Industrial Device Server User's Manual

IDS-5011-WG



Version 1.0 May 2008.



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Getting to Know Your Device Server

1.1 About the IDS-5011-WG Serial Device Server



IDS-5011-WG is an innovative 1 port RS232/422/485 to 802.11b/g WLAN and 1 port LAN device server. Users are able to configure IDS-5011-WG 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.

IDS-5011-WG 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, IDS-5011-WG provides dual redundant power inputs both on DC power jack and terminal block. IDS-5011-WG also provides NAT pass through function so that users are able to manage IDS-5011-WG inside

or outside NAT router. It is easy for different IP domain users to use the Switch. Therefore, IDS-5011-WG 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 IDS-5011-WG 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 32bits

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 IDS-5011-WG on DIN-Rail

Each IDS-5011-WG has a Din-Rail kit on rear panel. The Din-Rail kit helps IDS-5011-WG to fix on the Din-Rail. It is easy to install the IDS-5011-WG on the Din-Rail:

2.1.1 Mount IDS-5011-WG on DIN-Rail

Step 1: Slant the IDS-5011-WG and mount the metal spring to Din-Rail.

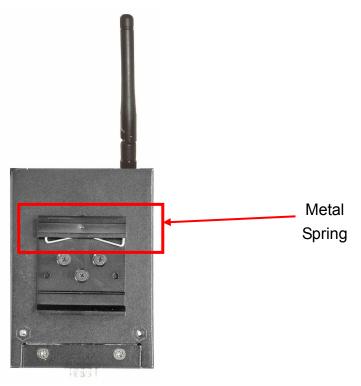


Figure 2-1





Step 2: Push the IDS-5011-WG toward the Din-Rail until you heard a "click" sound.

Figure 2-2

2.2 Wall Mounting Installation

Each IDS-5011-WG has another installation method for you. A wall mount panel can be found in the package. The following steps show how to mount the IDS-5011-WG on the wall:



2.2.1 Mount IDS-5011-WG on wall

Step 1: Remove Din-Rail kit.

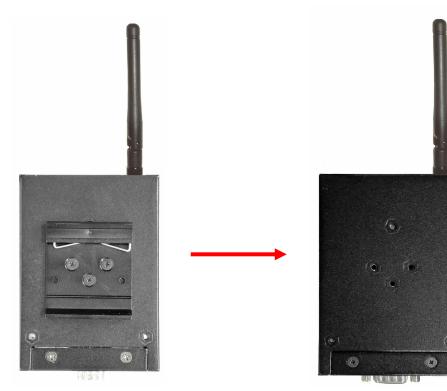


Figure 2-3





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

Figure 2-4

The screws specification shows in the following two pictures. In order to prevent IDS-5011-WG from any damage, the size of screws should not be larger than the size that used in IDS-5011-WG.

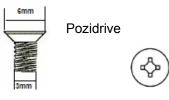


Figure 2-5



Step 3: Mount the combined IDS-5011-WG on the wall. .



Figure 2-6



Hardware Overview

3.1 Front Panel



Figure 3-1

- 1. Product description of IDS-5011-WG.
- 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 1.
- 5. LED of 10/100Base-T(X) Ethernet port 2.
- 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 IDS-5011-WG.

LED	Color	Status	Description
		On	DC power 1 activated.
PWR1	Green/Red	Red blinking	Indicates an IP conflict, or DHCP or BOOTP server did not respond properly
	Green/Red	On	DC power 2 activated.
PWR2	Green/Red	Red blinking	Indicates an IP conflict, or DHCP or BOOTP server did not respond properly
ЕТН	Green/Amber	Green On/Blinking	100Mbps LNK/ACT
2111		Amber On/Blinking	10Mbps LNK/ACT
WLAN	Green/Amber	Green On/Blinking	WLAN LNK/ACT Signal good
		Amber On/Blinking	WLAN LNK/ACT Signal poor
Serial	Green	Blinking	Serial port is transmitting data
Genal	Red	Blinking	Serial port is receiving data

Table 3-1 Front panel LEDs



3.3 Top Panel

The Top panel components of IDS-5011-WG 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

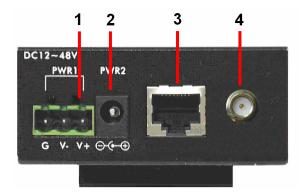


Figure 3-2

3.4 Bottom Panel

The bottom panel components of IDS-5011-WG are showed as below:

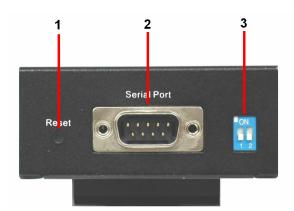
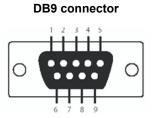


Figure 3-3



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



Pin #	RS 232	RS 422	RS 485 (4 wire)	RS 485 (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			
RS 232 mod act as DTE				

Table 3-2 Pin assignment

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

DIP 1	DIP 2	Termination Configuration	
ON	ON	Termination for long distance 4-wire RS485/422	
ON	OFF	Reserved	
OFF	ON	Termination for long distance 2-wire RS485	
OFF	OFF	No termination for RS485/ 422 (short distance)	

Table 3-2 DIP Switch



3.5 Rear Panel

The rear panel components of IDS-5011-WG are showed as below:

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

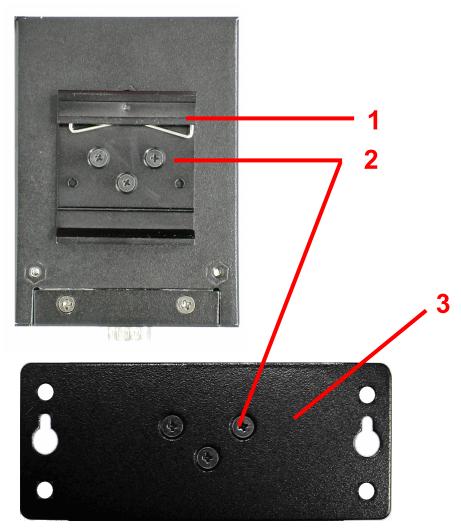


Figure 3-4 Rear Panel



Cables

4.1 Ethernet Cables

The IDS-5011-WG has standard Ethernet ports. According to the link type, the IDS-5011-WG 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	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

Table 4-1 Cable Types and Specifications

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

Table 4-2 RJ-45 Pin Assignments

The IDS-5011-WG supports auto MDI/MDI-X operation. You can use a straight- through cable to connect PC to IDS-5011-WG. 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

Table 4-2 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

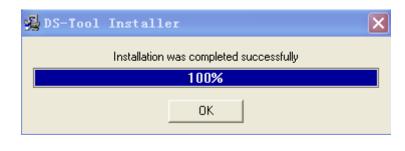
DS-Tool is a powerful Windows utility for DS series. It supports device discovery, device configuration, group setup, group firmware update, monitoring functions...etc. It is easy for you to install and configure devices over the network.

5.1.1 Install IDS-Tool

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

월 DS-Tool Instal	ller			X
ORing	Destination Directory C:\Program Files\DS-Tool Required: 7543 K Available: 210228 K		<u>B</u> rowse	
		Start	<u>E</u> xit	

Figure 5-1



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

Figure 5-2

Step 3: Check for your selection.



Figure 5-3



5.1.2 Using DS-Tool

5.1.2.1 Explore device servers

DS-Tool will broadcast to the network and search all available DS devices in the network. The default IP address of 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.

🚱 DS-Tool						
File Device Configuration COM Co	nfiguration Op	tions Help				
	Broadc	ast Searching	BICCIDD	Original IP 192.11 Using Static IP Assign Static IP IP Address 192. Netmask 255.	xBB:CC:DD:77 68.10.2 Using DHCP 168.10.2 255.255.0 168.10.2	
				Password	uto Scan	
				Cancel	OK	_
		Cancel C	lear All	Select All	Add	
	<u> </u>			o be re-config :e. Group IP W		

Figure 5-4



5.1.2.2 Configure device servers

General settings

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

General Security Networking	Wireless	Notification Mana	gement Upgrade Firm	ware Save/Load
Model Industrial 1-port RS232/422	/485 to 802.	11 b/g WLAN Devic	e Server	Power
LAN IP Address 192.168.0.41		C Address 56:04:02:07	Version 1.05j	Networking 1 🔜 w 🚥
WLAN IP Address Disabled		1AC Address 00:00:00:00		🕘 Locate On
Device Name/Location DeviceServer-DEFAULT				
Using SNTP Time Server		Auto IP Report		
pool.ntp.org	Port 123	IP Address 192.168.0.35	Port 60001	
Time Zone (GMT+08:00)Taipei	•	Get Cu Report Interval	rrent Host Seconds	
S Refresh				🔄 🌛 Apply Only 🛛 🌧 Apply and Sav

Figure 5-5 General settings

The following table describes the labels in this screen.

