of configuration file update(s), the ATA will recheck the 3-configuration files status and proceed for the Upgrade firmware process. The ATA will check the current firmware version and if required will download the new firmware and reboot when the download is complete.



# DEFAULT SETTING & VALUE

## Default Value and Value Range

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
bootcode_version	V1.6.7	Read-only.
device_mode	1	0: Bridge Mode 1: Gateway Mode
wan	1	0: Static IP 1: DHCP client 2: PPPoE client
wan_ip	172.25.25.1	Valid IP address
wan_mask	255.255.255.0	Valid Netmask
wan_gateway	172.25.25.1	Valid IP address
wan_dns	172.25.25.1	Valid IP address
pppoe_username	1234	A generic string with up to 32 characters.
pppoe_password	0000	A generic string with up to 32 characters.
provision_priority	0	Provision priority=0 HTTP 1st and TFTP 2nd Provision priority=1 TFTP 1st and HTTP 2nd Provision priority=0 HTTP only (Set TFTP provisioning/upgrade server value=0) Provision priority=1 TFTP only (Set HTTP provisioning/upgrade server value=0)
provision_server_address	devicecfg.private.net/devicecfg/utstarcom/config	Valid IP address or URL 0: Disable
provision_server_port	69, 100, 200	Valid port number 0: Disable (Port not used)
provision_http_server_address	devicecfg.private.net/devicecfg/utstarcom/config	Valid IP address or URL 0: Disable
provision_http_server_port	80	Valid port number
provision_group	0	Enter any group number or name. 0: Disable
provision_expires	86400	Time in seconds
provision_server_address_backup	0	Valid IP address

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
upgrade_server_address	devicecfg.private.net/firmware/ utstarcom	Valid IP address or URL 0: Disable
upgrade_server_port	69	Valid port number
upgrade_http_server_address	devicecfg.private.net/firmware/ utstarcom	Valid IP address or URL 0: Disable
upgrade_http_server_port	80	Valid port number
upgrade_filename	0	A valid file with cpr extension.
upgrade_provisapp_filename	U53V004.00.00_UTSTARCOM -provisapp.V0.0.1.cpr	Read-only.
provision_sync_check=0	0:disable	0: disable 1: enable 2: enable and authenticate (Currently authenticate feature not implemented)
provisapp_enable	1	Flag for enable/disable recovery image upgrade 0: disable 1: enable
wan_provisioning	1	0: disable 1: enable
wan_dns3	0.0.0.0	Valid IP address
debug_level	0	0: do not show debug messages 1: show ERROR 2: show ERROR and WARNING 3: show ERROR, WARNING and INFO 4: show ERROR, WARNING, INFO and DEBUG
default_t1	Generic: 500	SIP-RFC 3261 T1 Timer value Range: 100 to 5000
dscp	1	1: trusted mode 2: un-trusted mode
Dmz	0	0: disable DMZ1: enable DMZ
Dmz_ip	0.0.0.0	Valid IP address
dhcp_start	172.25.25.2	Valid IP address
dhcp_end	172.25.25.21	Valid IP address
dhcp_mode	auto	Auto Manual
dhcp_df_gw	172.25.25.1	Valid IP address
dhcp_dns	172.25.25.1	Valid IP address
dhcp_dns2	0.0.0.0	Valid IP address
dhcp_hostname	0	Valid host name
dhcp_wins	172.25.25.1	Valid IP address
dhcp_domain	.com	Valid domain name
dhcp_lease_time	86400	Time in seconds

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
dhcp_resrv_ip	192.168.100.100	Valid IP address
dhcp_resrv_mac	00-00-00-00-00-00	Valid MAC address
dos_rtp_check	1	0: disable RTP checking 1: enable RTP checking
dos_ping_reply	1	0: disable ping reply 1: enable ping reply
dos_http_serv_enable	1	0: disable web access 1: enable web access
dos_telnet_serv_enable	1	0: disable telnet access 1: enable telnet access
ems_server_address	0	Valid IP address 0: Disable
ems_server_port	63030	Valid port number
ems_community	Private	PrivatePublic
ems_expires	3600	Time in seconds maximum value=86400
Factoryreset	*#322867973738	Default set to *#322867973738 used to set ATA to the factory default settings.
lan_ip	172.25.25.1	Valid IP address
lan_mask	255.255.255.0	Valid Netmask
lan_gateway	172.25.25.1	Valid IP address
lan_dns1	192.168.100.1	Valid IP address
lan_dns2	192.168.100.1	Valid IP address
lan_proto	Dhcp	Enable / Disable DHCP 0: static 1: dhcp
mac_spoofing_enable	0	0: disable mac cloning 1: enable mac cloning
mac_spoofing_mac_address	000000000000	Valid MAC address
network_mtu_rate	1460	Transport layer MTU Range: 28 to1460,
ntp_server_address	0	Valid IP address 0: Disable
ntp_timezone	-5	-13 to +12
ntp_expires	86400	Time in seconds
pstn_switchkey	0000	Valid 4 digits number
pstn_offhookdelaytime	0	Time in seconds
port_forward_1	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_2	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_3	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_4	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_5	tcp,0.0.0.0,0	Protocol, valid IP, valid Port

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
port_forward_6	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_7	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_8	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_9	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
port_forward_10	tcp,0.0.0.0,0	Protocol, valid IP, valid Port
supervisor_password	utstar	A generic string with up to 20 characters.
snmp_sendtrap	0	0: disable traps 1: enable traps.
snmp_get	public	public private
snmp_set	private	public private
snmp_trap	public	public private
snmp_target1	0.0.0.0	Valid IP address
snmp_target2	0.0.0.0	Valid IP address
snmp_target3	0.0.0.0	Valid IP address
snmp_target4	0.0.0.0	Valid IP address
snmp_port1	0	Valid port number
snmp_port2	0	Valid port number
snmp_port3	0	Valid port number
snmp_port4	0	Valid port number
syslog_server_address	0	Valid IP address 0: Disable
syslog_server_port	514	Valid port number
user_password	12345	A characters string
voip_protocol	1	0: MGCP1: SIP
voip_service_line0	1	0: disable line 0 1: enable line 0
voip_user_user0_loginid	0	0: Take username as the login ID
voip_user_user0_username	0	A characters string
voip_user_user0_password	0	A characters string
voip_user_user0_displayname	0	A characters string
voip_user_user0_prefix(generic)	0	1 digit number.
voip_service_line1	1	0: disable line 0 1: enable line 0
voip_user_user1_loginid	0	0: Take username as the login ID
voip_user_user1_username	0	A characters string
voip_user_user1_password	0	A characters string
voip_user_user1_displayname	0	A characters string
voip_user_user1_prefix	0	1 digit number.
voip_mgcp_localport	2427	Valid port number
voip_mgcp_callagent_address	127.0.0.1	Valid IP address
voip_mgcp_callagent_port	2727	Valid port number



