# **WIT-300H**

## **Installation Manual**

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND MAY NOT BE REPRODUCED OR COPIED WITHOUT **EXPRESS WRITTEN PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF LG ELECTRONICS COMPANY** 

Jan. 30-2005



**IG** Electronics, Inc.

## **REVISION HISTORY**

ISSUE	DATE	BY	REMARK
0.1A	Dec. 02/04	SJ HWANG	Preliminary Release
0.1B	Dec. 03/04	ALL	Second Review & Modification
0.1C	Jan. 30/05	SJ HWANG	MFIM Registration & USB/TFTP Downloaing
		•	
		*0	
	/		
	G		

## TABLE OF CONTENTS

SAF	ETY INSTRUCTIONS	
SAFI	ETY INFORMATION5	
BOD	Y-WORN OPERATIONERROR! BOOKMARK NOT DEFINED.	
FCC	PART 15 CLASS B COMPLIANCEERROR! BOOKMARK NOT DEFINE	D.
CAU	TIONS FOR BATTERY 6	
BAT	TERY DISPOSAL	
ADA	PTER (CHARGER) CAUTIONS 6	
1.	GETTING STARTED	
1.1 1.2	OPTIONS & BASIC ENCLOSURE	
1.3	ACCESS POINT	
	1.3.2 How to set up multiple APs	
1.4		
2.	WIRELESS ENVIRONMENT SETUP 12	
2.1 2.1	BASIC IEEE 802.11B NETWORK DIAGRAM	
2.2	AP CONFIGURATION	
	2.2.1 SSID	
	2.2.2 DTIM (DATA TRAFFIC INDICATION MAP) & BEACON	
	2.2.5       CONTROUCHTION         2.2.4       NETWORK PARAMETERS	
3	IPECS LIK-300 SETUP	
21	MEIM SAW Version 19	
3.2	WIT-300H REGISTRATION	
	3.2.1 REMOTE MODE	
	3.2.2 LOCAL MODE	
4.	S/W UPGRADE	
4.1	USB S/W DOWNLOADING	
4.2	TFTP S/W DOWNLOADING	
5.	CONSOLE CONNECTION	

#### PREFACE

The main objective of this document is to provide an instruction for proper installation of WIT-300H. Mechanical feature is simply described and operation condition is precisely addressed to prevent the WIT-300H from malfunctioning by environmental reason. In advance of the environmental consideration, please refer to this document it will help an installer in setting up basic circumstance for normal operation of the WIT-300H.

### **Safety Instructions**

**WARNING!** To reduce the possibility of electric shock, do not expose your phone to high humidity areas, such as the bathroom, swimming pool, etc.

**Always store your phone away from heat.** Never store your phone in settings that may expose it to temperatures less than 32°F or greater than 104°F, such as outside during a snow storm or in your car on a hot day. Exposure to excessive cold or heat will result in malfunction, damage and/or catastrophic failure.

**Be careful when using your phone near other electronic devices.** RF emissions from your mobile phone may affect inadequately shielded electronic equipment nearby. You should consult with manufacturers of any personal medical devices, such as pacemakers and hearing aides, to determine if they are susceptible to interference from your mobile phone. Turn off your phone in a medical facility or at a gas station. Never place your phone in a microwave oven as this will cause the battery to explode.

**IMPORTANT!** Please read the TIA SAFETY INFORMATION before using your phone.

#### **Safety Information**

Please read and observe the following information for the safe and proper use of your phone and to prevent any unanticipated damage by accident. Also, keep the user's manual in an accessible place at all times after reading it.

- Unplug the power cord and charger during a lightning storm to avoid electric shock or fire.
- Do not use your phone in high explosive areas, as the phone may influence high frequency devices.
- Do not put your phone in a place subject to excessive dust, and be careful to keep the minimum required distance between the power cord and heat sources.
- Unplug the power cord prior to cleaning your phone, and clean the power plug pin when it is dirty.
- Do not damage the power cord by bending, twisting, pulling, or heating. Do not use the plug if it is loose, as it may cause fire or electric shock.
- Hold the power cord plug firmly to plug and unplug the power cord. Ensure the plug is firmly connected. If it is not firmly connected, it may cause excessive heat or fire.
- Do not place any heavy item on the power cord. Do not allow the power cord to be crimped, as it may cause fire or electric shock.
- Be careful not to let the battery contacts touch metal conductors such as a necklace or coins. When shorted, it may cause an explosion.
- Do not disassemble or allow heavy impact to the battery as it may cause electric shock, short-circuit, and fire. Store the battery in a place out of reach of children.
- Using a damaged battery or placing a battery in your mouth, may cause serious injury.
- Do not place items with a magnetic strip, such as a credit card, phone card, bank book and a subway ticket, near your phone. The magnetism of the phone may damage the data stored in the magnetic strip.
- Do not hold or let the antenna come in contact with your body during a call.
- Talking on your phone for a long period of time may reduce the call quality due to heat generated during use.
- Do not allow excessive vibration or impact to the phone.
- When you do not use the phone for a long period time, store it in a safe area with the power cord unplugged.