Label	Description
Device Name/location	You can set the device name or related information. By clicking "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 ID Deport	By Clicking the "Get current Host" button you will get your local IP, and then set the
Set Auto IP Report	Report interval time. The device server will report its status periodically.

Table 5-1 General settings

At IP collection option show the device server status. The report interval is 0 indicate disable this setting (default). But you can set the other IP or Port.

Securit	y
---------	---

General Security Net	tworking Notification M	anagement Upgrade Firmware Save/Load	
Access IP Table		Password	
IP1 192.168.0.1	Mask 255.255.255.25	Enabled New Password	
IP2 192.168.0.2	Mask 255.255.255.0	. I Enabled	
IP3	Mask 0.0.0.0	Enabled Confirm New Password	
IP4	Mask 0.0.0.0	Enabled Old Password	
IP5	Mask 0.0.0.0	Enabled	
IP6	Mask 0.0.0.0	Enabled Characteristic	
IP7	Mask 0.0.0.0	Enabled Change Password	
IP8	Mask 0.0.0.0	Enabled	
IP9	Mask 0.0.0.0	F Enabled	
IP10	Mask 0.0.0.0	Enabled	
IP11	Mask 0.0.0.0	Enabled	
IP12	Mask 0.0.0.0	Enabled	
IP13	Mask 0.0.0.0	Enabled	
IP14	Mask 0.0.0.0	Enabled	
IP15	Mask 0.0.0.0	Enabled	
IP16	Mask 0.0.0.0	Enabled	
S Refresh		🌛 Apply Only 🏾 🌛 Apply and	Save

Figure 5-6 Security

The following table describes the labels in this screen.

Label	Description
Accessible IP Setting	To prevent unauthorized access by setting host IP addresses and network masks.
Decoward actting	You can set the password to prevent unauthorized access from your server. Factory
Password setting	default is no password.

Table 5-2 Security



Network Setting

Device 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 Security Wire Wireless	Networking Wireless	Notification	Management	Upgrade Firmware	Save/Load	
	' IP	IOTP				
Static IP Setting	\$					
IP Address	192.168.10.2					
Netmask	255.255.255.0					
Gatway	192.168.10.1					
DNS1	192.168.10.1					
DNS2						
S Refresh					🌛 Apply Only	Apply and Save

Figure 5-7 Network Setting



Label	Description
Using DHCP/BOOTP	IP Address automatically assigned by a DHCP server in your network.
Static IP Address	Manually assigning an IP address.
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.
Switch Mode	Redundant: When the connection between master-link and LAN fails, the DS can automatically switch to another LAN port within10mS, and still guarantees a non-stop connection Switch: Daisy Chain support to reduce usage of switch ports.

The following table describes the labels in this screen.

Table 5-3 Network setting

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 INFRA structure available.



Network Ty SSI	ecurity Networking Wireless Notification Management Upgrade Firmware Save/Load
Wireless En O No En O WEP	
	WEP Encryption Key Character Input : 5 characters(WEP64) C 1 research C 2 C 4
C TKIP	WPA-PSK (Previously Shared Key) Key Renewal Period : minutes
Sefres	sh Apply Only Apply and Save

Figure 5-8 Wireless Network Setting

Label	Description	
Network Type	Type includes INFRA and ADHOC.	
	Service Set Identifier Default is the default setting. The SSID is a unique name that	
SSID	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.	
Channel	You can select the Auto.	
NO Encryption	You can set no encryption mode, but this mode is insecurity and don't suggest use.	
	VEP You can set four encryption 5characters (WEP64), 13 characters (WEP128), 10 digits (WEP64), 26digits (WEP128).	
VVEP		
ТКІР	TKIP (Temporal Key Integrity Protocol) is a key management protocol.	
450	AES (Advanced Encryption System) is a variable bit length symmetric digital encryption	
AES	algorithm.	

The following table describes the labels in this screen.

Table 5-3 Wireless Network setting

*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 alarmed by E-mail, SNMP trap, or system log.