**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
voip_mgcp_wildrsip	0	0: Wild-carded RSIP disable 1: Wild-carded RSIP enable
voip_mgcp_epid	domain.net	Valid domain name
voip_mgcp_epidstyle	0	0: aaln/#@[ip_addr] 1: mac_addr/#@[ip_addr] 2: aaln/#@mac_addr 3: aaln/#@domain_name
voip_mgcp_expires	150	Time in seconds.
voip_callfeature_enable	1	0: Disable 1: Enable
voip_callfeature_wotransfer_en1	1	0: Disable for port 1 1: Enable for port 1
voip_callfeature_hold_en1	1	0: Disable for port 1 1: Enable for port 1
voip_callfeature_wait_en1	1	0: Disable for port 1 1: Enable for port 1
voip_callfeature_wtransfer_en1	1	0: Disable for port 1 1: Enable for port 1
voip_callfeature_alertinfo_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_wait_disccode1	#88	A "#" character followed by 2 digits number.
voip_callfeature_waiting_percall_deact1	*70	A "*" character followed by 2 digits number.
voip_callfeature_foraways_num1	0	A generic string with up to 50 characters.
voip_callfeature_foraways_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_forbusy_num1	0	A generic string with up to 50 characters.
voip_callfeature_forbusy_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_forno_num1	0	A generic string with up to 50 characters.
voip_callfeature_forno_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_for_ringnum1	3	0 to 10
voip_callfeature_alertinfo_num1	0	A generic string with up to 32 characters.
voip_call_second_feccode1	*25	A "*" character followed by 2 digits number.
voip_callfeature_wotransfer_feccode1	*24	A "*" character followed by 2 digits number.
voip_callfeature_wtransfer_trancode1	#44	A "#" character followed by 2 digits number.
voip_callfeature_waiting_act1	*99	A "*" character followed by 2 digits number.
voip_callfeature_waiting_deact1	#99	A "#" character followed by 2 digits number.
voip_callfeature_foraways_act1	*75	A "*" character followed by 2 digits number.
voip_callfeature_foraways_deact1	#75	A "#" character followed by 2 digits number.

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
voip_callfeature_forbusy_act1	*76	A "*" character followed by 2 digits number.
voip_callfeature_forbusy_deact1	#76	A "#" character followed by 2 digits number.
voip_callfeature_forno_act1	*77	A "*" character followed by 2 digits number.
voip_callfeature_forno_deact1	#77	A "#" character followed by 2 digits number.
voip_callfeature_dnd_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_blockclid_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_blockclid_percall_act1	*67	A "*" character followed by 2 digits number.
voip_callfeature_rej_priv_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_conference_en1	1	0: Disable for port 1
voip_callfeature_conference_code1	#92	A "#" character followed by 2 digits number.
voip_callfeature_busyredial_en1	1	0: Disable for port 1 1: Enable for port 1
voip_callfeature_busyredial_code1	#5	A "#" character followed by 2 digits number.
voip_callfeature_busyredial_repeat1	10	Time in seconds. Must be less then the value in voip_callfeature_busyredial_stop1.
voip_callfeature_busyredial_stop1	60	Time in seconds. Must be greater then the value in voip_callfeature_busyredial_repeat1
voip_callfeature_polarity_reversal_en1	0	0: Disable for port 1 1: Enable for port 1
voip_callfeature_wotransfer_en2	1	0: Disable for port 2 1: Enable for port 2
voip_callfeature_hold_en2	1	0: Disable for port 2 1: Enable for port 2
voip_callfeature_wait_en2	1	0: Disable for port 2 1: Enable for port 2
voip_callfeature_wtransfer_en2	1	0: Disable for port 2 1: Enable for port 2
voip_callfeature_alertinfo_en2	0	0: Disable for port 2 1: Enable for port 2
voip_callfeature_wait_disccode2	#88	A "#" character followed by 2 digits number.
voip_callfeature_waiting_percall_deact2	*70	A "*" character followed by 2 digits number.
voip_callfeature_foraways_num2	0	A generic string with up to 50 characters.
voip_callfeature_foraways_en2	0	0: Disable for port 2 1: Enable for port 2
voip_callfeature_forbusy_num2	0	A generic string with up to 50 characters.
voip_callfeature_forbusy_en2	0	0: Disable for port 2 1: Enable for port 2

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
voip_callfeature_forno_num2	0	A generic string with up to 50 characters.
voip_callfeature_forno_en2	0	0: Disable for port 2 1: Enable for port 2
voip_callfeature_for_ringnum2	0	0 to 10
voip_callfeature_alertinfo_num2	0	A generic string with up to 32 characters.
voip_call_second_feccode2	*25	A "*" character followed by 2 digits number.
voip_callfeature_wotransfer_feccode2	*24	A "*" character followed by 2 digits number.
voip_callfeature_wtransfer_trancode2	#44	A "#" character followed by 2 digits number.
voip_callfeature_waiting_act2	*99	A "*" character followed by 2 digits number.
voip_callfeature_waiting_deact2	#99	A "#" character followed by 2 digits number.
voip_callfeature_foraways_act2	*75	A "*" character followed by 2 digits number.
voip_callfeature_foraways_deact2	#75	A "#" character followed by 2 digits number.
voip_callfeature_forbusy_act2	*76	A "*" character followed by 2 digits number.
voip_callfeature_forbusy_deact2	#76	A "#" character followed by 2 digits number.
voip_callfeature_forno_act2	*77	A "*" character followed by 2 digits number.
voip_callfeature_forno_deact2	#77	A "#" character followed by 2 digits number.
voip_callfeature_dnd_en2	0	0: Disable for port 2 1: Enable for port 2
voip_callfeature_blockclid_en2	0	0: Disable for port 2 1: Enable for port 2
voip_callfeature_blockclid_percall_act2	*67	A "*" character followed by 2 digits number.
voip_callfeature_rej_priv_en2	0	0: Disable for port 2 1: Enable for port 2
voip_callfeature_conference_en2	1	0: Disable for port 2 1: Enable for port 2
voip_callfeature_conference_code2	#92	A "#" character followed by 2 digits number.
voip_callfeature_busyredial_en2	1	0: Disable for port 2 1: Enable for port 2
voip_callfeature_busyredial_code2	#5	A "#" character followed by 2 digits number.
voip_callfeature_busyredial_repeat2	10	Time in seconds. Must be less then the value in voip_callfeature_busyredial_stop2.
voip_callfeature_busyredial_stop2	60	Time in seconds. Must be greater then the value in voip_callfeature_busyredial_repeat2
voip_callfeature_polarity_reversal_en2	0	0: Disable for port 2 1: Enable for port 2
voip_sip_with_sdp	1	0= without SDP 1=with SDP
voip_sip_localport	5060	Valid port number
voip_sip_proxy_address	0	Valid IP address 0: Disable
voip_sip_proxy_port	5060	Valid port number

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
voip_sip_registrar_address	0	Valid IP address 0: Disable
voip_sip_registrar_port	5060	Valid port number
voip_sip_outbound_address	0	Valid IP address 0: Disable
voip_sip_outbound_port	5060	Valid port number
voip_sip_expires	3600	Time in seconds
voip_sip_domain	0	0: use local IP address as the domain name
voip_sip_subject	Call_Invite	A character string. 0: Disable
voip_sip_proxyrequire	0	A generic string with up to 64 characters.
voip_sip_dnssrv	0	Flag for enable/disable DNS-SRV 0: disable 1: enable
voip_sip_redundancy	1	Flag for enable/disable redundancy 0: disable 1: enable
voip_sip_authenticate	0	Flag for enable/disable authentication 0: disable 1: enable
voip_codec_rate0	20	Line1 (FXS-port1) codec rate values102030
voip_codec_rate1	20	Line2 (FXS-port2) codec rate values 102030
voip_codec_prefer0	2	Line1 (FXS-port1) prefer codec type 0: PCMU (G.711 u-law) 1: PCMA (G.711 A-law) 2: G.729A 3: G.723.1 4: G.726
voip_codec_prefer1	2	Line2 (FXS-port2) prefer codec type 0: PCMU (G.711 u-law) 1: PCMA (G.711 A-law) 2: G.729A 3: G.723.1 4: G.726
voip_codec_vad0	1	Line1 (FXS-port1) VAD functionality 0: disable 1: enable
voip_codec_vad1	1	Line2 (FXS-port2) VAD functionality 0: disable 1: enable