The radio module has been evaluated under FCC Bulletin OET 65C (01-01) and found to be compliant to the requirements as set forth in CFR 47 Sections 2.1091,2.1093, and 15.247(b)(4) addressing RF Exposure from radio frequency devices. This model meets the applicable governments requirements for exposure to radio frequency waves. This wireless Terminal contains a radio transceiver. The radio transceiver and antenna have been designed to meet the RF emission requirements for human exposure as specified by the FCC as well as by other agencies from other countries. These guidelines were developed by the industry based on guidance from the World Health Organization(WHO). These industry standards have been developed to include additional safety margins to ensure that the user is exposed to the least amount of RF radiation.

The radio transceiver uses a non ionization type of radiation as opposed to a ionized radiation such as an X-Ray wave.

The exposure standard for these devices references a unit of measure known as SAR. The limit as set by the FCC is 1.6W/kg. The test for this emission level is done in an independent laboratory who employs test methods and operating positions reviewed by the FCC and other agencies. Before the Terminal was placed on the market, the product was tested and certified in accordance with the FCC regulations to verify that the product did not exceed the FCC SAR requirements.

The highest SAR level measured for this terminal was 0.128 mW/g for body and 0.063 mW/g for Head. The design of this Terminal complies with the FCC guidelines ,these international standards and This terminal can be held in temporary confidentiality status.

## 

Use only the supplied and approved antenna. Use of unauthorized antennas or modifications could impair call quality, damage the phone, void your warranty and/or result in violation of FCC regulations. Do not use the phone with a damaged antenna. If a damaged antenna comes into contact with skin, a minor burn may result. Contact your local dealer for a replacement antenna.

### **Cautions for Battery Safety Notices**

- Do not disassemble, crush, Puncture, or incinerate the battery pack.
- The battery pack is intended for use only with this device.
- To avoid risk of fire, burns, or damage to your battery pack, do not allow a metal object to touch the battery contacts.
- Do not short-circuit.
- Do not expose to high temperature: 60°C (140°F).
- To obtain a replacement battery, contact your local wireless dealer or carrier. Use only the batteries that have one of the following LG Part No. : Battery Pack(Standard) 3.7V Li-ion WIT-300H 050128P.

#### **Battery Disposal**

- Please dispose of your battery properly or bring to your local wireless carrier for recycling.
- Do not dispose in fire or with hazardous or flammable materials.

#### Adapter (Charger) Cautions

- Using the wrong battery charger could damage your phone and void your warranty.
- The adapter or battery charger is intended for indoor use only.

Do not expose the adapter or battery charger to direct sunlight or use it in places with high humidity, such as the bathroom.

LGE Intellectual Property

7

#### FCC Safety Compliance Statement

The Federal Communications Commission(FCC), with its action in ET Docket 93-62, has adopted a safety standard for human exposure to Radio Frequency(RF) electromagnetic energy emitted by FCC-certified equipment.

The Wireless IP Terminal WIT-300H meets the uncontrolled environmental limits as stated in OET-65C(01-01)when operated in accordance with the operation guidelines described in this manual. Proper operation of this radio device according to the instructions in this publication will result in user exposure substantially below the FCC recommended limits.

### Manufacturer's FCC Declaration of Conformity Statement



Model : Wireless IP Terminal WIT-300H FCC Certification Number : BEJWIT-300H

This device complies with Part 15 rules. Operation is subject to the following two conditions

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and radiates radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference. However, there is no guarantee that interference will not occur. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by on of the following measure;

- Reorient or relocate the receiving antenna.
- Increase separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.

# 

This Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by LG including the use Of Non-LG antennas, could void the user's authority to operate this device.

#### **Compliance Statement for Canada**

This Class B Digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la Classe B respecte les exigencies du Reglement sur le material broilleur du Canada.

This device complies with Class B Limits of Industry Canada. Operations is subject to the following two conditions ;

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

The device is certified to the requirements of RSS-210 for 2.4GHz spread spectrum devices. The use of this device in a system operating either partially or completely outdoors may require the user to obtain a license for the system according to the Canadian regulations. For further information contact your Local Industry Canada office.