General Security Networking	Notification	Management Upg	rade Firmware Save/Lo	ad
SNMP Trap	Email Notifica	ition 🔽 Sys	log Notification	
Syslog Setttings Notified Items Hardware Reset (Cold Star Software Reset (Warm Star Login Failed IP Changed Password Changed Access IP Blocked	rt) ☐ Red ☐ DI_1 ☐ DI_2 ☐ DI_2	lundant Power Changi lundant Ethemet Char 1 Changed 2 Changed 3 Changed 4 Changed		
System Log Settings Server IP 192.168.0.2	Port 514	Using Current H	lost's Log Server	
🍤 Refresh			🜛 Apply Only	Apply and Save

Figure 5-9 Notification

The following table describes the labels in this screen.

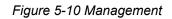
Label	Description
SNMP Trap	To notify events by SNMP trap.
Email Notification	To notify events by Email.
Syslog Notification	To notify events by Syslog.
Notify items	Events to be notified.
Apply	Apply current setting.
Apply and Save	Apply and save current setting.

Table 5-4 Notification



Management

General Security Networking Noti	hcation Management Upgrade Firmware
🔽 Web Management Enable	Goto Web Management
🔽 Telnet Management Enable	Goto Telnet Management
🔽 SNMP Management Enable	
SNMP Management Settings	
Community	
Location	
Contact	
Trap Server1	
Trap Server2	
Trap Server3	
Trap Server4	
L	



The following table describes the labels in this screen.

Label	Description		
Web Management Enable	To enable management from Web. Click "Goto Web Management" button to		
Web Management Enable	access web.		
Tolact Management Enable	To enable management by Telnet. Click "Goto Telnet Management" button to		
Telnet Management Enable	execute Telnet command.		
SNMP Management Enable	To enable management by SNMP.		
SNMP Management Settings	To configure SNMP related settings.		

Table 554 Management



Upgrade Firmware

General 🛛 Security	Networking	Notification	Management	Upgrade Firmware	Save/Load
Firmware Image					
				Browsing	Upgrade

Figure 5-11 Upgrade Firmware

The following table describes the labels in this screen.

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

Table 5-6 Upgrade Firmware

Save/Load

ieneral | Security | Networking | Notification | Management | Upgrade Firmware | Save/Load |

Save Configuration to Flash
C Apply and Save
Load Default
Coad Default
Reboot Device
O Reboot Device
Import/Export Configuration
Import Export

Figure 5-12 Save / Load

The following table describes the labels in this screen.

Label	Description	
Save Configuration to	Save current configuration into flash memory.	
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 Configuration	Restore the previous exported configuration.	
Export Configuration	Exported current configuration to a file to backup the configuration.	

Table 5-7 Save / Load

5.1.2.3 Configure serial port

Serial Settings

Serial Settings Service Mode Notification			
port1			
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 Delimiter 3 Delimiter 4 Image: Image			
O (0-65535)ms data 1 interval time data 2 interval time data 3 The received data will be queueing in TX buffer until TX interval time is timeout or TX buffer is full (4K Bytes) , the data will also be sent. 0 is disable.			
Sefresh Save			

Figure 5-13 Serial Settings



Label	Description	
Port Alias	Remark the port to hint the connected device.	
Interface	RS232 / RS422 / RS485(2-wires) / RS485(4-wires)	
David rate	110bps/300bps/1200bps/2400bps/4800bps/9600bps/19200bps/	
Baud rate	38400bps/57600bps/115200bps/230400bps/460800bps	
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	
Derfermense	Throughput: This mode optimized for highest transmission speed.	
Performance	Latency: This mode optimized for shortest response time.	
	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.	
Serial to Ethernet		
	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.	
	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.	
Ethernet to Serial		
	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 "flushE2S data buffer"	
	timeout the data will also be sent. You can set the time from 0 to 65535 seconds.	

The following table describes the labels in this screen.



	Force TX interval time is to specify the timeout when no data has been transmitted.		
Force TX Interval Time	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.		

Table 5-8 Serial settings

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.

