Industrial Device Server DS-11-W User's Manual

Version 1.0

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Getting to Know Your Device Server

1.1 About the DS-11-W Serial Device Server



DS-11-W is an innovative 1 port RS232/422/485 to 802.11b/g WLAN and 1 port LAN device server. Users are able to configure DS-11-W by DS-Tool via LAN port or WLAN interface, but not simultaneously. Once LAN port is activated, WLAN interface will enter standby mode to minimize power consumption. Secondly, DS-11-W can simultaneously transfer data into 5 host PCs. This feature can assure all critical data that saved in different host PCs to avoid ethernet break or host PCs failure. Thirdly, DS-11-W provides dual redundant

power inputs both on DC power jack and terminal block. DS-11-W also provides NAT pass through function so that users are able to manage DS-11-W inside or outside NAT router. It is easy for different IP domain users to use the Switch. Therefore, DS-11-W is the best communication solution for wireless application of serial devices.

1.2 Software Features

- High Speed Air Connectivity: WLAN interface support up to 54Mbps link speed
- Highly Security Capability: WEP/WPA/WPA2/802.1X/Radius/TKIP supported
- NAT-pass through: User can manage DS-11-W through NAT router
- Redundant Power Inputs: 12~48VDC on power jack and terminal block
- Redundant multiple host devices: 5 simultaneous in Virtual COM, TCP Server, TCP Client mode, UDP
- Secured Management by HTTPS and SSH
- Versatile Modes: Virtual Com, Serial Tunnel, TCP Server, TCP Client, UDP
- Event Warning by Syslog, Email, SNMP trap, and Beeper

■ Various Windows O.S. supported: Windows NT/2000/ XP/ 2003/VISTA

1.3 Hardware Features

- Redundant Power Inputs: 12~48 VDC on terminal block and power jack
- Operating Temperature: -10 to 55°C
- Storage Temperature: -20 to 85 °C
- Operating Humidity: 5% to 95%, non-condensing
- Casing: IP-30
- 1 10/100Base-T(X) Ethernet port
- Reverse SMA connector for 2.4GHz antenna
- Dimensions(W x D x H) : 72mm(W)x125 mm(D)x31mm(H)



Hardware Installation

2.1 Install DS-11-W on DIN-Rail

Each DS-11-W has a Din-Rail kit on rear panel. The Din-Rail kit helps DS-11-W to fix on the Din-Rail. It is easy to install the DS-11-W on the Din-Rail:

2.1.1 Mount DS-11-W on DIN-Rail

Step 1: Slant the DS-11-W and mount the metal spring to Din-Rail.



Step 2: Push the DS-11-W toward the Din-Rail until you heard a "click" sound.



2.2 Wall Mounting Installation

Each DS-11-W has another installation method. A wall mount panel can be found in the package. The following steps show how to mount the DS-11-W on the wall:

2.2.1 Mount DS-11-W on wall

Step 1: Remove Din-Rail kit.



Step 2: Use 3 screws that can be found in the package to combine the wall mount panel. Just like the picture shows below:



The screws specification shows in the following two pictures. In order to prevent DS-11-W from any damage, the size of screws should not be larger than the size that used in DS-11-W.



Step 3: Mount the combined DS-11-W on the wall.





Hardware Overview

3.1 Front Panel



- 1. Product description of DS.
- 2. LED for PWR1 and system status. When the PWR1 links, the green led will be light on.
- 3. LED for PWR2 and system status. When the PWR2 links, the green led will be light on.

- 4. LED of 10/100Base-T(X) Ethernet port.
- 5. LED of 802.11b/g WLAN port.
- 6. LED of serial port. Green for transmitting, red for receiving

3.2 Front Panel LEDs

The following table describes the labels that stick on the DS.

LED	Color	Status	Description
		On	DC power 1 activated.
DWD4	Green/Ded		Indicates an IP conflict, or
PVVR1	Green/Red	Red blinking	DHCP or BOOTP server did
			not respond properly
		On	DC power 2 activated.
DWDO	Green/Red		Indicates an IP conflict, or
PWRZ		Red blinking	DHCP or BOOTP server did
			not respond properly
сти	Green/Amber	Green On/Blinking	100Mbps LNK/ACT
EIN		Amber On/Blinking	10Mbps LNK/ACT
	Green/Amber	Green On/Blinking	WLAN LNK/ACT Signal good
WLAN		Amber On/Blinking	WLAN LNK/ACT Signal poor
Sorial	Green	Blinking	Serial port is transmitting data
Jenai	Red	Blinking	Serial port is receiving data

3.3 Top Panel

The Top panel components of DS are showed as below:

- 1. Terminal block include: PWR1 (12 ~ 48V DC)
- 2. Power Jack include: PWR2 (12 ~ 48V DC)
- 3. RJ45 Ethernet Connector: 2 10/100Base-T(X) Ethernet interface.
- 4. Reverse SMA connector for 2.4GHz antenna



3.4 Bottom Panel

The bottom panel components of DS are showed as below:



- 1. Reset bottom. 5 seconds for factory default.
- 2. Male DB9 connector: Serial interface of RS-232/422/485 (2 wire)(4 wire).

	Pin Assignment						
	Pin#	RS232	RS422	RS485(4 wire)	RS485(2 wire)		
	1	DCD	RXD-	RXD-			
	2	RXD	RXD+	RXD+			
	3	TXD	TXD+	TXD+	DATA+		
	4	DTR	TXD-	TXD-	DATA-		
	5	GND	GND	GND	GND		
	6	DSR					
	7	RTS					
	8	CTS					
	9	RI					
RS232 mode act as DTE							

3. DIP Switch: Termination for RS-422/485

DIP1DIP2Termination ConfigurationONONTermination for Long Distance 4-wire RS485/RS422ONOFFReservedOFFONTermination for Long Distance 2-wire RS485OFFOFFNo Termination for RS232/422/485(short distance)

3.5 Rear Panel

The rear panel components of DS are showed as below:

- 1. Screw holes for wall mount kit and DIN-Rail kit.
- 2. Din-Rail kit
- 3. Wall Mount Kit





Cables

4.1 Ethernet Cables

The DS-11-W has standard Ethernet ports. According to the link type, the DS-11-W use CAT 3, 4, 5,5e UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications

Cable	Туре	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

100BASE-TX/10BASE-T Pin Assignments

With 100BASE-TX/10BASE-T cable, pins 1 and 2 are used for transmitting data, and pins 3 and 6 are used for receiving data.

Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used

RJ-45 Pin Assignments

The DS supports auto MDI/MDI-X operation. You can use a straight-through cable to connect PC to DS-11-W. The following table below shows the 10BASE-T/ 100BASE-TX MDI and MDI-X port pin outs.

Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

MDI/MDI-X pins assignment

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.