This Document Contains proprietary information and may not be reproduced or copied without express Written permission of a duly authorized representative of LG Electronics company

9

#### **Getting Started** 1.

#### 1.1 **Options & Basic Enclosure**

#### Cautions

- Using the phone near receiving equipment (i.e., TV or radio) may cause interference.
- Keep your phone in a safe place when not in use.
- Only use the batteries, antennas, and chargers provided by LG. Using unauthorized accessories could void your warranty.
- Only authorized personnel should service the phone and its accessories. Faulty installation or service may result in accidents and consequently void the warranty.
- Do not hold the antenna while the phone is in use. •
- Do not use the phone in designated no cellular phone use areas.
- Do not expose the phone to high temperature or humidity.
- Avoid getting your phone wet. If the phone gets wet, turn the power off immediately and remove the **Prope** battery. If the phone is non-functional, return it to the dealer for service.
- Avoid shock or impact to the phone.

1) Desktop Holder

#### **Options:**

User need to purchase desktop holder with additional payment.

Desktop holder will be provided as option.



Unpacking the box, customer will see the following items.

1) WIT-300H Phone		WIT-300H WiFi Phone. You should be able to find MAC address tag at the back side of the phone.
2) Rechargeable battery	Rechargea displayed.	ble battery. LG logo should be
3) Travel adaptor/ Power cable	The tab, t 300H	one end is plugged into power he other one is slotted into WIT- Jack.

4) USB cable		
5) Handstrap	15535	
6) Ear Microphone	In the cable of ear-microphone, there remote control button. It is useful for hands way operation.	is a s-free
7) User manual		

If you find the trademark of LG Electronics on the rechargeable battery, the delivery is strictly confirmed by LG Electronics. Inc.

#### 1.2 Wireless Network Cell

Fundamental topology of the IEEE 802.11b based wireless networking is the overlapped concatenation of more than two cell ranges. The following figure shows the example of a cell area.



The WIT-300H is only 802.11b compliant, its maximum frequency is 2.4GHz and 11 Mbps maximum bandwidth. In terms of the transfer speed, it is inferior to 802.11g compliant phone supporting 54Mbps, while, the cell coverage of 802.11b based WIT-300H can be wider than any other devices matched with 802.11g. For more detail information of cell planning, please refer to the manual of AP.

#### 1.3 Access Point

The following is a list of APs that have been made an imperative experimentation with the WIT-300H and the result.

1) Cisco – AP1230B
 2) Netgear – ME103
 3) LinkSys – WRT54GS
 4) Orinoco – AP600
 5) 3COM – 3CRWE454G72

#### 1.3.1 Which one is better

Depending on the internal implementation of IEEE802.11b protocol inside of the APs, roaming across two contiguous regions may be affected. Cisco & Orinoco is currently showing most optimized seamless roaming. **CISCO and Orinoco APs are strongly recommended to customers**.

#### 1.3.2 How to set up multiple APs

Our recommendation is that one AP(Access Point) is used for one cell area. If you would install more than two APs for a cell, we recommend you to use the same SSID for each AP.

#### 1.4 iPECS LIK-300

The iPECS LIK-300 is a call controller of the WIT-300H. Any activity of WIT-300H is notified to the iPECS LIK-300, therefore, it should be placed within a same LAN subnet. However, in remote mode, the WIT-300H can interact with iPECS LIK-300 out of the subnet.

### 2. Wireless Environment Setup

This section describes AP(Access Point) configuration for normal operation of WIT-300H. The AP should be plugged into a switch/hub for connectivity with the subnet of office.

#### 2.1 Basic IEEE 802.11b network diagram

The following figure exhibits network infrastructure of 802.11b compliant network diagram.



APs are connected to a HUB in subnet, since WIT-300H is able to access the Internet. The iPECS LIK-300 and WIT-300H system work on top of this context.



Depending on vendors of AP, the following two parameters should be carefully set up.

13

This Document Contains proprietary information and may not be reproduced or copied without express Written permission of a duly authorized representative of LG Electronics company

#### 2.2.1 SSID

**SSID** is for authentication use. An AP can have an arbitrary SSID value for example "*wireless*". In this case, WIT-300H with "*wireless*" SSID can communicate with that AP. It is important to use accurate SSID on both WIT-300H and AP.

#### **Recommendation**)

- (1) If you are free of security, please just use one SSID for all APs and WIT-300H.
- (2) If you are using WIT-300H in a wireless environment with predetermined SSID, please change the SSID of your WIT-300H.

After changing the SSID of WIT-300H, you need to reboot it to apply the change.