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
voip_rtp_port	13456	Valid port number
voip_rtp_qos_type	1	0: disable 1: DiffServ 2: Tos
voip_rtp_qos_tos	16	0 to 3600
voip_qos_dscp_media	184	0 to 3600
voip_qos_dscp_signal	160	0 to 3600
voip_endpoint_rxgain	0	-36 to +18 dB
voip_endpoint_txgain	0	-36 to +18 dB
voip_endpoint_ring	2000,4000	<ontime,offtime> or <ontime1,offtime1,ontime2,offtime2>
voip_endpoint_ring_dr6	2000,4000	<ontime,offtime> or <ontime1,offtime1,ontime2,offtime2>
voip_endpoint_ring_dr7	2000,4000	<ontime,offtime> or <ontime1,offtime1,ontime2,offtime2>
voip_endpoint_ring_dr8	2000,4000	<ontime,offtime> or <ontime1,offtime1,ontime2,offtime2>
voip_endpoint_ring_field	0	
voip_endpoint_dialtone	1000,0,350,440	<ontime,offtime,freq1,freq2>
voip_endpoint_busytone	500,500,480,620	<ontime,offtime,freq1,freq2> or <ontime1,offtime1,ontime2,offtime2,freq1,freq2>
voip_endpoint_ringbacktone	2000,4000,440,480	
voip_endpoint_callwaittone	300,10000,440,0	<ontime,offtime,freq1,freq2> or <ontime1,offtime1,ontime2,offtime2,freq1,freq2> or <ontime1,offtime1,ontime2,offtime2,ontime3,offtime3,freq1,freq2>
voip_endpoint_callwaittone_field	0	
voip_endpoint_flash0	200,800	Line1 (FXS-port1) Hook- flash range: (Enter valid number in (ms)) for <min, max>hookflash limits.  Min: lower bound of detecting hook flash. (In Milli-seconds)  Max: upper bound of detecting hook flash. (In Milli-seconds)

**Table 46** abconfig.cfg Default Value and Value Range

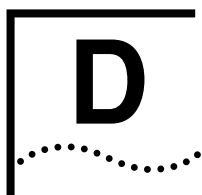
Field	Default Value	Valid Range
voip_endpoint_flash1	200,800	Line1 (FXS-port2) Hook-flash range: (Enter valid number in (ms)) for <min, max>hookflash limits.  Min: lower bound of detecting hook flash. (In Milli-seconds)  Max: upper bound of detecting hook flash. (In Milli-seconds)
voip_fax_t38	0	0: disable  1: enable
voip_fax_t38port	49170	Valid port number
voip_stun_nataddress	0	Valid IP address  0: Disable
voip_stun_server_address	0	Valid IP address  0: Disable
voip_stun_server_port	3478	Valid port number
voip_stun_localport	3478	Valid port number
voip_stun_expires	60	Time in seconds
voip_country	12	0 = Custom Specific Values  12= NORTH AMERICA
voip_digitmap1	Generic: 1111 1xxxxxxxxxx 911 411 *x.#	Custom Specific Values
voip_digitmap2	Generic: 1111 1xxxxxxxxxx 911 411 *x.#	Custom Specific Values
voip_nte_user0	1	RFC-2833  0=disable  1=enable
voip_nte_user1	1	RFC-2833  0=disable  1=enable
voip_info_user0	0	SIP-INFO  0=disable  1=enable
voip_info_user1	0	SIP-INFO  0=disable  1=enable
voip_jitterbufMin	0	0 to 150
voip_jitterbufMax	150	0 to 150
voip_jitterbufTarget	0	0 to 150
vlan_tag_priority_port0	0	0 - 65535
vlan_tag_priority_port1	0	0 - 65535
vlan_tag_vlan_id_port0	4	0 to 100
vlan_tag_vlan_id_port1	4	0 to 100

**Table 46** abconfig.cfg Default Value and Value Range

Field	Default Value	Valid Range
vlan_tag_enable	0	0: disable 1: enable
vlan_tag_add_port0	0	0: disable 1: enable
vlan_tag_add_port1	0	0: disable 1: enable
vlan_tag_remove_port0	0	0: disable 1: enable
vlan_tag_remove_port1	0	0: disable 1: enable
vlan_tag_replace_port0	0	0: disable 1: enable
vlan_tag_replace_port1	0	0: disable 1: enable
vlan_tag_voice_priority	1	0 to 8
vlan_tag_voice_vlan_id	3	0 to 100







# IAN-02EX SNMP MIB REFERENCE

MIB Scalar Objects as defined in UTSI-VOIPRG-MIB.mib are listed below.



*Note: Please contact your UTStarcom, Inc Network Consultant or Sales representative for the UTSI-VOIPRG-MIB.mib file.*

## MIB Scalar Objects

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
System Status 1.3.6.1.4.1.4684.1.1.0 read-only current	The device status. It will be queried by SNMP platform.	INTEGER <ul style="list-style-type: none"><li>■ normal(1)</li><li>■ minor(2)</li><li>■ major(3)</li></ul>
systemVersion 1.3.6.1.4.1.4684.1.2.0 read-only current	System software version. It will be queried by SNMP platform for matching LCT and GW SW version.	DisplayString (0..20)
currentAlarmNum 1.3.6.1.4.1.4684.5.1.1.1.1.5.1.0 read-only current	The number of entries in current alarm table	INTEGER
rgCommonReset 1.3.6.1.4.1.4684.5.4.1.1.0 read-write current	Reset system. Trigger(1), Normal(2).	INTEGER <ul style="list-style-type: none"><li>■ trigger(1)</li><li>■ normal(2)</li></ul>
rgCommonFactoryReset 1.3.6.1.4.1.4684.5.4.1.2.0 read-write current	Reset to factory default setting. Trigger(1), Normal(2).	INTEGER <ul style="list-style-type: none"><li>■ trigger(1)</li><li>■ normal(2)</li></ul>
rgCommonHardwareVersion 1.3.6.1.4.1.4684.5.4.1.3.0 read-only current	Hardware version.	DisplayString (0..255)
rgCommonFirmwareVersion 1.3.6.1.4.1.4684.5.4.1.4.0 read-only current	software version.	DisplayString (0..255)
rgCommonBootVersion 1.3.6.1.4.1.4684.5.4.1.5.0 read-only current	Boot code version.	DisplayString (0..255)

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgCommonDeviceType 1.3.6.1.4.1.4684.5.4.1.6.0 read-only current	Device type of device.	DisplayString (0..255)
rgCommonDeviceDescription 1.3.6.1.4.1.4684.5.4.1.7.0 read-only current	A textual description of the system device. This value should include the full name and version identification of the system's hardware type, software operating-system, and networking software. It is mandatory that this only contain printable ASCII characters.	DisplayString (0..255)
rgCommonLastBuildDate 1.3.6.1.4.1.4684.5.4.1.100.0 read-only current	Last build date of system software	DisplayString (0..255)
rgCommonLastBuildTime 1.3.6.1.4.1.4684.5.4.1.101.0 read-only current	Last build time of system software	DisplayString (0..255)
rgSysDescription 1.3.6.1.4.1.4684.5.4.2.1.0 read-write current	The description of system.	DisplayString (0..255)
rgSysDateTime 1.3.6.1.4.1.4684.5.4.2.2.0 read-only current	Current system date and time in GMT.	DisplayString (0..255)
rgSysPhysAddr 1.3.6.1.4.1.4684.5.4.2.3.0 read-only current	Physical address of system.	DisplayString (0..255)
rgSysIpAddr 1.3.6.1.4.1.4684.5.4.2.4.0 read-only current	The IP address of system.	IpAddress
rgSysSubnetMask 1.3.6.1.4.1.4684.5.4.2.5.0 read-only current	The net mask of system.	IpAddress
rgSysDefGateway 1.3.6.1.4.1.4684.5.4.2.6.0 read-only current	The default gateway of system.	IpAddress
rgSysPassSupervisor 1.3.6.1.4.1.4684.5.4.2.7.0 read-only current	Login password for supervisor.	DisplayString (0..255)
rgSysPassUser 1.3.6.1.4.1.4684.5.4.2.8.0 read-only current	Login password for user.	DisplayString (0..255)