Management Interface

5.1 DS-Tool

DS-Tool is a powerful Windows utility for DS series. It supports device discovery, device configuration, group setup, group firmware update, monitoring functions...etc. It is easy for you to install and configure devices over the network.

5.1.1 Install DS-Tool

Step 1: Execute the Setup program, click "start" after selecting the folder for DS-Tool.

월 Installing DSTool				×
	Destination Directory C:\Program Files\DSTool			-
	Required: 5222 K Available: 823068 K		<u>B</u> rowse	
		Start	<u>E</u> xit	

Step 2: When installation complete successfully, then click "OK".

😼 Installing DSTool	×				
Installation was completed successfully					
100%					
ОК					

Step 3: Check for your selection.



5.1.2 Using DS-Tool

5.1.2.1 Explore DS device servers

DS-Tool will broadcast to the network and search all available DS devices in the network. The default IP address of the device is "**192.168.10.2**", and selects the searching device you wish to use and press "**Add**" button. You can set static IP address or in DHCP client mode to get IP address automatically. Finally, click "**OK** "button to add the device.

Adc Broadcast	Broadcast Searchi	ng			e Firnware
DSTool	New Devices	0:25:44:56:56:45,1	nvalid IP,*	MAC 01 Original IP 19 Using State Assign Static I IP Address Netmask Gatway DNS1 DNS2 Password Cancel	0:25:44:56:56:45 32.168.10.2 ic IP Using DHCP P 192.168.10.2 255.255.255.0 192.168.10.2 Auto Scan OK
	Cancel	Clear All	Select All	Add]

5.1.2.2 Configure DS device servers

General settings

This page includes the setting of device name, SNTP server and Auto IP Report.

Model Power Industrial 1-port RS232/422/485 to 802.11 b/g WLAN Device Server 1 2 LAN IP Address LAN MAC Address VLAN IP Address WLAN MAC Address Disabled 00:00:00:00:00 Device Name/Location DeviceServer: IP Address V Using SNTP Time Server Auto IP Report SNTP Server IP Port Ige Current Host Ige Current Host Igent 1:0 Seconds	Model Industrial 1-port RS232/422/485 LAN IP Address L 192.168.0.41 WLAN IP Address ↓ Disabled Device Name/Location DeviceServer-DEFAULT ✓ Using SNTP Time Server SNTP Server IP Port pool.ntp.org 123 Time Zone [(GMT+08:00)Taipei	to 802.11 b/g WLAN Device Server AN MAC Address Version 00:00:56:04:02:07 1.05j VLAN MAC Address 00:00:00:00:00:00 VLAN MAC Address 00:00:00:00:00 VLAN MAC Address 00:00:00:00 VLAN MAC Address 00:00:00:00 VLAN MAC Address 00:00:00:00 VLAN MAC Address 00:00:00:00 VLAN MAC Address 00:00:00 VLAN MAC Address 00:00 VLAN MAC Address 00 VLAN MAC Address 00 VLAN MAC Address 00 VLA	Power 1 2 2 Networking w attl Metworking Locate On
LAN IP Address LAN MAC Address Version Networking 192.168.0.41 00:00:56:04:02:07 1.05 III III w will wLAN IP Address WLAN MAC Address IIII III w will Disabled 00:00:00:00:00 Device Name/Location Device Server DEFAULT V Using SNTP Time Server V Auto IP Report SNTP Server IP Port pool.ntp.org 123 Time Zone [GMT +08:00]T aipei Get Current Host Report Interval 10 Seconds	LAN IP Address L 192.168.0.41 wLAN IP Address v Disabled Device Name/Location DeviceServer-DEFAULT ✓ Using SNTP Time Server SNTP Server IP Port pool.ntp.org [123 Time Zone (GMT+08:00)Taipei	AN MAC Address Version 00:00:56:04:02:07 1.05j vLAN MAC Address 00:00:00:00:00:00 ✓ Auto IP Report IP Address Port 192:168.0.35 5000	Networking 1 w wattl Metworking w wattl Locate On 101
WLAN IP Address Disabled Device Name/Location Device Server-DEFAULT Using SNTP Time Server SNTP Server IP Port IP Address I23 Time Zone [GMT+08:00]T aipei IO ID Seconds	WLAN IP Address V Disabled Device Name/Location DeviceServer-DEFAULT Using SNTP Time Server SNTP Server IP Port pool.ntp.org [123 Time Zone [(GMT+08:00)Taipei	VLAN MAC Address 00:00:00:00:00:00 ✓ Auto IP Report IP Address Port [192.168.0.35 [6000]	Vocate On
Device Name/Location DeviceServer/DEFAULT Using SNTP Time Server V Auto IP Report SNTP Server IP Port pool.ntp.org 123 Time Zone (GMT +08:00)Taipei Get Current Host Report Interval 10 Seconds	Device Name/Location DeviceServer-DEFAULT Using SNTP Time Server SNTP Server IP Poot pool.ntp.org Time Zone (GMT+08:00)Taipei	✓ Auto IP Report IP Address Port 192.168.0.35 5000	001
V Using SNTP Time Server Auto IP Report SNTP Server IP Port pool.ntp.org 123 Time Zone Get Current Host (GMT+08:00)Taipei Report Interval 10 Seconds	Using SNTP Time Server SNTP Server IP Port pool.ntp.org [123 Time Zone (GMT+08:00)Taipei	IP Address Port 192.168.0.35 6000	101
Get Current Host (GMT+08:00)Taipei Get Current Host Report Interval 10	Time Zone (GMT+08:00)Taipei		
		Get Current Host Report Interval 10 Seconds	
	Petroph		<u> </u>

Label Description			
Device	You can set the device name or related information. By clicking		
Name/location	"Locate On" button you can locate the serial server's position.		
Set SNTP	Input the SNTP server domain name or IP address, port and select the		
	Time zone.		
Set Auto IP	By Clicking the "Get current Host" button you will get your local IP,		
Report	and then set the Report interval time. The device server will report its		
	status periodically.		
	At "IP collection "option show the device report information. The		
	report interval is 0 indicate disable this setting (default), but you can set		
	the other IP or Port.		