#### 2.2.2 DTIM (Data Traffic Indication Map) & Beacon

**DTIM** is related to an interval of packet transmission. By an inherent nature of the iPECS LIK-300, WIT-300H frequently uses multicast message for the communication with the iPECS LIK-300. The delivery of multicast message is affected by the DTIM parameter.

**Beacon** is an indication of packets buffered in AP which are to be delivered to each wireless station, WIT-300H. The information of **DTIM** is contained in a beacon message. Therefore, DTIM configuration can be affected by the beacon interval. The following is illustrating the relationship of beacon and DTIM:



#### **Recommendation**)

- (1) DTIM should be less than 200 msec.
- (2) If AP doesn't support DTIM configuration, more special care needs to be taken for Beacon interval setup. Otherwise, Use the smallest DTIM interval that AP can support.

2.2.3 Configuration

This section enumerates how you set up both SSID and DTIM in AP.

#### <u>Orinoco</u>

	Filtering Alarms	Bridge Security
(	System Network Inte	rfaces Management
Status	Wireless - A Wireless - B	Ethernet
Configure	Wireless interface properties determine the ch well as how wireless clients will communicate	naracteristics of the wireless medium as with the access point.
Monitor	Warning: If WDS is enabled, then automatic chi	annel selection should be disabled.
commands	Note: Changes to these parameters require acce	ess point reboot in order to take effect.
Commands Help	Note: Changes to these parameters require acce Physical Interface Type MAC Address	885 point reboot in order to take effect. 802.11b (DSSS 2.4 GHz) 
Commands Help	Note: Changes to these parameters require acce Physical Interface Type MAC Address Network Name (SSID)	802.11b (DSSS 2.4 GHz) 00:02:20:4C:27:38 My Wireless Network B
Commands Help Exit	Note: Changes to these parameters require acce Physical Interface Type <u>MAC Address</u> Network Name (SSID) Enable Auto Channel Select	855 point reboot in order to take effect. 802.11b (DSSS 2.4 GHz) 00:02:20:40:27:38 My Wireless Network B
Commands Help Exit	Note: Changes to these parameters require acce Physical Interface Type MAC Address Network Name (SSID) Enable Auto Channel Select Frequency Channel	802.11b (DSSS 2.4 GHz) 00.02:2D:4C:27:3B My Wireless Network B 3 - 2.422 GHz
Commands Help Exit	Note: Changes to these parameters require acce Physical Interface Type MAC Address Network Name (SSID) Enable Auto Channel Select Frequency Channel Distance Between APs	802.11b (DSSS 2.4 GHz)         00:02:2D:4C:27:3B         My Wireless Network B         Image
Commands Help Exit	Note: Changes to these parameters require acce Physical Interface Type MAC Address Network Name (SSID) Enable Auto Channel Select Frequency Channel Distance Between APs Multicast Rate	Book and the second sec
commands Help Exit		Book and the second sec
commands Help Exit	Kote: Changes to these parameters require accel     Physical Interface Type     MAC Address     Network Name (SSID)     Enable Auto Channel Select     Frequency Channel     Distance Between APs     Multicast Rate     DTIM Period (1-65535 sec)     RTS/CTS Medium Reservation (2347=off)	802.11b (DSSS 2.4 GHz)         00:02:2D:4C:27:38         My Wireless Network B         Image         2.422 GHz         Large         1         2347

- (1) Open a page "Interface>Wireless". You can see a edit box "Network Name" and "DTIM Period".
- (2) At "Network Name" enter SSID.
- (3) At "DTIM Period", enter 1.

#### <u>Cisco</u>

Beacon Period:	100 (20-4000 Kusec)	Data Beacon Rate (DTIM):	1 (1-100)
Max. Data Retries:	32 (1-128)	RTS Max. Retries:	32 (1-128)
Fragmentation Threshold:	2346 (256-2346)	RTS Threshold:	2312 (0-2347)
Repeater Parent AP Timeout:	0	(D-65535 sec)	
Repeater Parent AP MAC 1 (optional):		(НННН. НННН. НННН)	
Repeater Parent AP MAC 2 (optional):		(НННН.НННН.НННН)	
Repeater Parent AP MAC 3 (optional):		(НННН. НННН. НННН)	
Repeater Parent AP MAC 4 (optional):		(нини нини нини)	

- (1) Open a page "Network Interfaces > Settings". You can see a edit box "DTIM".
- (2) Enter 1.