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgSysLedPower 1.3.6.1.4.1.4684.5.4.2.9.0 read-only current	LED display status for power supply indicator.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> <li>■ blink(3)</li> </ul>
rgSysLedLan 1.3.6.1.4.1.4684.5.4.2.10.0 read-only current	LED display status for LAN linking indicator.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> <li>■ blink(3)</li> </ul>
rgSysLedWan 1.3.6.1.4.1.4684.5.4.2.11.0 read-only current	LED display status for WAN linking indicator.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> <li>■ blink(3)</li> </ul>
rgSysLedVrdy 1.3.6.1.4.1.4684.5.4.2.12.0 read-only current	LED display status for VoIP ready indicator.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> <li>■ blink(3)</li> </ul>
rgSysInternetAccessMode 1.3.6.1.4.1.4684.5.4.2.13.0 read-write current	The method of Internet(WAN) access.	INTEGER <ul style="list-style-type: none"> <li>■ static(1)</li> <li>■ dhcp(2)</li> <li>■ pppoe(3)</li> </ul>
rgSysNteEnable 1.3.6.1.4.1.4684.5.4.2.14.0 read-write current	Enable/Disable NTE function	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> </ul> <p>default = off</p>
rgPortNumTotal 1.3.6.1.4.1.4684.5.4.3.1.0 read-only current	The total port number of VoIP Gateway(FXS interface).	Integer32
rgPortNumUsable 1.3.6.1.4.1.4684.5.4.3.2.0 read-only current	The usable port number of VoIP Gateway(FXS interface).	Integer32
rgPortNumBusy 1.3.6.1.4.1.4684.5.4.3.3.0 read-only current	The busy port number of VoIP Gateway(FXS interface).	Integer32
rgPortNumFault 1.3.6.1.4.1.4684.5.4.3.4.0 read-only current	The fault port number of VoIP Gateway(FXS interface).	Integer32
rgPortNumForbidden 1.3.6.1.4.1.4684.5.4.3.5.0 read-only current	The forbidden port number of VoIP Gateway(FXS interface).	Integer32

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgVoipProtocol 1.3.6.1.4.1.4684.5.4.4.1.0 read-write current	VoIP signaling protocol.	INTEGER <ul style="list-style-type: none"> <li>■ mgcp(1)</li> <li>■ sip(2)</li> <li>■ h323(3)</li> </ul>
rgVoipMgcpLocalport 1.3.6.1.4.1.4684.5.4.4.2.1.0 read-write current	The local listening port of MGCP stack.	INTEGER (1..65535)
rgVoipMgcpPriCallAgentAddress 1.3.6.1.4.1.4684.5.4.4.2.2.0 read-write current	The network IP address of the primary CallAgent.	IpAddress
rgVoipMgcpPriCallAgentPort 1.3.6.1.4.1.4684.5.4.4.2.3.0 read-write current	The port number of the primary CallAgent.	INTEGER (1..65536)
rgVoipMgcpSecCallAgentAddress 1.3.6.1.4.1.4684.5.4.4.2.4.0 read-write current	The network IP address of the secondary CallAgent.	IpAddress
rgVoipMgcpSecCallAgentPort 1.3.6.1.4.1.4684.5.4.4.2.5.0 read-write current	The port number of the secondary CallAgent.	INTEGER (1..65536)
rgVoipMgcpExpires 1.3.6.1.4.1.4684.5.4.4.2.6.0 read-write current	The period(in seconds) of sending keep alive message to callagent.	Integer32
rgVoipMgcpWildRsip 1.3.6.1.4.1.4684.5.4.4.2.7.0 read-write current	Enable / Disable sending RSIP with wildcarded endpoint id.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> </ul> default = off
rgVoipMgcpEpIdStyle 1.3.6.1.4.1.4684.5.4.4.2.8.0 read-write current	Specify endpoint id style.	INTEGER <ul style="list-style-type: none"> <li>■ aalN-IpAddr(0)</li> <li>■ macAddr-IpAddr(1)</li> <li>■ aalN-MacAddr(2)</li> <li>■ aalN-DomainName(3)</li> </ul>
rgVoipSipLocalport 1.3.6.1.4.1.4684.5.4.4.3.1.0 read-write current	The local listening port of SIP stack.	INTEGER (1..65536)
rgVoipSipProxyAddress 1.3.6.1.4.1.4684.5.4.4.3.2.0 read-write current	The network IP addresss of SIP proxy.	IpAddress

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgVoipSipProxyPort 1.3.6.1.4.1.4684.5.4.4.3.3.0 read-write current	The port number of SIP proxy.	INTEGER (1..65536)
rgVoipSipRegistrarAddress 1.3.6.1.4.1.4684.5.4.4.3.4.0 read-write current	The network IP address of SIP registrar.	IpAddress
rgVoipSipRegistrarPort 1.3.6.1.4.1.4684.5.4.4.3.5.0 read-write current	The port number of SIP registrar.	INTEGER (1..65536)
rgVoipSipExpires 1.3.6.1.4.1.4684.5.4.4.3.6.0 read-write current	The period(in seconds) that the SIP registration will expire.	Integer32
rgVoipSipDomain 1.3.6.1.4.1.4684.5.4.4.3.7.0 read-write current	The SIP domain name for the URI to be registered. e.g., if the settings are, username : 1234 domain : iptel.org registrar: 195.37.77.101 then the URI sip:1234@iptel.org will be registered in 195.37.77.101.	DisplayString (0..255)
rgVoipSipSubject 1.3.6.1.4.1.4684.5.4.4.3.8.0 read-write current	The content of the SIP subject header in outgoing INVITE message. This is used to indicate the title of the call.	DisplayString (0..255)
rgVoipH323Localport 1.3.6.1.4.1.4684.5.4.4.4.1.0 read-write current	The local listening port of H.323 stack.	INTEGER (1..65536)
rgVoipH323GatekeeperAddress 1.3.6.1.4.1.4684.5.4.4.4.2.0 read-write current	The network IP address of H.323 gatekeeper.	IpAddress
rgVoipH323GatekeeperPort 1.3.6.1.4.1.4684.5.4.4.4.3.0 read-write current	The listening port of H.323 gatekeeper.	INTEGER (1..65536)
rgVoipH323Expires 1.3.6.1.4.1.4684.5.4.4.4.4.0 read-write current	The period(in seconds) of sending keep alive message to gatekeeper.	Integer32
rgVoipH323Faststart 1.3.6.1.4.1.4684.5.4.4.4.5.0 read-write current	Enable/Disable H.323 fast connect procedure.	TruthValue
rgVoipCodecRate 1.3.6.1.4.1.4684.5.4.4.5.0 read-write current	The preferred codec rate (packet period) in milliseconds.	INTEGER (1..256)