Security

General Security Networking Wireless Notification Management Upgrade Firmware Save/Load						
Access IP Table	Access IP Table Password					
IP1 192.168.0.1	Mask 255.255.255.255	🔽 Enabled	New Password			
IP2 192.168.0.2	Mask 255.255.255.0	🔽 Enabled	<u></u>			
IP3	Mask	Enabled	Confirm New Password			
IP4	Mask	Enabled	Old Password			
IP5	Mask	🔲 Enabled	xxxxxx			
IP6	Mask	Enabled				
IP7	Mask	Enabled	Change Password			
IP8	Mask	Enabled				
IP9	Mask	Enabled				
IP10	Mask	Enabled				
IP11	Mask	Enabled				
IP12	Mask	Enabled				
IP13	Mask	Enabled				
IP14	Mask	Enabled				
IP15	Mask	Enabled				
IP16	Mask	Enabled				
,	,					
🍫 Refresh			🜛 Apply Only 🛛 🗼 Apply and Save			

Label	Description		
Accessible IP	To prevent unauthorized access by setting host IP addresses and		
Setting	network masks.		
	1. Only one host with a special IP address can access the		
	device server , "IP address /255.255.255.255" (e.g.,		
	"192.168.0.1/255.255.255.255").		
	2. Hosts on a specific subnet can access the device server.		
	"IP address/255.255.255.0" (e.g.,		
	"192.168.0.2/255.255.255.0")		
	3. Any host can access the device server. Disable this		
	function by un-checking the "Enable IP Filter" checkbox		
Password setting	You can set the password to prevent unauthorized access from your		
	server. Factory default is no password.		

Network Setting

Device DS can connect the Network by wire and wireless. You must assign a valid IP address for DS before attached in your network environment. Your network administrator should provide you the IP address and related settings. The IP address must be unique within the network (otherwise, DS will not have a valid connection to the network). You can choose from three possible "**IP configuration**" modes: Static, DHCP/BOOTP. The Factory Default IP address is "**192.168.10.2**"

General Securit	Vetworking Wireless Notification Manage	ment 🛛 Upgrade Firmware 🗍 Sa	ive/Load	
Wire Wireles:	3			
Using Static	IP 🔲 Using DHCP/BOOTP			
-Static IP Setting	8			
IP Address	192.168.10.2			
Netmask	255.255.255.0			
Gatway	192.168.10.1			
DNS1	192.168.10.1			
DNS2				
🧐 Refresh			🍌 Apply Only	À Apply and Save

Label	Description			
Using Static IP	Manually assigning an IP address.			
Using	IP Address automatically assigned by a DHCP server in your network.			
DHCP/BOOTP				
Subnet Mask	All devices on the network must have the same subnet mask to			
	communicate on the network.			
Gateway	Enter the IP address of the router in you network.			
DNS Server	Enter the IP address of the DNS server, The DNS server translates			
	domain names into IP address.			

Wireless setting

Wireless Network type includes two modes: Infra and Adhoc. The Infra type connects the network by wireless access point, but the Adhoc is formed by the association of wireless and mobile devices capable of communicating among themselves even when there is no networking infrastructure available. Infra Network



Adhoc Network



General Se Network Ty SSI	ecurity Networking Wireless Notification Management Upgrade Firmwa Pe Adhoc D tianya SSID Scan	re Save/Load
Wireless En	cryption	
♥ WEP	WEP Encryption Key Character Input : 5 characters(WEP64)	
C TKIP C AES	WPA.PSK (Previouslu Shared Keu)	
	Key Renewal Period : minutes	
🍤 Refres	h	👌 Apply Only 📄 🌛 Apply and Sav

The following table describes the labels in this screen.

Label	Description		
Network Type	Type includes Infra and Adhoc.		
SSID	Service Set Identifier Default is the default setting. The SSID is a unique		
	name that identifies a network. All devices on a network must share the		
	same SSID name in order to communicate on the network.		
Channel	All devices on the network must be set to the same channel to		
	communicate on the network. You can select the Auto.		
NO Encryption	You can set no encryption mode, but this mode is insecurity and don't		
	suggest use.		
WEP	You can set four encryption 5characters (WEP64), 13 characters		
	(WEP128), 10 digits (WEP64), 26digits (WEP128).		
ТКІР	TKIP (Temporal Key Integrity Protocol) is a key management protocol.		
AES	AES (Advanced Encryption System) is a variable bit length symmetric		
	digital encryption algorithm.		

*Simply unplug the RJ-45 to change into wireless connection

Notification

Specify the events that should be notified to the administrator. The events can be notified by

E-mail, SNMP trap, or system log.

General Security Networking Wireless Notification Management Upgrade Firmwa	re Save/Load		
SNMP Trap 🔽 Email Notification 🔽 Syslog Notification			
SNMP Settings Email Settings Syslog Setttings			
Notified Items			
Hardware Reset (Cold Start) □ DI_1 Changed			
V Software Reset (Warm Start) DI_2 Changed			
▼ Password Changed □ D0 1 Changed			
Access IP Blocked DO_2 Changed			
Redundant Power Changed			
Redundant Ethernet Changed			
System Log Settings			
Server IP Port			
192.168.0.35 514 Using Current Host's Log Server			
S Refresh	🍐 Apply Only 🛛 🐋 Apply and Save		

Label	Description		
SNMP Trap	To notify events information by SNMP trap.		
Email Notification	To notify events information by Email.		
Syslog	To notify events information by SySlog. You can use the current		
Notification	Host's Log server by click "Using Current Host's Log Server" button.		
	You also can set other log server. (DS-tool log server port default 514)		
Notify items	The events to be notified.		
Apply	Apply current setting, but the setting will be lost after reboot.		
Apply and Save	Apply and save current setting. Write configuration into flash		
	memory.		

Management

General Security	Networking Wire	less Notification	Management	Upgrade Firmware	Save/Load	
🔽 Web Manag	ement Enable	Goto Web Ma	nagement			
🔽 Telnet Mana	gement Enable	Goto Telnet Ma	anagement			
🔽 SNMP Mana	agement Enable					
SNMP Manager	nent Settings			7		
Community	tian					
Location	tian					
Contact	tian					
	[(arr					
Trap Server1	192.168.0.12					
Tran Server2						
Thep controls	1					
Trap Server3						
Tree Course						
i rap Server4						
L						
4						
🍤 Refresh					📥 Apply Only	Apply and Save
						///

Label	Description
Web Management	To enable management from Web. Click "Goto Web Management"
Enable	button to access device web page, then set the device by web.
Telnet	To enable management by Telnet(SSH). Click "Goto Telnet
Management	Management" button to execute Telnet command.
Enable	
SNMP	
Management	To enable management by SNMP.
Enable	
SNMP	
Management	To configure SNMP server related settings.
Settings	

Upgrade Firmware	
General Security Networking Wireless Notification Man	agement Upgrade Firmware Save/Load
Firmware Image	
	Browsing Upgrade

The following table describes the labels in this screen.

Label	Description
Browsing	Browse the file and upgrade
Upgrade	Enable the firmware upgrade.