	Close Window					
CISCO SYSTEMS	Cisco 1200	Access Point				
HOME EXPRESS SET-UP	Hostname CiscoAP1					CiscoAP1 uptime is 25 minutes
NETWORK MAP ASSOCIATION NETWORK INTERFACES	+ Security: SSID Ma + SSID Properties	nager				
SECURITY Admin Access SSID Manager Encryption Manager Server Manager	Current SSID List		ss VL	ID: AN:	< NONE >  Define VLANs	
Local RADIUS Ser Advanced Security SERVICES WIRELESS SERVIC	Delete					
SYSTEM SOFTWAR	+ Authentication Se	ttinas				

- (3) Open a page "Security > SSID Manager". You can see a edit box "SSID".
- (4) Enter your SSID.

<u>LinkSys</u>			ert
	LINKSYS <sup>®</sup> A Division of Cisco Systems, Inc.		Firmware Version: 2.07
		Wireless-G Access Point	WAP54G
	Setup	Setup Status Advanced Help	
	Firmware Version AP Hame	v2.07, Apr 08, 2004 QE-Linksys WAP54G	
١	LAN Configuration Type IP Address Subnet Mask Gateway	MAC Address:         00:0C:41:D7:CA:2C           Static IP Address         Image: Static IP Address           150         .         150         .           255         .         225         .         0         Gateway of the Access Point as it is seen by           150         .         150         .         60         .         245         your local network.	
	Wireless Mode	MAC Address: 00:0C:41:D7:CA:2C	
	SSID Channel Wireless Security	qewit     SSID Broadcast     Enable       1     (Regulatory Domain: USA )       •     Enable     •       •     Disable     Edit Security Settings	
		Save Settings Cancel Changes Help	CISCO SYSTEMS attlituaattlitua

- (1) Open a page "Setup > Basic Info". You can see a edit box "SSID".
- (2) Enter SSID.

			Wireless C Access Po	terration of the second s
			Willeleas-C Access I 0	INT WAP540
Advanced	Setup Status Ad	ivanced Help		
	Filters Advanced Wi	ireless SNMP		
Authentication Type	Auto 🛛 🖌 (Default: Auto)			
Transmission Rates	Auto 💟 (Default: Auto)			
CTS Protection Mode	Disable (Default: Disable)			
Basic Rates	Default (Default: Default)			
Antenna Selection	Diversity (Default: Diversit	y)		
Beacon Interval	100 (Default: 100 Millisecond	is Range 20∼1000.)		
RTS Threshold	2346 (Default: 2346, Range: 2:	56 - 2346)		
Fragmentation Threshold	2346 (Default: 2346, Range: 2	56 - 2346)		
DTIM Interval	1 (Default: 3, Range: 1 - 25	55)		
				-
				CISCO SYSTI
	Save Set	tings Cancel Changes	Help	الاستناكات
) Open a page " <i>A</i> ) Enter 1 as DTIN	Advanced > Advanced	Wireless" . You	u can see a edit box	"DTIM".
) Open a page "A ) Enter 1 as DTIN	Advanced > Advanced	Wireless" . You	u can see a edit box	"DTIM".
) Open a page "A ) Enter 1 as DTIN	Advanced > Advanced 1 value. 0 0 fficeConnect 1	Wireless" . You	u can see a edit box Access Point	"DTIM".
) Open a page " <b>A</b> ) Enter 1 as DTIN	Advanced > Advanced 1 value. 1 val	Wireless" . You	u can see a edit box Access Point	"DTIM".
) Open a page "A ) Enter 1 as DTIN 2M 200 3COM	Advanced > Advanced 1 value. 1 val	Wireless" . You	a can see a edit box Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIM	Advanced > Advanced A value. A val	Wireless" . You	LI Client List Profile	"DTIM".
) Open a page " <b>A</b> ) Enter 1 as DTIN <u>OM</u> <u>OM</u> <u>OM</u> <u>OM</u> <u>OM</u> <u>OM</u> <u>OM</u> <u>OM</u>	Advanced > Advanced A value. A val	Wireless" . You	L can see a edit box Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIN M OM CON CON CON CON CON CON CON CON CON CON	Advanced > Advanced I value. I val	Wireless" . You	Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIM M OM Construction Cons	Advanced > Advanced A value. A val	Wireless" . You Source of the second	Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIN ) ) M () () () () () () () () () () () () ()	Advanced > Advanced A value. A val	Wireless" . You	Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIM M (A) (A) (A) (A) (A) (A) (A) (A) (A) (A)	Advanced > Advanced I value. I val	Wireless" . You	Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIM M C M C C C C C C C C C C C C C C C	Advanced > Advanced A value. A val	Wireless ". You Vireless 11g gs Connection Control ing II 11	Access Point	"DTIM".
) Open a page "A ) Enter 1 as DTIM M (A) (A) (A) (A) (A) (A) (A) (A) (A) (A)	Advanced > Advanced A value. A val	Wireless" . You	Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIM OM OM OM OC 3COM Velcome LAN Settings Wireless Settings System Tools Status and Logs Support/Feedback LOG OUT	Advanced > Advanced I value. I val	Wireless" . You Vireless 11g gs Connection Control ing vit300h vit300h vit300h vit300h	Access Point Client List Profile	"DTIM".
) Open a page "A ) Enter 1 as DTIM OM OM OC 3COM Welcome LAN Settings Wireless Settings System Tools Status and Logs Support/Feedback LOG OUT	Advanced > Advanced A value. A val	Wireless" . You Vireless 11g gs Connection Control ing viii300h viii300h viii300h viii300h viii300h viii300h	Access Point	"DTIM".