Serial Settings Service Mode Notification	
port1 Service Mode Virtual COM Mode 💌	
Virtual COM Mode	
Virtual COM Settings Data Port# 4004 Edit IP Port Number Idle Timeout	(0-65535) Seconds
Control Port# 4005 Alive Check 0	(0-65535) Seconds
Multilink	
Max Connections	Select a Virtual COM Name
5	VCOM1
Destination Host VCOM Name	(Validated charaters of virtual COM name is A-Z, a-z and 0-9. Max Length of the name
Waiting for VCOM connect 🚖 Goto VCom	is 128 charaters) Using Traditional COM Name
Waiting for VCOM connect Goto VCom	COM3 COM4 COM5
Waiting for VCOM connect Goto VCom	CDM6 CDM7 CDM8 CDM9
Waiting for VCOM connect Goto VCom	COM9 COM10 COM11 COM12
Waiting for VCOM connect 📥 Goto VCom	COM13
	Cancel OK

Figure 5-14 Virtual COM



Label	Description
Map Virtual COM	Select a Virtual COM Name to map on.
May Connection	The number of Max connection can support simultaneous connections are 5, default
Max Connection	values is 1.
	When serial port stops data transmission for a defined period of time (Idle Timeout), the
Idle Timeout	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.
	The serial device will send TCP alive-check package in each defined time interval (Alive
Alive Check	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.

The following table describes the labels in this screen.

Table 5-9 Virtual COM

*Not allowed to mapping Virtual COM from web

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 bort1 Service Mode TCP Server Mode -
TCP Server Mode
Misc. Data Port 4002 Control Port 4003 Multilink Misc.
Max Connections 1 Image: Second sec
Disconnect
2 Disconnect
3 Disconnect
Disconnect
Sefresh Apply Only

Figure 5-15 TCP Server mode

The following table describes the la	bels in this screen.

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.

Table 5-10 TCP Server mode



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	
port1 Service Mode TCP Client Mode	
TCP Client Mode	
TCP Client Settings Destination Host Port 192.168.0.10 [4002] Image: Control Port 4003	Misc. Idle Timeout 0 (0-65535) Seconds Alive Check 0 (0-65535) Seconds Connect on Startup
Multilink	
Destination Host Port	<u>,</u>
2 eQ. Auto Scar	1
3 Auto Scar	1
4 Auto Scar	1

Figure 5-16 TCP Client mode

The following table describes the labels in this screen.

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

Table 5-11 TCP Client mode

Service Mode – UDP 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		
Service Mode UDP Mod	e 💌		
UDP Mode			
UDP Settings Listening Port 4004	9. Auto Scan		
	Destination Host End	Courding Deat	
Destination Host Begin		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	

Figure 5-17 UDP mode

Notification

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



Serial Settings Service Mode Notif	ication		
🔽 SNMP Trap 🔽 Em	nail Notification 🔽 Syst	og Notification	
SNMP Settings Email Settings Sy	slog Settings		
Notified Items	CTS Changed		
DSR Changed	Port Connected		
🔲 RI Changed	Port Disconnected		
⊤Email to Mail Server: Mail to:			
9 Refresh		🌛 Apply Only	Apply and Save

Figure 5-18 Notification

The following table describes the labels in this screen.
--

Label	Description
DCD changed	When DCD (Data Carrier Detect) signal changes, it indicates that the modem
DCD changed	connection status has changed. Notification will be sent.
DSP abangod	When DSR (Data Set Ready) signal changes, it indicates that the data communication
DSR changed	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.
	In TCP Server Mode, when the device accepts an incoming TCP connection, this event
Port connected	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.



	In TCP Server/Client Mode, when the device lost the TCP link, this event will be trigger.
Port disconnected	In Virtual COM Mode, When Virtual COM is not available, this event will be trigger. A
	notification will be sent.

Table 5-12 Notification

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.

Figure 5-19 Certificate



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

Figure 5-20 Certificate

*Only if password is set.

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

Industrial Device Server				
open all Serial Device Server System Port Serial Setting Management	System	n Information		
📓 Save/Reboot 📓 Help	I	P Address	192.168.10.2	
	N	MAC Address	00:00:56:04:02:07	
	F	Firmware Version	1.00	

Figure 5-21 System information

5.2.1.1 System

Time (SNTP)

Industrial Device Server				
 System Time(SNTP) IP Configuration 	SNT	P Configuration		
 User Authentication Port Serial Setting 		Name	DeviceServer-DEFAULT	
 Management Save/Reboot 		Time		
Help		SNTP	© Enable O Disable	
		Time Zone	(GMT+08:00)Taipei	
		Local Time	Thu Jan 1 08:08:31 1970	
		Time Server	pool.ntp.org Port 123	
	Console			
		Telnet Console	● Enable ○ Disable	
		Apply		

Figure 5-22 Time (SNTP)

et the name of DS.
e SNTP server.
set the SNTP enable, select the time zone you located.
P server domain name or IP address and Port.
nsole (SSH) is included for security reasons. In some cases, you may need
this function to prevent unauthorized access from internet. The factory enable.