Save/Load

General Security Networking Wireless Notification Management Upgrade Firmwa	re Save/Load
Save Configuration to Flash]
Apply and Save	
Load Default]
o Load Default	
Reboot Device]
○ Reboot Device	
Import/Export Configuration	
Import Export	
	-
S Refresh	👌 Apply Only 🗼 Apply and Save

Label	Description
Save	Save current configuration into flash memory.
Configuration to	
Flash	

Load Default	Load default configuration except the network settings. If you want to
	load all factory default, you need to press "Reset" button on the device
	(Hardware restore).
Reboot Device	Reboot the device server (warm start).
Import	Restore the previous exported configuration.
Configuration	
Export	Export current configuration to a file to backup the configuration.
Configuration	

5.1.2.3 Configure serial port

Serial Settings

Serial Settings Service Mode Notification		
Port Alias Port0		
Baudrate 38400 Stop Bits 1 Performance Throughput Parity No Flow Control No Flow Data Bits 8 Interface RS232		
Delimiter Settings Serial to Ethernet Ethernet to Serial		
Delimiter 1 Delimiter 2 Image: Constraint of the state of the st		
Flush Serial to Ethernet Data Buffer After 0 (0-65535) ms		
The received data will be queueing in the buffer until all the delimiters are matched. When the buffer is full (4K Bytes) or after "flush S2E data buffer" timeout, the data will also be sent.		
Force TX interval time 0 (0-65535)ms 1 (0-65535)ms		
Sefresh Apply Only		

Label	Description
Port Alias	Remark the port to hint the connected device.
Interface	RS232 / RS422 / RS485(2-wires) / RS485(4-wires)
Baud rate	110bps/300bps/1200bps/2400bps/4800bps/9600bps/19200bps/
	38400bps/57600bps/115200bps/230400bps

r	T r
Data Bits	5, 6, 7, 8
Stop Bits	1, 2 (1.5)
Parity	No, Even, Odd, Mark, Space
Flow Control	No, XON/XOFF, RTS/CTS, DTR/DSR
Performance	Throughput: This mode optimized for highest transmission
	speed.
	Latency: This mode optimized for shortest response time.
Serial to Ethernet	Delimiter:
	You can define max. 4 delimiters (00~FF, Hex) for each way.
	The data will be hold until the delimiters are received or the option
	"Flush Serial to Ethernet data buffer" times out. 0 means
	disable. Factory default is 0.
	Flush Data Buffer After:
	The received data will be queuing in the buffer until all the delimiters
	are matched. When the buffer is full (4K Bytes) or after "flush S2E
	data buffer" timeout the data will also be sent. You can set the time
	from 0 to 65535 seconds.
Ethernet to Serial	Delimiter:
	You can define max. 4 delimiters (00~FF, Hex) for each way.
	The data will be hold until the delimiters are received or the option
	"Flush Ethernet to Serial data buffer" times out. 0 means
	disable. Factory default is 0.
	Flush Data Buffer After:
	The received data will be queuing in the buffer until all the
	delimiters are matched. When the buffer is full (4K Bytes) or
	delimiters are matched. When the buffer is full (4K Bytes) or after "flushE2S data buffer" timeout the data will also be sent.
	delimiters are matched. When the buffer is full (4K Bytes) or after " flushE2S data buffer " timeout the data will also be sent. You can set the time from 0 to 65535 seconds.
Force TX Interval	 delimiters are matched. When the buffer is full (4K Bytes) or after "flushE2S data buffer" timeout the data will also be sent. You can set the time from 0 to 65535 seconds. Force TX interval time is to specify the timeout when no data has been
Force TX Interval Time	 delimiters are matched. When the buffer is full (4K Bytes) or after "flushE2S data buffer" timeout the data will also be sent. You can set the time from 0 to 65535 seconds. Force TX interval time is to specify the timeout when no data has been transmitted. When the timeout is reached or TX buffer is full (4K
Force TX Interval Time	 delimiters are matched. When the buffer is full (4K Bytes) or after "flushE2S data buffer" timeout the data will also be sent. You can set the time from 0 to 65535 seconds. Force TX interval time is to specify the timeout when no data has been transmitted. When the timeout is reached or TX buffer is full (4K Bytes), the queued data will be sent. 0 means disable. Factory

Service Mode – Virtual COM Mode

In Virtual COM Mode, the DS-Tool establishes a transparent connection between host and serial device by mapping the Port of the serial server serial port to local COM port on the host computer. Virtual COM Mode also supports up to 5 simultaneous connections, so that multiple hosts can send or receive data by the same serial device at the same time.

Serial Settings Service Mode Notification port1 Service Mode Virtual COM Mode Virtual COM Mode	
Virtual COM Settings Misc. Data Port# 4004 Edit IP Port Number Idle Timeout 0 Control Port# 4005 Map Virtual COM Alive Check 0	(0-65535) Seconds (0-65535) Seconds
Multilink Max Connections 5	Select a Virtual COM Name
Destination Host VCOM Name	(Validated charaters of virtual COM name is A-Z, a-z and 0-9. Max Length of the name is 128 charaters) Using Traditional COM Name
Waiting for VCDM connect Soto VCom 3 Waiting for VCOM connect Soto VCom	CUM3 COM4 COM5 COM6 COM7 COM8
Waiting for VCOM connect Goto VCom	COM9 COM10 COM11 COM12 COM12
	Cancel OK

Label	Description
Map Virtual COM	Select a Virtual COM Name to map on.
Max Connection	The number of Max connection can support simultaneous connections
	are 5, default values is 1.
Idle Timeout	When serial port stops data transmission for a defined period of time
	(Idle Timeout), the connection will be closed and the port will be freed
	and try to connect with other hosts. 0 indicate disable this function.
	Factory default value is 0. If Multilink is configured, only the first host
	connection is effective for this setting.
Alive Check	The serial device will send TCP alive-check package in each defined
	time interval (Alive Check) to remote host to check the TCP
	connection. If the TCP connection is not alive, the connection will be
	closed and the port will be freed. 0 indicate disable this function.
	Factory default is 0.

Service Mode – TCP Server Mode

In TCP Server Mode, DS is configured with a unique Port combination on a TCP/IP network. In this case, DS waits passively to be contacted by the device. After a connection is established, it can then proceed with data transmission. TCP Server mode also supports up to 5 simultaneous connections, so that multiple device can receive data from the same serial device at the same time.

erial Settings Service Mode Notification
Service Mode TCP Server Mode
CP Server Mode
TCP Server Settings Misc. Data Port 4002 Idle Timeout 0 (0-65535) Seconds Control Port 4003 Auto Scan Alive Check 0 (0-65535) Seconds
Max Connections Image: Second secon
2 Disconnect
🧐 Refresh 🛛 🕹 Apply Only 🔹 🍛 Apply and Save

Label	Description
Data Port	Set the port number for data transmission.
Auto Scan	Scan the data port automatically.
Idle Timeout	When serial port stops data transmission for a defined period of time
	(Idle Timeout), the connection will be closed and the port will be freed
	and try to connect with other hosts. 0 indicate disable this function.
	Factory default value is 0. If Multilink is configured, only the first host
	connection is effective for this setting.
Alive Check	The serial device will send TCP alive-check package in each defined
	time interval (Alive Check) to remote host to check the TCP
	connection. If the TCP connection is not alive, the connection will be
	closed and the port will be freed. 0 indicate disable this function.
	Factory default is 0.
Max Connection	The number of Max connection can support simultaneous connections
	are 5, default values is 1.