(1) Open a page "Wireless Settings > Configuration" . You can see a edit box "SSID".

17

- (2) Enter SSID.
- (3) DTIM configuration is not supported.

#### **Netgear**

Basic			
			Country Domain
<ul> <li>IP Settings</li> </ul>	Country Domain	USA 🗖	Select the setting to match your locatio. Note that the Cha
Wireless     Settings	Channel No:	9 -	will change according to the selection made.
Settings	Current Channel No:	9	Channel No.
Management	WHITEFESS Network Name (SSID)	wit300h	Select the Channel you wish to use on your Wirel
<ul> <li>Change Password</li> </ul>	Wireless Security		If you experience interference (shown by lost control
<ul> <li>Upgrade</li> </ul>	Network Authentication:	Open 🔽	and/or slow data transfers) you may need to expe with different channels to see which is the best.
Firmware	Data Encryption:	Disable 💌	Concerned Observed Mar
Settings	Network Key:		
Reset Access	Passphrase:	Generate Ke	This displays the the Channel number currently in use.
Point	Key Value:		Wireless Network Name (SSID)
Information	Key Index:	Key 1 💌	Colorithe Manufacture a Mathematic Names (COLD) to exactly other
<ul> <li>Activity Log</li> </ul>		Configure 8	302.1x on your Wireless LAN.
Station List		Anniu Concel	Wireless Security
<ul> <li>Statistics</li> </ul>		Appiy	· · · · · · · · · · · · · · · · · · ·
Advanced			Network Authentication
(1) Open a pa	an "Wireless Settin	ne Bacio" Vou con s	oo a odit box "SSID"
	ige wireless Settin	gs > basic - Tou can s	
(2) Enter SSI	כ. ≽ 🤅		
(=) =			

Network parameters such as IP address, netmask, gateway are also to be configured since AP is bridging between the WIT-300H and the iPECS LIK-300. They are all to be set up with the same values to those in iPECS LIK-300.

## 3. iPECS LIK-300 Setup

#### 3.1 MFIM S/W Version

WIT-300H is recognized as special phone type in MFIM in iPECS LIK-300, version **30.Ah**. After downloading this version image into a MFIM of iPECS, you can see the following figure in WEB administrator,

[ Devic	ce IP addres	s ]									
Order	Sequence Number	Del	Logical Num	Туре	Device ID	MAC Address	IP Address	Direct Send	Local Device	Version	СРИ Туре
					CO	Gateway					
1	1		1 - 6	VOIP GW	97	00405a12b96f	0.0.0.0	ON 🔽	ON 🐱	30Ah	ARM7_4530
2	2		7 - 8	PSTN-LOOP GW	65	00405a127d59	0.0.0.0	ON 💌	ON 💌	12Da	T2U
3	3		9 - 10	PSTN-LOOP GW	65	00405a127d5a	0.0.0.0	ON 💌	ON 💌	12Da	T2U
						STA					
1	4		100 (Disconnected)	Phone (WIT3012D)	154	00405a133f9e	0.0.0.0	ON 🗸	ON 🗸	12Ac	
2	5		101	Phone (24B)	130	00405a017c49	10.10.60.11	ON 🖌	ON 🖌	12Bc	T2
3	6		102 (Disconnected)	Phone (WIT3012D)	154	08000e200112	10.10.60.12	ON 🗸	ON 🗸	12Ac	
4	7		103 (Disconnected)	Phone (WIT3012D)	154	08000e201001	10.10.60.13	OFF 🗸	ON 🐱	12Ac	
5	8		104 (Disconnected)	Phone (WIT3012D)	154	00405a133fa9	0.0.0.0	ON 💌	ON 🗸	12Ac	
6	9		105 (Disconnected)	Phone (WIT3012D)	154	00405a133faa	0.0.0.0	ON 🗸	ON 🐱	12Ac	
				$\searrow$	MISC&	VSF Gateway					

In " System ID & Number Plans >> System & Device IP Address Plan ", you can see a WIT3012D type. It indicates that WIT-300H phone is registered into the iPECS LIK-300.