The following table describes the labels in this screen.

Table 5-13 Time (SNTP)



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**"

Industrial Device Server				
open all S Serial Device Server System Time(SNTP) P Configuration	IP Co	nfiguration		
 User Authentication Port Serial Setting 		IP Configuration	Static 💌	
Management Save/Reboot Help		IP Address	192.168.10.2	
🖼 нер		Netmask	255.255.255.0	
		Gateway	192.168.10.1	
		DNS Server 1	192.168.10.1	
		DNS Server 2		
		Auto IP Report		
		Auto Report to IP		
		Auto Report to TCP Port	0	
		Auto Report Interval	0_seconds	
		Ethernet Mode		
		Ethernet Mode		
		Apply		

Figure 5-23 IP configuration



Label	Description
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	The device server will report its status periodically. At DS-Tool->IP collection option show the device server status. The report interval is 0 indicate disable this setting (default). But you can set the other IP or Port.

Table 5-14 IP configuration

Wireless configuration

Wireless Network 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 INFRA structure available.



	Istrial Device Server
open all Serial Device Server System Since(SNTP) By IP Configuration	Wireless Configuration
 Wireless Configuration User Authentication Port Serial Setting Management 	Network Type Adhoc V SSID SSID Scan
🖹 Save/Reboot 📔 Help	channel Auto Wireless Encryption
	No Encryption WEP
	WEP Encryption Key Character Input : 13 characters(WEP128) v (*) 1:
	2: 3:
	О 4: О ТКІР
	WPA-PSK (Previously Shared Key):
	Key Renewal Period : minutes
	Apply

Figure 5-24 Wireless configurations

Label	Description		
Network Type	Type includes INFRA and ADHOC.		
	Service Set Identifier Default is the default setting. The SSID is a unique name that		
SSID	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.		
Channer	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		
VVEF	(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
AES	algorithm.

Table 5-14 Wireless Network setting

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

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.

Industrial Device Server			
open all Serial Device Server System Time(SNTP) Serial Setting Output Serial Setting Management Save/Reboot Help	User Authentication Old Password		

Figure 5-25 Authentication



5.2.1.2 Port serial setting

Serial configuration ORing **Industrial Device Server** open all Serial Device Server Ser Serial Configuration User Authentication Ort Serial Setting Serial Configuration Port Profile Port1 💌 Port Alias Port1 Service Mode * Interface RS232 ▲ Management Save/Reboot Help Baud Rate 38400 🔽 Data Bits 8 🗸 Stop Bits ~ 1 Parity None 🔽 Flow Control None * Force TX Interval Time 0 ms Performance ⊙ Throughput ○ Latency Apply

Figure 5-26 Serial configuration

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/460800bps		
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 Time	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 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.

Table 5-15 Serial configuration

Port Profile				
Industrial Device Server				
open all Serial Device Server System Time(SNTP) P Configuration	Port	Profile		-
 User Authentication Ort Serial Setting 			Port1 💌	
Serial Configuration Port Profile		Local TCP Port	4000	
 Service Mode Management 		Command Port	4001	
Save/Reboot		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	
		Apply		-

Figure 5-27 Port Profile



Label	Description			
	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.			
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 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.			
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			

Table 5-16 Port Profile



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.

Industrial Device Server				
open all	Servi	ice Mode		
User Authentication Iser Authentication			Port1 V	
 Serial Configuration Port Profile 		Service Mode	Virtual COM Mode 💌	
 Service Mode Management 		Idle Timeout	0 (0~65535)seconds	
in Save/Reboot i Help		Alive Check	420 (0~65535)seconds	
		Max Connection	1 v max. connection (1~5)	
		Apply		

Figure 5-28 Virtual COM mode

Label	Description		
	When serial port stops data transmission for a defined period of time (Idle Timeout), the		
Idle Timeout	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.