Service Mode – TCP Client Mode

In TCP Client Mode, device can establish a TCP connection with server by the method you have settled (Startup or any character). After the data has been transferred, device can disconnect automatically from the server by using the TCP alive check time or idle time settings.

Serial Settings Service Mode Notification
Service Mode TCP Client Mode
TCP Client Mode
TCP Client Settings Misc. Destination Host Port 192.168.0.10 4002 Image: Control Port 4003 Image: Connect on Startup Image: Connect on Startup
Multilink Destination Host Port
Auto Scan
2 es Auto Scan
3 EQ. Auto Scan
4 Auto Scan

Label	Description
Destination Host	Set the IP address of host.
Port	Set the port number of data port.
Idle Timeout	When serial port stops data transmission for a defined period of time
	(Idle Timeout), the connection will be closed and the port will be freed
	and try to connect with other hosts. 0 indicate disable this function.
	Factory default value is 0. If Multilink is configured, only the first host
	connection is effective for this setting.
Alive Check	The serial device will send TCP alive-check package in each defined
	time interval (Alive Check) to remote host to check the TCP
	connection. If the TCP connection is not alive, the connection will be
	closed and the port will be freed. 0 indicate disable this function.
	Factory default is 0.
Connect on	The TCP Client will build TCP connection once the connected serial
Startup	device is started.

Connect on Any	The TCP Client will build TCP connection once the connected serial
Character	device starts to send data.

Service Mode – UDP Client Mode

Compared to TCP communication, UDP is faster and more efficient. In UDP mode, you can Uni-cast or Multi-cast data from the serial device server to host computers, and the serial device can also receive data from one or multiple host

Serial Settings Service Mode	Notification		
port1 Service Mode UDP Mo	de 💌		
UDP Mode			
UDP Settings Listening Port 4004	🕰 Auto Scan		
Multilink			
Destination Host Begin	Destination Host End	Sending Port	
192.168.0.1	to 192.168.0.100	10000	🕰 Auto Scan
2	to		🕰 Auto Scan
3	to		🕰 Auto Scan
4	to		🕰 Auto Scan

Notification

Specify the events that should be noticed. The events can be notified by E-mail, SNMP trap or system log.

Serial Settings Service Mode	Notification
SNMP Trap	Email Notification 🔽 Syslog Notification
SNMP Settings Email Settings	Syslog Settings
DCD Changed	CTS Changed
DSR Changed	Port Connected
🔲 RI Changed	Fort Disconnected
Mail Server: Mail to:	
S Refresh	👌 Apply Only 🌏 🍌 Apply and Save

Label	Description
DCD changed	When DCD (Data Carrier Detect) signal changes, it indicates that the
	modem connection status has changed. Notification will be sent.
DSR changed	When DSR (Data Set Ready) signal changes, it indicates that the data
	communication equipment is powered off. A Notification will be sent.
RI changed	When RI (Ring Indicator) signal changes, it indicates that the incoming
	of a call. A Notification will be sent.
CTS changed	When CTS (Clear To Send) signal changes, it indicates that the
	transmission between computer and DCE can proceed. A notification
	will be sent.
Port connected	In TCP Server Mode, when the device accepts an incoming TCP
	connection, this event will be trigger. In TCP Client Mode, when the
	device has connected to the remote host, this event will be trigger. In
	Virtual COM Mode, Virtual COM is ready to use. A notification will be
	sent.
Port	In TCP Server/Client Mode, when the device lost the TCP link, this
disconnected	event will be trigger. In Virtual COM Mode, When Virtual COM is not
	available, this event will be trigger. A notification will be sent.

5.2 Configuration by Web Browser

5.2.1 Connect to the Web page

Step 1: Input the IP address of DS with "https://192.168.10.2" in the Address input box of IE.

Step 2: Click "Yes" button on the dialog box.



Step 3: Input the name and password, then click "OK".

Connect to 192.1	68. 10. 2
cgi-bin	
<u>U</u> ser name:	😰 admin 💽
<u>P</u> assword:	•••••
	Remember my password
	OK Cancel

*Only if password is set

Step 4: The system information will be shown as below.

Indus	trial Networki	ng Platform Design Partner	
	1. All		
MENU	System Information		
erial Device Server	IP Address	192.168.10.2	
System	MAC Address	00:17:88:69:95:62	
Port Serial Setting Management	Firmware Version	1.1e	
Save/Reboot Help			

5.2.1.1 System SNTP

	A State /	
MENU	SNTP Configura	tion
rial Device Server	Name	DeviceServer-DEFAULT
Bystem Custom Information	Time	
SNTP	SNTP	C Enable O Disable
IP Configuration	Time Zone	(GMT+08:00)Taipei
Wireless Configuration	Local Time	Thu Jan 1 08:08:26 1970
Port Serial Setting	Time Server	pool.ntp.org Port 123
/lanagement Save/Reboot	Console	
	Talpat Cancala	05.11.051.11

Label	Description
Name	You can set the name of DS
SNTP	Enable the SNTP server.
Time zone	After you set the SNTP enable, select the time zone you located.
Time server	Input SNTP server domain name or IP address and Port.
Console	Telnet Console (SSH) is included for security reasons. In some
	cases, you may need to disable this function to prevent unauthorized
	access from internet. The factory default is enable.

IP Configuration

You must assign a valid IP address for DS before attached in your network environment. Your network administrator should provide you with the IP address and related settings. The IP address must be unique and within the network (otherwise, DS will not have a valid connection to the network). You can choose from three possible "**IP configuration**" modes: Static, DHCP/BOOTP. The Factory Default IP address is "**192.168.10.2**"

Industri	ial Networkin	g Platform Design Partner
MENU	IP Configuration	
B System	Network Interface	LAN
System Information	IP Configuration	DHCP/BOOTP V
IP Configuration	IP Address	192.168.0.41
Wireless Configuration	Netmask	255.255.255.0
Port Serial Setting	Gateway	192.168.0.1
Management Save/Reboot	DNS Server 1	192.168.0.1
Help	DNS Server 2	
and the second se	Auto IP Report	
	Auto Report to IP	
	Auto Report to TCP Port	0
	Auto Report Interval	0 seconds
	Apply	

Label	Description
Network Type	Include Lan and Wireless.
DHCP/BOOTP	Obtain the IP address automatically from DHCP server.
Static IP Address	Assigning an IP address manually.
Subnet Mask	Set the subnet mask to communicate on the network.
Gateway	Enter the IP address of the router in you network.
DNS Server	Enter the IP address of the DNS server to translate domain names into
	IP address.
Auto IP Report	Set the report IP address and TCP port (60001 DS-tool default), then
	the device server will report it status periodically.
	At DS-Tool->IP collection option show the device server status. The
	report interval is 0 indicate disable this setting (default). Also you can
	set the other IP or Port.