#### 3.2 WIT-300H Registration

WIT-300H is recognized as one of the wired phone by iPECS MFIM. The registration can be completed by two modes like the LIP phone; Remote mode and Local mode. *If you could use the MFIM located in your local LAN area, you can register your phone in local mode, otherwise, you should use remote mode.* 

3.2.1	Remo	te moo	de						
			-					-	

To register WIT-300H in remote mode, you should know WIT-300H MAC address and IP.

#### A. Basic settings

- Enter the MAC address of WIT-300H in MFIM web administration page.
   MAC address is found at menu " (MENU) > Phone Info > Network Info > MAC Address ".
- (2) Enter SSID for wireless networking at " (MENU) > Settings > Network > 802.1b Config> SSID". User can probe all the APs around the WIT-300H, and choose one of them at "Auto" menu shown here.

_GE/VD71M-2.0Af MAY/04	[ Rem	ote Dev	vice Table ]					Sav
Eastura Admin								
eature Aumin	Index	Doloto	Mac Address	IP Address	Sta List	SIt List	Gatoway List	
System ID & Numbering Plans	1		00601d30d2dc	150.150.60.103	NONE	NONE	NONE	
Station Data	2		000208000027	192.168.57.30	NONE	NONE	NONE	
Board Based Data	3		00105a764b28	150.150.60.213	NONE	NONE	NONE	
CO Line Data	4		000208000028	192.168.57.28	NONE	NONE	NONE	
System Data Station Group Data	5		08000e200000	150.150.57.131	NONE	NONE	NONE	
ISDN Line Data	6			100.100.01.101	NONE	NONE	NONE	
Tables Data			00000-000001	150 150 57 122			NONE	
Networking Data				150,150,57,155				
Remote Device Data	8		U8000e200002	150,150,57,131	KTU(TU3)	NONE	NONE	
Remote device Table(PGM	9		08000e200003		NONE	NONE	NONE	
Remote Music Address	10		08000e200005		NONE	NONE	NONE	
(PGM 431)	11		08000e200104	150.150.60.244	KTU(105)	NONE	NONE	
Remote Ext Contact(PGM 432)	12		08000e200105	150.150.60.244	KTU(114.)	NONE	NONE	
Remote Alarm Attribute	13		08000e200011	150.150.60.218	KTU(110)	NONE	NONE	
(PGM 433~435) Initialization	14		08000e200010	158.150.60.103	NONE	NONE	NONE	
indaization	15				NONE	NONE	NONE	
	16				NONE	NONE	NONE	
	17				NONE	NONE	NONE	
1							🔵 인터넷	

- (3) Set "Remote mode" to "Yes" at " (MENU) > Settings > KTUset > Remote Mode".
- (4) Set "Same Router" to "Yes" at " (MENU) > Settings > KTUset > Same Router
- (5) Set "Direct Send" to "Yes" at " (MENU) > Settings > KTUset > Direct Send
- (6) Enter MFIM IP at (MENU) > Settings > KTUset > MFIM IP
- (7) Enternetwork mask of MFIM at <sup>(1)</sup> (MENU) > Settings > KTUset > MFIM Netmask

B. When you use static IP address,

- (1) Enter IP address of WIT-300H at " (MENU) > Settings > Network > Static IP > IP Address "
- (2) Enter network mask of WIT-300H at " (MENU) > Settings > Network > Static IP > subnet "
- (3) Enter gateway IP of WIT-300H at " (MENU) > Settings > Network > Static IP > Primary GW "

#### C. When you use dynamic IP address,

(1) Set "DHCP mode" to "Yes" at " (MENU) > Settings > Network > DHCP "

After setting these all up, please turn off WIT-300H and then turn it on.

#### 3.2.2 Local mode

#### A. MFIM configuration

(1) Set the deep switch '3' to '1' as follows.



It means that the MAC address of WIT-300H doesn't need to be registered in the MFIM. If the MAC address of the WIT-300H has been registered, MFIM configuration is not something to be concerned.

#### B. SSID setting



After setting these all up, please turn off WIT-300H and then turn it on.

### 4. S/W Upgrade

. The S/W image of WIT-300H composed of three binary files; wit300hDbg.bin, Drv\_C.bin, Drv\_M.bin.

(1) **wit300hDbg.bin** : It includes H/W support kits; WLAN driver, Operating system core, DSP/LCD drivers, etc.

(2) **Drv\_C.bin** : It is the collection of business S/W; phonebook, Messaging, Screen manipulator, etc.

(3) Drv\_M.bin : It is the compressed collection of graphic widgets; icon, bitmap, images, etc.