Table 5-17 Virtual COM mode

*Not allowed to mapping Virtual COM from web

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.

open all ③ Serial Device Server □ ③ System ④ Time(SNTP) ④ IP Configuration		al Device S	Server	
📓 User Authentication 🗆 🔄 Port Serial Setting			Port1 V	
Serial Configuration Port Profile		Service Mode	TCP Server Mode 💌	
 Service Mode Management 		TCP Server Port	4000	
Save/Reboot		Idle Timeout	0 (0~65535)seconds	
🖼 Helb		Alive Check	420 (0~65535)seconds	
		Max Connection	1 v max. connection(1~5)	
		Apply		

Figure 5-29 TCP Server Mode



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

Table 5-18 TCP server mode

Service Mode – TCP Client Mode

In TCP Client Mode, device can establish a TCP connection with server by the method you set (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 timeout settings.



open all Serial Device Server System Simme(SNTP) IP Configuration	USTRIAL DEVICE S	Server
 User Authentication Ort Serial Setting 		Port1 💌
 Serial Configuration Port Profile 	Service Mode	TCP Client Mode 💌
 Service Mode Management 	Destination Host	0.0.0.0 : 4000
 Save/Reboot Help 	Idle Timeout	0 (0~65535)seconds
	Alive Check	420 (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	

Figure 5-30 TCP client mode

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



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

Table 5-19 TCP client mode

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

open all Serial Device Server System Time(SNTP) ♥ Configuration				
 User Authentication Or Serial Setting Serial Configuration 		Service Mode	Port1 V UDP Mode	
 Port Profile Service Mode Management 		Listen Port	4000	
Save/Reboot		Host start IP	Host end IP	Send Port
🖹 Help		1. 0.0.0.0	0.0.0.0	65535
		2. 0.0.0.0	0.0.0.0	65535
		3. 0.0.0.0	0.0.0.0	65535
		4. 0.0.0.0	0.0.0.0	65535
		Apply		

Figure 5-31 UDP client mode



5.2.1.3 Management

Access IP Control

Access IP Control 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., "192.168.0.1/255.255.255.255").
- 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

ORing Ind	ustrial D	evice S	erver		
pen all Serial Device Server System Time(SNTP) Bi IP Configuration	Access IP C	ontrol List			
 User Authentication Ort Serial Setting 	🗖 Ena	ble IP Filtering (No	t check this option will a	allow any IP to have as	sessibility)
 Serial Configuration Port Profile 	No.	Activate the IP	IP Address	Netmask	
🗃 Service Mode C Management	1				
Access IP Control SMTP/SNMP Conf.	2				
System Event Conf.	з				
🖹 Help	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				



SMTP/SNMP Conf

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.

Industrial Device Server				
open all Serial Device Server System Time(SNTP) Si IP Configuration	SMTP/SNMP Config	uration		
User Authentication I continue of the second sec	E-mail Settings			
 Serial Configuration Port Profile 	SMTP Server	Port		
 Service Mode Management 	🗌 My server re	quires authentication		
 Access IP Control SMTP/SNMP Conf. System Event Conf. 	User Name			
Save/Reboot	Password			
	E-mail Sender			
	E-mail Address :			
	E-mail Address (
	E-mail Address (
	E-mail Address ·	4		
	SNMP Trap Serve	er		
	SNMP Server 1			
	SNMP Server 2			
	SNMP Server 3			
	SNMP Server 4			

Figure 5-33 SMTP / SNMP conf



System Event Conf.

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

open all Serial Device Server C System	USTRIAL DEVICE SERVER System Event Configuration				
 Time(SNTP) IP Configuration 	Device Event Notification				
User Authentication Image: Contract Setting	Hardware Reset (Cold Start) SMTP Mail	SNMP Trap Syslog			
 Serial Configuration Port Profile 	Software Reset (Warm Start)				
📓 Service Mode E 🔄 Management	Login Failed SMTP Mail				
 Access IP Control SMTP/SNMP Conf. 	IP Address Changed SMTP Mail				
 System Event Conf. Save/Reboot 	Password Changed SMTP Mail				
🔀 Help	Access IP Blocked	SNMP Trap Syslog			
	Redundant Power Changed SMTP Mail	SNMP Trap Syslog			
	Redundant Ethernet Changed 🗌 SMTP Mail	SNMP Trap Syslog			
	Port Event Notification Port 1 💌				
	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	SNMP Trap Syslog			
	Fault Event Notification and Fault LED/Relay				
	Power 1 Fault SMTP Mail SNMP Tra	ap Syslog Fault LED/Relay			
	Power 2 Fault SMTP Mail SNMP Tra	ap 🗌 Syslog 🛛 🗍 Fault LED/Relay			