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgVoipCodecPrefer 1.3.6.1.4.1.4684.5.4.4.6.0 read-write current	The preferred codec. (e.g., PCMU(G.711 u-law), PCMA(G.711 A-law), G.729A, G.723.1).	INTEGER <ul style="list-style-type: none"> <li>■ pcmu(1)</li> <li>■ pcma(2)</li> <li>■ g729a(3)</li> <li>■ g7231(4)</li> </ul> default = pcmu
rgVoipCodecVad 1.3.6.1.4.1.4684.5.4.4.7.0 read-write current	Enable/Disable Voice Activity Detection(VAD).	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> </ul>
rgVoipFaxT38 1.3.6.1.4.1.4684.5.4.4.8.0 read-write current	Enable/Disable T.38 fax.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> </ul>
rgVoipFaxT38Port 1.3.6.1.4.1.4684.5.4.4.9.0 read-write current	The port number to send/receive T.38 packets.	INTEGER (1..65536)
rgVoipPstnSwitchkey 1.3.6.1.4.1.4684.5.4.4.10.0 read-write current	The keys of switching from VoIP mode to PSTN mode.	DisplayString (0..255)
rgVoipRtpPort 1.3.6.1.4.1.4684.5.4.4.11.0 read-write current	Specify the port number to send/receive RTP packets. port : used by 1st RTP session port + 2: used by 2nd RTP session	INTEGER (1..65536)
rgVoipRtpTos 1.3.6.1.4.1.4684.5.4.4.12.0 read-write current	The IP TOS(type of service) of RTP packet.	INTEGER (1..256)
rgVoipRxGain 1.3.6.1.4.1.4684.5.4.4.13.0 read-write current	The adjustment of receive audio gain value in dB. dB: -36 ~ +18.	INTEGER (-36..18)
rgVoipTxGain 1.3.6.1.4.1.4684.5.4.4.14.0 read-write current	The adjustment of transmit audio gain value in dB. dB: -36 ~ +18.	INTEGER (-36..18)
rgVoipSpeedDialCount 1.3.6.1.4.1.4684.5.4.4.15.1.0 read-only current	The entry count of PSTN redialing digitmap.	Integer32
rgVoipDigitmapCount 1.3.6.1.4.1.4684.5.4.4.16.1.0 read-only current	The entry count of PSTN redialing digitmap.	Integer32
rgCallHistoryVoipInCount 1.3.6.1.4.1.4684.5.4.5.2.0 read-only current	The incoming count of Call History entry.	Counter32

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgCallHistoryVoipOutCount 1.3.6.1.4.1.4684.5.4.5.3.0 read-only current	The outgoing count of Call History entry.	Counter32
rgCallHistoryVoipOutSuccess 1.3.6.1.4.1.4684.5.4.5.4.0 read-only current	The total number of successful placed outgoing call.	Counter32
rgCallHistoryVoipOutFail 1.3.6.1.4.1.4684.5.4.5.5.0 read-only current	The total number of failed placed outgoing call.	Counter32
rgCallHistoryPstnInCount 1.3.6.1.4.1.4684.5.4.5.6.0 read-only current	The incoming count of Call History entry.	Counter32
rgCallHistoryPstnOutCount 1.3.6.1.4.1.4684.5.4.5.7.0 read-only current	The outgoing count of Call History entry.	Counter32
mgToneType 1.3.6.1.4.1.4684.5.4.6.1.0 read-write current	Select the tone type you want to config. ring(1) : or ringback(2): or dial(3) : busy(4) : or callwait(5): or	INTEGER <ul style="list-style-type: none"> <li>■ ring(1)</li> <li>■ ringback(2)</li> <li>■ dial(3)</li> <li>■ busy(4)</li> <li>■ callwait(5)</li> </ul>
mgToneOnTime1 1.3.6.1.4.1.4684.5.4.6.2.0 read-write current	The active time of ring tone cadence.	INTEGER (1..65536)
mgToneOffTime1 1.3.6.1.4.1.4684.5.4.6.3.0 read-write current	The inactive time of ring tone cadence.	INTEGER (1..65536)
mgToneOnTime2 1.3.6.1.4.1.4684.5.4.6.4.0 read-write current	The active time of ring tone cadence. 0 means we don't need this object value.	INTEGER (0..65536) default = 0
mgToneOffTime2 1.3.6.1.4.1.4684.5.4.6.5.0 read-write current	The inactive time of ring tone cadence. 0 means we don't need this object value.	INTEGER (0..65536) default = 0
mgToneFreq1 1.3.6.1.4.1.4684.5.4.6.6.0 read-write current	The first frequency of tone type cadence.	Integer32
mgToneFreq2 1.3.6.1.4.1.4684.5.4.6.7.0 read-write current	The second frequency of tone type cadence.	Integer32

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
mgToneOperation 1.3.6.1.4.1.4684.5.4.6.8.0 read-write current	Enable/Disable tone modulation by tone type.	INTEGER ■ on(1) ■ off(2)
rgMgtDhcpServerIp 1.3.6.1.4.1.4684.5.4.7.1.0 read-only current	The network IP address of the local DHCP server for LAN.	IpAddress
rgMgtPriDnsIp 1.3.6.1.4.1.4684.5.4.7.2.0 read-only current	The network IP address of primary DNS server.	IpAddress
rgMgtSecDnsIp 1.3.6.1.4.1.4684.5.4.7.3.0 read-only current	The network IP address of secondary DNS server.	IpAddress
rgMgtPppoeServer 1.3.6.1.4.1.4684.5.4.7.4.0 read-only current	The network IP address of PPPoE server.	IpAddress
rgMgtPppoeUsername 1.3.6.1.4.1.4684.5.4.7.5.0 read-write current	Specify the user name of PPPoE client.	DisplayString (0..255)
rgMgtPppoePassword 1.3.6.1.4.1.4684.5.4.7.6.0 read-write current	Specify the password of PPPoE client.	DisplayString (0..255)
rgMgtProvisionServerAddress 1.3.6.1.4.1.4684.5.4.7.7.0 read-write current	The network IP address of the provision server.	IpAddress
rgMgtProvisionServerPort 1.3.6.1.4.1.4684.5.4.7.8.0 read-write current	The port number of the provision server.	INTEGER (1..65536)
rgMgtProvisionServerGroup 1.3.6.1.4.1.4684.5.4.7.9.0 read-write current	The group that device belongs to.	DisplayString (0..255)
rgMgtProvisionServerExpires 1.3.6.1.4.1.4684.5.4.7.10.0 read-write current	The period(in seconds) of retrieving configuration from provision server.	Integer32
rgMgtNtpServerAddress 1.3.6.1.4.1.4684.5.4.7.15.0 read-write current	The network IP address of the NTP server.	IpAddress
rgMgtNtpTimezone 1.3.6.1.4.1.4684.5.4.7.16.0 read-write current	The time zone of current location for NTP.	INTEGER (-12..12)