Wireless setting

Wireless Network type include two mode, Infra and Adhoc. The Infra type connect the network by wireless access point, but the Adhoc is formed by the association of wireless and mobile devices capable of communicating among themselves even if there is no networking infrastructure available.

1 Start	1		
Wir	eless Settings		
Net	work Type	Infra 💌	
SSI	b	SSID Scan	
Wire	less Encryption		
۲	No Encryption		
0	O WEP		
V	VEP Encryption ev	Character Input : 13 characters(WEP128) 💌	
	ອ້1:		
) 2:		
) з:		
) 4:		
0	ткір		
0	AES		
14	/DA-DSK (Dreviou	cly Shared Keyl)	
		siy shared key).	
W K	/PA-PSK (Previou ey Renewal Perio	sly Shared Key) d : mir	

Label	Description
Network Type	Type include Infra and Adhoc.
SSID	Service Set Identifier Default is the default setting. The SSID is a unique
	name that identifies a network. All devices on a network must share the
	same SSID name in order to communicate on the network.
Channel	All devices on the network must be set to the same channel to
	communicate on the network. You can select the Auto.
NO Encryption	You can set no encryption mode, but this mode is insecurity and we don't
	suggest to use it.
WEP	You can set four encryption 5 characters (WEP64),13
	characters(WEP128), 10 digits(WEP64),26 digits(WEP128).
ТКІР	TKIP (Temporal Key Integrity Protocol) is a key management protocol.
AES	AES (Advanced Encryption System) is a variable bit length symmetric
	digital encryption algorithm.

Authentication

You can set the password to prevent unauthorized access from network. Input the "**Old password**" and "**New password**" to change the password. Factory default is no password.

MENU	User Authentication	
al Device Server	Old Password	
stem System Information	New Password	
SNTP	Confirm New Password	
IP Configuration		
User Authentication	Apply	
rt Serial Setting		
nagement		

5.2.1.2 Port serial setting Serial configuration

Serial Configuration	
	Port1
Port Alias	PortO
Interface	RS232 💌
Baud Rate	38400 💌
Data Bits	8 🕶
Stop Bits	1
Parity	None 💌
Flow Control	None 💌
Force TX Interval Time	0 ms
Performance	⊙ Throughput ○ Latency
Apply	

The following table	e describes the labels in this screen.

Label	Description
Port Alias	Remark the port to hint the connected device.
Interface	RS232 / RS422 / RS485(2-wires) / RS485(4-wires)
Baud rate	110bps/300bps/1200bps/2400bps/4800bps/9600bps/19200bps/

	38400bps/57600bps/115200bps/230400bps
Data Bits	5, 6, 7, 8
Stop Bits	1, 2 (1.5)
Parity	No, Even, Odd, Mark, Space
Flow Control	No, XON/XOFF, RTS/CTS, DTR/DSR
Force TX Interval	Force TX interval time is to specify the timeout when no data has been
Time	transmitted. When the timeout is reached or TX buffer is full (4K
	Bytes), the queued data will be sent. 0 means disable. Factory
	default value is 0.
Performance	Throughput: This mode optimized for highest transmission
	speed.
	Latency: This mode optimized for shortest response time.
Apply	Activate settings on this page.

Port Profile

	Port1
Local TCP Port	4000
Command Port	4001
Mode	Serial to Ethernet
Flush Data Buffer After	0 ms
Delimiter(Hex 0~ff)	1: 00 2: 00 3: 00 4: 00
Mode	Ethernet to Serial
Flush Data Buffer After	0 ms
Delimiter(Hex 0~ff)	1; 00 2; 00 3; 00 4; 00

Label	Description
Serial to Ethernet	Flush Data Buffer After:
	The received data will be queued in the buffer until all the delimiters
	are matched. When the buffer is full (4K Bytes) or after "flush S2E
	data buffer" timeout, the data will also be sent. You can set the time
	from 0 to 65535 seconds.
	Delimiter:
	You can define max. 4 delimiters (00~FF, Hex) for each way. The

	data will be hold until the delimiters are received or the option "Flush
	Serial to Ethernet data buffer" times out. 0 means disable.
	Factory default is 0
Ethernet to serial	Flush Data Buffer After:
	The received data will be queued in the buffer until all the delimiters
	are matched. When the buffer is full (4K Bytes) or after "flush E2S
	data buffer" timeout, the data will also be sent. You can set the time
	from 0 to 65535 seconds.
	Delimiter:
	You can define max. 4 delimiters (00~FF, Hex) for each way. The
	data will be hold until the delimiters are received or the option "Flush
	Ethernet to Serial data buffer" times out. 0 means disable.
	Factory default is 0

Service Mode – Virtual COM Mode

In Virtual COM Mode, the driver establishes a transparent connection between host and serial device by mapping the Port of the serial server serial port to local COM port on the host computer. Virtual COM Mode also supports up to 5 simultaneous connections, so that multiple hosts can send or receive data by the same serial device at the same time.

Service Mode	
	Port1
Service Mode	Virtual COM Mode 💌
Idle Timeout	0 (0~65535)seconds
Alive Check	0 (0~65535)seconds
Max Connection	1 ♥ max. connection (1~5)
Apply	

*Not allowed to mapping Virtual COM from web

Label	Description
Idle Timeout	When serial port stops data transmission for a defined period of time
	(Idle Timeout), the connection will be closed and the port will be freed
	and try to connect with other hosts. 0 indicate disable this function.

	Factory default value is 0. If Multilink is configured, only the first host
	connection is effective for this setting.
Alive Check	The serial device will send TCP alive-check package in each defined
	time interval (Alive Check) to remote host to check the TCP
	connection. If the TCP connection is not alive, the connection will be
	closed and the port will be freed. 0 indicate disable this function.
	Factory default is 0.
Max Connection	The number of Max connection can support simultaneous connections
	are 5, default values is 1.

Service Mode – TCP Server Mode

In TCP Server Mode, DS is configured with a unique Port combination on a TCP/IP network. In this case, DS waits passively to be contacted by the device. After the device establishes a connection with the serial device, it can then proceed with data transmission. TCP Server mode also supports up to 5 simultaneous connections, so that multiple device can receive data from the same serial device at the same time.