Figure 5-34 SMTP / SNMP conf

Label	Description		
Hardware Reset (Cold	This refers to starting the system from power off (contrast this with warm start). When		
	performing a cold start, DS will automatically issue an Auto warning message by		
Start)	sending E-mail, log information or an SNMP trap after booting.		



r	
Software Reset (Warm	This refers to restart the computer without turning the power off. When performing a
Start)	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 Changed	When IP address of device changed, a notification will be sent.
Password Changed	When password of device changed, a notification will be sent.
Access IP Blocked	When the host accesses the device with blocked IP addresses, a notification will be
	sent.
Redundant Power	When status of power changed, a notification will be sent.
Change	
Redundant Ethernet	When status of Ethernet port changed, a notification will be sent.
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 disconnected	In TCP Server/Client Mode, when the device lost the TCP link, this event will be trigger.
	In Virtual COM Mode, When Virtual COM is not available, this event will be trigger. A
	notification will be sent.
Power 1 Fault	When Power 1 Fault, a notification will be sent and the Fault LED will be lighted.
Power 2 Fault	When Power 2 Fault, a notification will be sent and Fault LED will be lighted.



Eth1 link down	When Eth1 link down, a notification will be sent and Fault LED will be lighted.
Eth2 link down	When Eth2 link down, a notification will be sent and Fault LED will be lighted.

Table 5-20 System event conf

5.2.1.4 Save/Reboot

ORing) Ind	lustrial Davias Carver
ind	ustrial Device Server
open all	
 Serial Device Server System 	Factory Default
 Time(SNTP) IP Configuration 	Reset to default configuration. Click Reset button to reset all configurations to the default value.
 User Authentication Ort Serial Setting Serial Configuration 	Reset
Port Profile	Restore Configuration
 Service Mode Management 	You can restore the previous saved configuration to Device Server.
Access IP Control SMTP/SNMP Conf.	File to restore: 浏览
📓 System Event Conf.	Restore
 Save/Reboot Help 	
	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: 浏览
	Upgrade
	Reboot Device Please click [Reboot] button to restart device.
	Please click [Reboot] button to restart device.

Figure 5-35 Save / Reboot



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

Table 5-21 Save / Reboot

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.

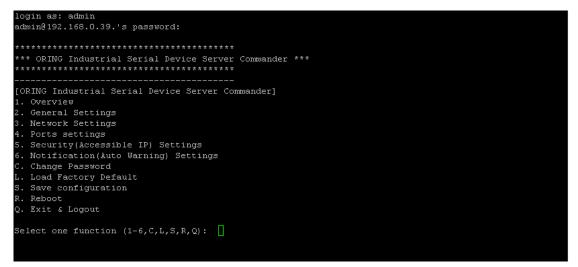


Figure 5-36 SSH



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
Protocols	MIB II, HTTPS, SSH
WLAN Feature	
Operating Mode	Client mode
Antenna Connector	Reverse SMA
Radio Frequency Type	DSSS
	IEEE802.11b: CCK, DQPSK, DBPSK
Modulation	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
	WEP: (64-bit ,128-bit key supported)
Encryption	WPA:
	WPA2 :802.11i(WEP and AES encryption)
Security	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	
Serial 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	
	(IDS-5011-WG/IDS-5011-WG+)	
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	
Serial Line 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.	
	Green Blinking: Located by Administrator.	
	ETH1 Link / ACT:	
	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	PWR1: 12 ~ 48VDC in power jack	



	PWR1: 12 ~ 48VDC in 3-pin Terminal Block	
Reverse Polarity Protection	Present at terminal block	
Power Consumption	4 Watts MAX	
Software Utility		
Utility	DS-Tool for Windows NT/2000/XP/ 2003/VISTA which include	
	Device discovery	
	Auto IP report	
	Device setting (run-time change, no rebooting)	
	Access control list	
	Group setting	
	Device monitoring	
	Serial port monitoring	
	Log info	
	Group Firmware update	
	Virtual Com / TCP Server / TCP Client / UDP /Serial Tunnel	
Serial Mode	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, Console Command	
	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)	72mm(W)x125mm(D)x31mm(H)	
Casing	IP-30 protection	
Regulatory Approvals		
Shock	IEC 60068-2-27	
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)	
	EN61000-4-6 (CS)	
Warranty	5 years	