**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgMgtNtpExpires 1.3.6.1.4.1.4684.5.4.7.17.0 read-write current	The period(in seconds) of retrieving time from NTP server.	Integer32
rgMgtNtpSync 1.3.6.1.4.1.4684.5.4.7.18.0 read-write current	Synchronize local time with ntp server.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> </ul> default = off
rgMgtSyslogServerAddress 1.3.6.1.4.1.4684.5.4.7.19.0 read-write current	The network IP address of the syslog server.	IpAddress
rgMgtSyslogServerPort 1.3.6.1.4.1.4684.5.4.7.20.0 read-write current	The port number of the syslog server.	INTEGER (1..65536)
rgMgtVoipStunNatAddress 1.3.6.1.4.1.4684.5.4.7.21.0 read-write current	The network IP address of the NAT firewall. Should be specified if this device is located behind a NAT firewall. The NAT firewall should also activate port mapping or DMZ funtions to forward incoming voip signaling packet and RTP packets to this device. Make sure the STUN(Simple Traversal of User Datagram) server address is 0 if you want to specify nataddress by yourself. If the IP address of the NAT firewall is unknown, specify STUN server to determine it automatically.	IpAddress
rgMgtVoipStunServerIp 1.3.6.1.4.1.4684.5.4.7.22.0 read-write current	The network IP address of STUN(Simple Traversal of User Datagram) server. It is used to detecting the IP address of the NAT firewall. If this function is enabled, after detecting the IP address of the NAT firewall, 'nataddress' will be changed automatically.	IpAddress
rgMgtVoipStunServerPort 1.3.6.1.4.1.4684.5.4.7.23.0 read-write current	The port number of the STUN server.	INTEGER (1..65536)
rgMgtVoipStunLocalport 1.3.6.1.4.1.4684.5.4.7.24.0 read-write current	The local listening port number of the STUN client.	INTEGER (1..65536)
rgMgtVoipStunExpires 1.3.6.1.4.1.4684.5.4.7.25.0 read-write current	The period(in seconds) of sending STUN message to STUN server.	Integer32
rgEmsSnmpGetCommunity 1.3.6.1.4.1.4684.5.4.8.1.0 read-write current	The snmp get community name of system.	DisplayString (0..255)
rgEmsSnmpSetCommunity 1.3.6.1.4.1.4684.5.4.8.2.0 read-write current	The snmp set community name of system.	DisplayString (0..255)

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
rgEmsSnmpTrapCommunity 1.3.6.1.4.1.4684.5.4.8.3.0 read-write current	The snmp trap community name of system.	DisplayString (0..255)
rgEmsSnmpTrapIP1 1.3.6.1.4.1.4684.5.4.8.4.0 read-write current	The network IP address of SNMP server for receiving traps.	IpAddress
rgEmsSnmpTrapIP2 1.3.6.1.4.1.4684.5.4.8.5.0 read-write current	The network IP address of SNMP server for receiving traps.	IpAddress
rgEmsSnmpTrapIP3 1.3.6.1.4.1.4684.5.4.8.6.0 read-write current	The network IP address of SNMP server for receiving traps.	IpAddress
rgEmsSnmpTrapIP4 1.3.6.1.4.1.4684.5.4.8.7.0 read-write current	The network IP address of SNMP server for receiving traps.	IpAddress
rgEmsSnmpTrapPort1 1.3.6.1.4.1.4684.5.4.8.8.0 read-write current	The port number of SNMP server for receiving traps.	INTEGER (1..65536)
rgEmsSnmpTrapPort2 1.3.6.1.4.1.4684.5.4.8.9.0 read-write current	The port number of SNMP server for receiving traps.	INTEGER (1..65536)
rgEmsSnmpTrapPort3 1.3.6.1.4.1.4684.5.4.8.10.0 read-write current	The port number of SNMP server for receiving traps.	INTEGER (1..65536)
rgEmsSnmpTrapPort4 1.3.6.1.4.1.4684.5.4.8.11.0 read-write current	The port number of SNMP server for receiving traps.	INTEGER (1..65536)
rgEmsExpires 1.3.6.1.4.1.4684.5.4.8.12.0 read-write current	The period(in seconds) of sending IP inform message to EMS server.	Integer32
rgCurrentAlarmReset 1.3.6.1.4.1.4684.5.4.9.2.0 read-write current	Reset current alarm table.	INTEGER <ul style="list-style-type: none"> <li>■ trigger(1)</li> <li>■ normal(2)</li> </ul>
rgHistoryAlarmNum 1.3.6.1.4.1.4684.5.4.10.1.0 read-only current	The number of entries in history alarm table	INTEGER
rgHistoryAlarmReset 1.3.6.1.4.1.4684.5.4.10.2.0 read-write current	Reset history alarm table.	INTEGER <ul style="list-style-type: none"> <li>■ trigger(1)</li> <li>■ normal(2)</li> </ul>

**Table 47** MIB Scalar Objects Table

Node / OID	Description	Settings
notificationSeq 1.3.6.1.4.1.4684.5.4.20.1.0 accessible-for-notify current	Notification sequence number	Integer32
notificationClass 1.3.6.1.4.1.4684.5.4.20.2.0 accessible-for-notify current	Notification class type	INTEGER <ul style="list-style-type: none"> <li>■ fault(4)</li> <li>■ restore(5)</li> <li>■ event(6)</li> </ul>
notificationPortIdx 1.3.6.1.4.1.4684.5.4.20.3.0 accessible-for-notify current	Notification port index number	Integer32
notificationSoftSwitchIdx 1.3.6.1.4.1.4684.5.4.20.4.0 accessible-for-notify current	Notification soft switch number	Integer32

**systemInformationTable**

Indexed by:

- systemInformationIndex

**Table 48** System Information Table

Node / OID	Description	Settings
systemInformationIndex 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.1 read-only current	Table entry index value	INTEGER
tFTPServerIP 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.41 read-write current	The ip address of TFTP server for software download	IpAddress
tFTPFileName 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.42 read-write current	file name to be downloaded via TFTP	DisplayString (0..255)
tFTPOperation 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.43 read-write current	Doing download software with file name as tFTPFileName for software upgrade.	INTEGER <ul style="list-style-type: none"> <li>■ off(0)</li> <li>■ swDownload(1)</li> </ul> default = off
tFTPResult 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.44 read-only current	Tftp download result.	INTEGER <ul style="list-style-type: none"> <li>■ fail(0)</li> <li>■ success(1)</li> </ul> default = fail

**Table 48** System Information Table

Node / OID	Description	Settings
loginUserName 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.1.48 read-write current	password of supervisor	DisplayString (0..40)
loginPasswd 1.3.6.1.4.1.4684.5.1.1.1.1.1.1.1.49 read-write current	password of supervisor	DisplayString (0..40)

**currentAlarmTable** Indexed by:

- currentAlarmIndex

**Table 49** Current Alarm Table

Node / OID	Description	Settings
currentAlarmIndex 1.3.6.1.4.1.4684.5.1.1.1.1.1.5.2.1.1 read-only current	table index of Current Alarm Table	INTEGER (1..6)
currentAlarmObject 1.3.6.1.4.1.4684.5.1.1.1.1.1.5.2.1.2 read-only current	The if number of current alarm 0 - system 1 - 16 VoIP endpoints	INTEGER (0..16)
currentAlarmCause 1.3.6.1.4.1.4684.5.1.1.1.1.1.5.2.1.3 read-only current	The current alarm cause	ProbableCause
currentAlarmSeverity 1.3.6.1.4.1.4684.5.1.1.1.1.1.5.2.1.4 read-only current	alarm severity	INTEGER <ul style="list-style-type: none"> <li>■ cleared(0)</li> <li>■ major(1)</li> <li>■ minor(2)</li> <li>■ alert(3)</li> </ul>

**rgPortTable** This table contains information about specific ports.

Indexed by:

- rgPortIndex

**Table 50** rg Port Table

Node / OID	Description	Settings
rgPortIndex 1.3.6.1.4.1.4684.5.4.3.6.1.1 not-accessible current	Index variable to access the RgPortEntry objects of the rgPortTable.	INTEGER (1..256)
rgPortUsername 1.3.6.1.4.1.4684.5.4.3.6.1.2 read-write current	The user name (or phone number) of the port.	DisplayString (0..255)
rgPortPassword 1.3.6.1.4.1.4684.5.4.3.6.1.3 read-write current	The user password of the port.	DisplayString (0..255)
rgPortDisplayname 1.3.6.1.4.1.4684.5.4.3.6.1.4 read-write current	The display name of the port.	DisplayString (0..255)
rgPortRtpPort 1.3.6.1.4.1.4684.5.4.3.6.1.5 read-only current	The RTP port number of the port to send/receive RTP packet.	INTEGER (1..65536)
rgPortLed 1.3.6.1.4.1.4684.5.4.3.6.1.6 read-only current	LED displays status for the port.	INTEGER <ul style="list-style-type: none"> <li>■ on(1)</li> <li>■ off(2)</li> <li>■ blink(3)</li> </ul>
rgPortHookStatus 1.3.6.1.4.1.4684.5.4.3.6.1.7 read-only current	Phone hook status on the port.	INTEGER <ul style="list-style-type: none"> <li>■ onhook(1)</li> <li>■ offhook(2)</li> </ul>
rgPortRingStatus 1.3.6.1.4.1.4684.5.4.3.6.1.8 read-only current	Phone ring status on the port.	INTEGER <ul style="list-style-type: none"> <li>■ ringing(1)</li> <li>■ normal(2)</li> </ul>
rgPortInService 1.3.6.1.4.1.4684.5.4.3.6.1.9 read-only current	Config port service type.	INTEGER <ul style="list-style-type: none"> <li>■ inService(1)</li> <li>■ outOfService(2)</li> </ul> default = inService

**rgVoipSpeedDialTable** This table contains information about specific entry of PSTN redialing digitmap.

Indexed by:

- rgVoipSpeedDialIndex

**Table 51** rg Voip Speed Dial Table

Node / OID	Description	Settings
rgVoipSpeedDialIndex 1.3.6.1.4.1.4684.5.4.4.15.2.1.1 not-accessible current	Index variable to access the RgVoipSpeedDialEntry objects of the rgVoipSpeedDialTable.	INTEGER (1..300)
rgVoipSpeedDialString 1.3.6.1.4.1.4684.5.4.4.15.2.1.2 read-only current	Display digitmap string and length of the entry.	DisplayString (0..255)

**rgVoipDigitmapTable** This table contains information about specific entry of PSTN redialing digitmap.

Indexed by:

- rgVoipDigitmapIndex

**Table 52** rg Voip Digitmap Table

Node / OID	Description	Settings
rgVoipDigitmapIndex 1.3.6.1.4.1.4684.5.4.4.16.2.1.1 not-accessible current	Index variable to access the RgVoipDigitmapEntry objects of the rgVoipDigitmapTable.	INTEGER (1..300)
rgVoipDigitmapString 1.3.6.1.4.1.4684.5.4.4.16.2.1.2 read-only current	Display digitmap string and length of the entry.	DisplayString (0..255)

**rgCallHistoryTable** This table contains information about specific Call History.

Indexed by:

- rgCallHistoryIndex

**Table 53** rg Call History Table

Node / OID	Description	Settings
rgCallHistoryIndex 1.3.6.1.4.1.4684.5.4.5.1.1.1 not-accessible current	Index variable to access the RgCallHistoryEntry objects of the rgCallHistoryTable.	INTEGER (1..500)
rgCallHistoryPort 1.3.6.1.4.1.4684.5.4.5.1.1.2 read-only current	The attributed port number of the Call History.	INTEGER (1..65536)
rgCallHistoryDirection 1.3.6.1.4.1.4684.5.4.5.1.1.3 read-only current	The direction of the call in the Call history. The (1)send indicates that this call is a outgoing call and the (2)recv indicates that this call is a incoming call.	INTEGER <ul style="list-style-type: none"> <li>■ send(1)</li> <li>■ recv(2)</li> </ul>
rgCallHistoryCallingNumber 1.3.6.1.4.1.4684.5.4.5.1.1.4 read-only current	The phone number of Calling party in the Call History.	DisplayString (0..255)
rgCallHistoryCalledNumber 1.3.6.1.4.1.4684.5.4.5.1.1.5 read-only current	The phone number of Called party in the Call History.	DisplayString (0..255)
rgCallHistoryStart 1.3.6.1.4.1.4684.5.4.5.1.1.6 read-only current	The start time of a call in the Call History.	DisplayString (0..255)
rgCallHistoryEnd 1.3.6.1.4.1.4684.5.4.5.1.1.7 read-only current	The end time of a call in the Call History.	DisplayString (0..255)
rgCallHistoryDur 1.3.6.1.4.1.4684.5.4.5.1.1.8 read-only current	The duration time of a call in the Call History.	DisplayString (0..255)
rgCallHistoryRemIp 1.3.6.1.4.1.4684.5.4.5.1.1.9 read-only current	The remote IP address of a call in the Call History.	IpAddress
rgCallHistoryRemPort 1.3.6.1.4.1.4684.5.4.5.1.1.10 read-only current	The remote port number of a call in the Call History.	INTEGER (1..65536)
rgCallHistoryTxPackets 1.3.6.1.4.1.4684.5.4.5.1.1.11 read-only current	The total number of RTP packets transmitted during a call in the Call History.	Integer32
rgCallHistoryRxpPackets 1.3.6.1.4.1.4684.5.4.5.1.1.12 read-only current	The total number of RTP packets received during a call in the Call History.	Integer32

**Table 53** rg Call History Table

Node / OID	Description	Settings
rgCallHistoryTxOctets 1.3.6.1.4.1.4684.5.4.5.1.1.13 read-only current	The total number of payload octets (not including header or padding) transmitted in RTP data packets during a call in the Call History.	Integer32
rgCallHistoryRxOctets 1.3.6.1.4.1.4684.5.4.5.1.1.14 read-only current	The total number of payload octets (not including header or padding) received in RTP data packets during a call in the Call History.	Integer32
rgCallHistoryCODEC 1.3.6.1.4.1.4684.5.4.5.1.1.15 read-only current	The CODEC(payload) type of a call in the Call History.	DisplayString (0..255)
rgCallHistoryPacketPeriod 1.3.6.1.4.1.4684.5.4.5.1.1.16 read-only current	The packet period(CODEC rate) of a call in the CallHistory.	INTEGER (1..65536)
rgCallHistoryPacketLoss 1.3.6.1.4.1.4684.5.4.5.1.1.17 read-only current	The total packets loss during a call in the Call History.	Integer32

**rgHistoryAlarmTable** This table contains information about specific history alarm.

Indexed by:

- rgHistoryAlarmIndex

**Table 54** rg History AlarmTable

Node / OID	Description	Settings
rgHistoryAlarmIndex 1.3.6.1.4.1.4684.5.4.10.3.1.1 not-accessible current	table index of Current Alarm Table	INTEGER (1..10)
rgHistoryAlarmTime 1.3.6.1.4.1.4684.5.4.10.3.1.2 read-only current	Current system time in GMT, it is represented as seconds since 1970(YY):1(MM):1(DD):0(HH):0(MM):0(SS). For example, if the dateTime is 86400, it means the system time is 1970:1:2:0:0:0:	INTEGER
rgHistoryAlarmObject 1.3.6.1.4.1.4684.5.4.10.3.1.3 read-only current	The interface object with current alarm 0 - system 1 - 16 VOIP endpoint	INTEGER (0..16)
rgHistoryAlarmCause 1.3.6.1.4.1.4684.5.4.10.3.1.4 read-only current	The history alarm cause	ProbableCause



**Table 54** rg History AlarmTable

Node / OID	Description	Settings
rgHistoryAlarmSeverity	alarm severity	INTEGER
1.3.6.1.4.1.4684.5.4.10.3.1.5		<ul style="list-style-type: none"> <li>■ cleared(0)</li> <li>■ major(1)</li> <li>■ minor(2)</li> <li>■ alert(3)</li> </ul>
read-only current		

**Trap**

**rgStart**

**Table 55** rgStart Table

Display	rgStart
Description	RG start up (cold start)
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgStart
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.1