Service Mode	
	Port1
Service Mode	TCP Server Mode 💌
TCP Server Port	4000
Idle Timeout	0 (0~65535)seconds
Alive Check	0 (0~65535)seconds
Max Connection	1 v max. connection(1~5)
Apply	

Label	Description
TCP Server Port	Set the port number for data transmission.
Idle Timeout	When serial port stops data transmission for a defined period of time
	(Idle Timeout), the connection will be closed and the port will be freed
	and try to connect with other hosts. 0 indicate disable this function.
	Factory default value is 0. If Multilink is configured, only the first host
	connection is effective for this setting.
Alive Check	The serial device will send TCP alive-check package in each defined
	time interval (Alive Check) to remote host to check the TCP

	connection. If the TCP connection is not alive, the connection will be	
	closed and the port will be freed. 0 indicate disable this function.	
	Factory default is 0.	
Max Connection	Support up to 5 simultaneous connections are 5, default values is 1.	

Service Mode – TCP Client Mode

In TCP Client Mode, device can establish a TCP connection with server by the method you have settled (Startup or any character). After the data has been transferred, device can disconnect automatically from the server by using the TCP alive check time or idle time settings.

Service Mode		
	Port1	
Service Mode	TCP Client Mode 💌	
Destination Host	0.0.0.0 : 4000	
Idle Timeout	0 (0~65535)seconds	
Alive Check	0 (0~65535)seconds	
Connect on	⊙ Startup ○ Any Character	
Destination Host	Port	
1. 0.0.0.0	65535	
2. 0.0.0.0	65535	
3. 0.0.0.0	65535	
4. 0.0.0.0	65535	
Apply		

Label	Description	
Destination Host	Set the IP address of host and the port number of data port.	
Idle Timeout	When serial port stops data transmission for a defined period of time	
	(Idle Timeout), the connection will be closed and the port will be freed	
	and try to connect with other hosts. 0 indicate disable this function.	
	Factory default value is 0. If Multilink is configured, only the first host	
	connection is effective for this setting.	
Alive Check	The serial device will send TCP alive-check package in each defined	
	time interval (Alive Check) to remote host to check the TCP	
	connection. If the TCP connection is not alive, the connection will be	
	closed and the port will be freed. 0 indicate disable this function.	

	Factory default is 0.
Connect on	The TCP Client will build TCP connection once the connected serial
Startup	device is started.
Connect on Any	The TCP Client will build TCP connection once the connected serial
Character	device starts to send data.

Service Mode – UDP Client Mode

Compared to TCP communication, UDP is faster and more efficient. In UDP mode, you can Uni-cast or Multi-cast data from the serial device server to host computers, and the serial device can also receive data from one or multiple host

	Dout 1	
	Porti	
Service Mode	UDP Mode	
Listen Port	4004	
Host start IP	Host end IP	Send Port
1. 192.168.0.1	192.168.0.100	20000
2. 0.0.0.0	0.0.0.0	65535
з. 0.0.0.0	0.0.0.0	65535
4 0.0.0.0	0.0.0.0	65535

5.2.1.3 Management

Accessible IP Settings

Accessible IP Settings allow you to add or block the remote host IP addresses to prevent unauthorized access. If host's IP address is in the accessible IP table, then the host will be allowed to access the DS. You can choose one of the following cases by setting the parameter.

- Only one host with a special IP address can access the device server, "IP address /255.255.255.255" (e.g., "192.168.0.1/255.255.255").
- 2. Hosts on a specific subnet can access the device server. "IP

address/255.255.255.0" (e.g., "192.168.0.2/255.255.255.0")

3. Any host can access the device server. Disable this function by un-checking the "Enable IP Filter" checkbox

Access IP Control List					
Enable IP Filtering (Not check this option will allow any IP to have assessibility)					
No.	Activate the IP	IP Address		Netmask	
1					
2]]
з]]
4]]
5]
6]]
7]]
8]]
9]]
10]]
11]]
12					
13					
14					
15					
16					
Apply	1				

SMTP/SNMP Configuration

Email Server configuration includes the mail server's IP address or domain. If the authentication is required, specify your name and password. There are 4 Email addresses that you can specify to receive the notification.

SNMP Server configuration includes the SNMP Trap Server IP address, Community, Location and Contact. There are 4 SNMP addresses you can specify to receive the notification.

SysLog server configuration includes the server IP and server Port. This option need to use with DS-Tool.

DS-11-W User's Manual

SMTP/SNMP Configuration		
E-mail Settings		
SMTP Server	Port	
My server requires authentication		
User Name		
Password		
E-mail Sender		
E-mail Address 1		
E-mail Address 2		
E-mail Address 3		
E-mail Address 4		
SNMP Trap Server		
SNMP Server 1		
SNMP Server 2		
SNMP Server 3		
SNMP Server 4		
Community		
Location		
Contact		
Syslog Server		
Syslog Server IP		
Syslog Server Port	0	

System Event Configuration

Specify the events that should be notified to the administrator. The events can be notified by E-mail, SNMP trap, or system log.

System Event Configuration			
Device Event Notification			
Hardware Reset (Cold Start)	🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog
Software Reset (Warm Start)	🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog
Login Failed	SMTP Mail	SNMP Trap	Syslog
IP Address Changed	🔲 SMTP Mail	SNMP Trap	Syslog
Password changed	🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog
Access IP Blocked	SMTP Mail	SNMP Trap	Syslog
Redundant Power Changed	🔲 SMTP Mail	🔲 SNMP Trap	Syslog
Redundant Ethernet Changed	🔲 SMTP Mail	🔲 SNMP Trap	Syslog
SNMP Access Failed	SMTP Mail	SNMP Trap	Syslog
Port Event Notification			
DCD Changed	🔲 SMTP Mail	🔲 SNMP Trap	Syslog
DSR Changed	SMTP Mail	SNMP Trap	Syslog
RI Changed	SMTP Mail	SNMP Trap	🔲 Syslog
CTS Changed	🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog
Port Connected	🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog
Port Disconnected	🔲 SMTP Mail	🔲 SNMP Trap	Syslog

Apply

Label	Description		
Hardware Reset	This refers to starting the system from power off (contrast this with		
(Cold Start)	warm start). When performing a cold start, DS will automatically issue		
	an Auto warning message by sending E-mail, log information or an		
	SNMP trap after booting.		
Software Reset	This refers to restart the computer without turning the power off.		
(Warm Start)	When performing a warm start, DS will automatically send an E-mail,		
	log information or SNMP trap after reboot.		
Login Failed	When an unauthorized access from the Console or Web interface, a		
	notification will be sent.		
IP Address	When IP address of device changed, a notification will be sent.		
Changed			
Password	When password of device changed, a notification will be sent.		
Changed			
Access IP	When the host accesses the device with blocked IP addresses, a		
Blocked	notification will be sent.		
Redundant	When status of power changed, a notification will be sent.		