#### 4.1 USB S/W Downloading

USB is the easiest interface for customer to download S/W image into WIT-300H. Just plugging in a USB cable into PC keeping the image is a manual job for the downloading. The following "Flash-up" S/W needs to be installed in the PC.

#### A. Connecting USB cable

(1) Plug in the USB cable in the PC which Microsoft Windows is installed.





(2) Turn on WIT-300H.

The Windows detects new device through USB connection, and requires Driver S/W to be installed by stuel prof popping up a window indicating the installation of new driver S/W for the WIT-300H.

#### A. Installing driver

- (1) Unzip S/W zip file.
- (2) Assigning "usbio.sys" in the ZIP file to the window for new driver.

Now, you are ready for downloading the S/W.

#### B. Downloading S/W

(1) Click and run "FlashUp.exe" in the ZIP file.

C USB Flash Update Utility for WIT-300H, Version 1.0	
wit300hDbg,bin File to Upload	
C:\Download\images\wit300hDbg,bin	Browse
	🔽 Use
_Drv_C, bin File to Upload	
C:\Download\images\Drv_C,bin	Browse
	🗖 Use
Drv_M, bin File to Upload	
	Browse
	Use
Post Upload Action	
I Reboot After Upload	

- (2) Browsing and selecting an image file through "Browse" button on the FlashUp.exe.
- (3) Click button "UpLoad".

(4) You can see a progress window.

#### 4.2 **TFTP S/W Downloading**

S/W downloading is also possible through TFTP. A TFTP server should be properly setup in a PC containing WIT-300H image files

You can download one of the S/W images as follows:

#### A. Entering Engineering mode

- (1) In idle screen, press enter "menu" mode by pressing button 🔍 .
- (2) Enter "9"-"8"-"0" for "Engineering Mode"
- tellectual property (3) Press buttons "2"-"1"-"3"-"9"-"2"-[OK] as password.
- (4) Now, you are in the Engineering mode.

#### **B. Set-up TFTP prameters**

- (1) Select "TFTP Setting".
- (2) Enter the following values.

**TFTP Server IP** 

IP address of WIT-300H

Subnet mask Gateway IP



File name to be downloaded

TFTP	TFTP	TFTP	
1.SERVER IP	3.SUBNET MASK	5.SSID	
150.150.60.212	250.250.250.0	wit300h	
2.IP ADDRESS	4.GATEWAY	6.FILE NAME	
150.150.60.230	150.150.60.254	🔹 wit300hDbg 🕠	
DOWN LOAD 123	DOWN LOAD 123	DOWN LOAD ABC	

(6) Enter [OK] button

System Image

On downloading S/W image, user can see the following LCD screen, for example system image (wit300hDbg.bin)

TFTP transaction is under progress and blocks of images are delivered from TFTP server

23 Upgrading..... Contains proprietary information and may not be reproduced or copied without express LG much permission of a duly authorized representative of LG Electronics company

and copied to the flash memory.



Any error happens, this screen is shown. When any error occurs, the WIT-300H will work abnormally. Hence, please try to download the image again, until you succeed.

## Hectual 5. **Console Connection**

A. Console connection

System Image

Download Fail...

LG

(1) Plug in a console cable to WIT-300H and prepare for console monitoring by the PC through terminal emulator. Setting parameter is **115200 baudrate**, no flow control, **1 stop bit**, no parity.



#### **B.** Console command

(1) *ping* - To make sure that you can access TFTP server from WIT-300H. It is can be done by

trying ping test at the WIT-300H. For the ping test, if the IP address of TFTP server is 10.10.10.221, enter "**ping "10.10.10.221**" ". <u>DO NOT FORGET DOUBLE QUOTATION</u> <u>AROUND THE IP ADDRESS PARAMETER</u>. The reply should be printed on the console successfully.

Prov

->
-> ping "10.10.221"
PING 10.10.221 (84=20+8+56 bytes)
64 Lytes from 10, 10, 10, 221; icmp_seq=0, time=10, ms
64 bytes from 10, 10, 10, 221; icmp_seq=1, time=0, ms
64 bytes from 10,10,10,221; icmp_seq=2, time=0, ms
64 bytes from 10, 10, 10, 221; icmp_seq=3, time=0, ms
64 bytes from 10.10.10.221: icmp_seq=4. time=0. ms
trcStack aborted: error in top frame
10.10.10.221 PING Statistics
5 Packets transmitted, 5 Packets received, 0% Packet Loss
round-trip (ms) min/avg/max = 0/2/10
tShell restarted.

- (2) showPhoneParam Listing up the configuration of WIT-300H
- (3) *changePhoneParam* Changing the configuration of WIT-300H