**Table 56** Trap Variables

VarBind	Description	Settings
rgSysIpAddr	The IP address of system.	IpAddress
1.3.6.1.4.1.4684.5.4.2.4.0		

**rgRestarting**

**Table 57** rgRestarting Table

Display	rgRestarting
Description	RG restarting
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgRestarting
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.2

**Table 58** Trap Variables

VarBind	Description	Settings
rgSysIpAddr 1.3.6.1.4.1.4684.5.4.2.4.0	The IP address of system.	IpAddress

**rgPortFault****Table 59** rgPortFault Table

Display	rgPortFault
Description	VoIP Port fault
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgPortFault
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.3

**Table 60** Trap Variables

VarBind	Description	Settings
notificationSeq 1.3.6.1.4.1.4684.5.4.20.1.0	Notification sequence number	Integer32
notificationClass 1.3.6.1.4.1.4684.5.4.20.2.0	Notification class type	INTEGER <ul style="list-style-type: none"> <li>■ fault(4)</li> <li>■ restore(5)</li> <li>■ event(6)</li> </ul>
notificationPortIdx 1.3.6.1.4.1.4684.5.4.20.3.0	Notification port index number	Integer32

**rgSoftSwitchDown****Table 61** rgSoftSwitchDown Table

Display	rgSoftSwitchDown
Description	Soft switch types include: 1. MGC down trap for MGCP 2. Gatekeeper down trap for H323 3. Proxy server down trap for SIP
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgSoftSwitchDown
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.4

**Table 62** Trap Variables

VarBind	Description	Settings
notificationSeq 1.3.6.1.4.1.4684.5.4.20.1.0	Notification sequence number	Integer32
notificationClass 1.3.6.1.4.1.4684.5.4.20.2.0	Notification class type	INTEGER <ul style="list-style-type: none"> <li>■ fault(4)</li> <li>■ restore(5)</li> <li>■ event(6)</li> </ul>
notificationSoftSwitchIdx 1.3.6.1.4.1.4684.5.4.20.4.0	Notification soft switch number	Integer32

**rgLoadSuccess**

**Table 63** rgLoadSuccess Table

Display	rgLoadSuccess
Description	Download program/config success
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgLoadSuccess
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.5

**Table 64** Trap Variables

VarBind	Description	Settings
notificationSeq 1.3.6.1.4.1.4684.5.4.20.1.0	Notification sequence number	Integer32
notificationClass 1.3.6.1.4.1.4684.5.4.20.2.0	Notification class type	INTEGER <ul style="list-style-type: none"> <li>■ fault(4)</li> <li>■ restore(5)</li> <li>■ event(6)</li> </ul>

**rgLoadFail**

**Table 65** rgLoadFail Table

Display	rgLoadFail
Description	Download program/config fail
Probable cause	none specified
Severity	none specified

**Table 65** rgLoadFail Table

State	none specified
Trap Name	rgLoadFail
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.6

**Table 66** Trap Variables

VarBind	Description	Settings
notificationSeq 1.3.6.1.4.1.4684.5.4.20.1.0	Notification sequence number	Integer32
notificationClass 1.3.6.1.4.1.4684.5.4.20.2.0	Notification class type	INTEGER <ul style="list-style-type: none"> <li>■ fault(4)</li> <li>■ restore(5)</li> <li>■ event(6)</li> </ul>

**rgShakeHandToEMS****Table 67** rgShakeHandToEMS Table

Display	rgShakeHandToEMS
Description	Periodically handshake with EMS by rgEmsExpires value
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgShakeHandToEMS
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.7

**Table 68** Trap Variables

VarBind	Description	Settings
rgSysIpAddr 1.3.6.1.4.1.4684.5.4.2.4.0	The IP address of system.	IpAddress

**rgAlarmStatusChange****Table 69** rgAlarmStatusChange Table

Display	rgAlarmStatusChange
Description	Alarm status has changed
Probable cause	none specified
Severity	none specified
State	none specified

**Table 69** rgAlarmStatusChange Table

Trap Name	rgAlarmStatusChange
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.8

**Table 70** Trap Variables

VarBind	Description	Settings
notificationSeq	Notification sequence number	Integer32
	1.3.6.1.4.1.4684.5.4.20.1.0	

**rgLedChange****Table 71** rgLedChange Table

Display	rgLedChange
Description	LED status has changed
Probable cause	none specified
Severity	none specified
State	none specified
Trap Name	rgLedChange
ID	notification OID 1.3.6.1.4.1.4684.5.4.21.9

**Table 72** Trap Variables

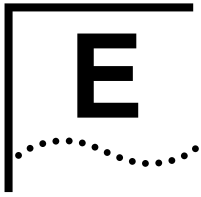
VarBind	Description	Settings
notificationSeq	Notification sequence number	Integer32
	1.3.6.1.4.1.4684.5.4.20.1.0	

**Syntax Types****Table 73** Syntax Types Table

Type	Description	Settings
Bool	Disabled/Enabled value	INTEGER <ul style="list-style-type: none"> <li>■ disabled(0)</li> <li>■ enabled(1)</li> </ul>

**Table 73** Syntax Types Table

Type	Description	Settings
ProbableCause	probable cause for current alarm	INTEGER <ul style="list-style-type: none"><li>■ proCau-wanLOL(1)</li><li>■ proCau-dhcp(2)</li><li>■ proCau-softSwitch(3)</li><li>■ proCau-acFail(4)</li><li>■ proCau-confExhaust(5)</li><li>■ proCau-portFail(6)</li><li>■ unknown(255)</li></ul>



# UPGRADE PROCEDURE

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## Upgrade Procedure

Follow the procedures below to upgrade Generic units from V1.8.2.2a or interim Generic release to V1.8.2.19a.

### 1 Step1

- Connect PC to LAN side.
- Connect ATA using ip-address 192.168.0.1
- Please verify using ipconfig command on the PC connected to the LAN side.
- The ATA on the LAN side should get ip-address 192.268.0.2
- Login=supervisor password=utstar
- System screen should be available on the PC connected to the LAN side.
- Display should show V1.8.2.2a [Factory shipped generic version]

### 2 Step2

- Go to firmware **Upgrade** tab and select firmware [V1.8.2.19a].
- ATA will read the file and VoIP, Line1 and Line2 LED's will flicker after 2 minutes.
- Once done ATA will reboot.

### 3 Step3

- Wait for a while and check the LAN LED on the ATA.
- Connect PC to LAN side.
- Connect ATA using ip-address 192.168.0.1
- Login=**supervisor** password=**utstar**

### 4 Step4

- Go to **Load Default Settings** tab.
- Select radio button **Default** settings
- ATA will load the default and the **Reboot screen** will appear.
- Select reboot, ATA will now reboot with the new default values.

### 5 Step5

- Connect PC to LAN side
- Please verify using ipconfig command on the PC connected to the LAN side
- Connect ATA using ip-address 172.25.25.1
- ATA on the LAN side should get ip-address 172.25.25.2
- Login=**supervisor** password=**utstar**

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## Upgrade Notes

### **LAN side ip-address change**

The upgrade from V1.8.2.2a (Generic) units to V1.8.2.19a will change the default LAN side ip-address from 192.168.0.x to 172.25.25.1. Hence after upgrade please make sure to connect to 172.25.25.1 to gain access to the ATA.

### **WAN side Static ip-address configuration.**

On doing load default user will need to configure the IP-Address of the WAN side if static ip-address was used previously. Configuration of Static WAN ip-address can be done using the GUI us the WANIP tab.

If DHCP option is used for the acquiring WAN-Side ip-address behavior will be the same as before upgrade.







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