Power Change			
DCD changed	When DCD (Data Carrier Detect) signal changes, it indicates that the		
	modem connection status has been changed. A Notification will be		
	sent.		
DSR changed	When DSR (Data Set Ready) signal changes, it indicates that the data		
	communication equipment is powered off. A Notification will be sent.		
RI changed	When RI (Ring Indicator) signal changes, it indicates an incoming call.		
	Notification will be sent.		
CTS changed	When CTS (Clear To Send) signal changes, it indicates that the		
	transmission between computer and DCE can proceed. A		
	notification will be sent.		
Port connected	In TCP Server Mode, when the device accepts an incoming TCP		
	connection, this event will be trigger. In TCP Client Mode, when the		
	device has connected to the remote host, this event will be trigger. In		
	Virtual COM Mode, Virtual COM is ready to use. A notification will be		
	sent.		
Port	In TCP Server/Client Mode, when the device lost the TCP link, this		
disconnected	event will be trigger. In Virtual COM Mode, When Virtual COM is not		
	available, this event will be trigger. A notification will be sent.		

5.2.1.4 Save/Reboot

Factory Default Reset to default configuration. Click Reset button to reset all configurations to the default value. Reset
Restore Configuration
File to restore:
Restore
Backup Configuration You can save current EEPROM value from the Device Server as a backup file of configuration. Backup
Upgrade Firmware
Specify the firmware image to upgrade. Note: Please DO NOT power off this device while upgrading firmware.
Firmware: Browse
Upgrade
Reboot Device
Please click [Reboot] button to restart device.
Reboot

Label	Description
Load Factory	Load default configuration except settings of Network. If you want
Default	load all factory default, you should press "Reset" button on the device
	(Hardware restore).
Import	Restore the previous exported configuration.
Configuration	
Export	Export the current configuration to a file.
Configuration	
Upgrade	Upgrade to a new firmware with specified file.
Firmware	
Reboot Device	Reboot the device server (warm start).

The following table describes the labels in this screen.

5.3 Configuration by SSH Console

5.3.1 Connect to DS

You can use SSH Tool (e.g., PuTTY) to access SSH console of DS. The SSH console interface is shown below.

```
🛃 192. 168. 10. 2
                                                            login as: admin
admin@192.168.10.2's password:
* * *
     Port Commander
Input System Password: ***
Password comfirmed. Starting Main Menu.
[Port Commander]
1. Overview
2. General Settings
3. Network Settings
4. Ports settings
5. Security(Accessible IP) Settings
Notification(Auto Warning) Settings
C. Change Password
L. Load Factory Default
S. Save configuration
R. Reboot
Q. Exit & Logout
Select one function (1-6,C,L,S,R,Q):
```



Technical Specifications

Network Interface	
Ethernet	1x 10/100Base-T(X) LAN
connector	RJ-45
Protection	Built-in1.5KV magnetic isolation
Protocols	ICMP, IP, TCP, UDP, DHCP, BOOTP, ARP/RARP, DNS,
	SNMP MIB II, HTTPS, SSH
WLAN Feature	
Operating Mode	Client mode
Radio Frequency Type	DSSS
Modulation	IEEE802.11b: CCK, DQPSK, DBPSK
	IEEE802.11g: OFDM with BPSK, QPSK,
	16QAM, 64QAM
Frequency Band	America/FCC: 2.412~2.462 GHz (11 channels)
	Europe CE/ETSI: 2.412~2.472 GHz (13 channels)
Transmission Rate	IEEE802.11b: 1/ 2/ 5.5/ 11 Mbps
	IEEE802.11g: 6/ 9/ 12/ 18/ 24/ 36/ 48/ 54 Mbps
Transmit Power	IEEE802.11b/g: 16dBm
Encryption	WEP: (64-bit ,128-bit key supported)
Security	WPA:
	WPA2 :802.11i(WEP and AES encryption)
	PSK (256-bit key pre-shared key supported) 802.1X and
	Radius supported TKIP encryption
Wireless Security	SSID broadcast disable
Serial Interface	
Interface	1x RS232 / RS422 / 4(2)-Wire RS485. Which can be
	configured by DS-Tool
Connector	Male DB9

Baud Rate	110 bps to 230.4 Kbps
Data Bits	5, 6, 7, 8
Parity	odd, even, none, mark, space
Stop Bits	1. 1.5, 2
RS-232 signals	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
RS-422 signals	Tx+,Tx-, Rx+, Rx-,GND
RS-485 (4 wire) signals	Tx+,Tx-, Rx+, Rx-,GND
RS-485 (2 wire) signals	Data+, Data-, GND
Flow control	XON/XOFF, RTS/CTS, DTR/DSR
Protection	Built-in15KV ESD protection
LED Indicators	PWR 1(2) / Ready:
	1) Red On: Power is on and booting up.
	Red Blinking: Indicates an IP conflict, or DHCP or
	BOOTP server did not respond properly
	2) Green On: Power is on and functioning normally
	Groop Blipking: Located by Administrator
	Green Binking. Located by Administrator.
	Orange ON/Blinking: 10 Mbps Ethernet
	Green ON/Blinking: 100 Mbps Ethernet
	WLAN Link /ACT: Green: Link, Orange: Poor signal
	Serial TX / RX LEDs:
	Red: Serial port is receiving data
	Green: Serial port is transmitting data.
Power Requirements	
Power Input Voltage	PWR1: 12~48VDC in 3-pin Terminal Block PWR2: 12~48VDC in Power Jack with Power Adapter
Reverse Polarity Protection	Present at terminal block
Power Consumption	4 Watts Max
Software Utility	
Utility	DS-Tool for Windows NT/2000/XP/2003/VISTA
	Device discovery
	Auto IP report
	Device setting (run-time change, no rebooting)
	Access control list
	Device monitoring
	Serial port monitoring
	Log info
	Group Firmware update

Serial Mode	Virtual Com / TCP Server / TCP Client / UDP /
	Serial Tunnel
	TCP Alive Check Timeout
	Inactivity Timeout
	Delimiter for Data Packing
	Force TX Timeout for Data Packing
Multiple Link	5 Hosts simultaneous connection: Virtual Com /
	TCP server / TCP Client / UDP
VCOM Driver	Windows NT/2000/XP/2003/VISTA
Configuration	Web HTTPS console, SSH console,
	DS-Tool for Windows NT/2000/XP/VISTA
Environmental	
Operating Temperature	-10 to 55°C (14 to 131°F)
Operating Humidity	5% to 95%(Non-condensing)
Storage Temperature	-20 to 85°C (-4 to 185 F)°
Mechanical	
Dimensions(W x D x H)	72 mm(W)x 125 mm(D)x 31 mm(H)
Casing	IP-30 protection
Regulatory Approvals	
Shock	IEC60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4
	(EFT), EN61000-4-5 (Surge), Level 3, EN61000-4-6
	(CS), Level 3
MBTF	200,000 hours at least
Warranty	5 years

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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

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

CAUTION:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC 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.

FCC RF Radiation Exposure Statement

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.