Industrial Device Server User's Manual

IDS-5042 Series



Version 1.00 Aug 2010.



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Getting to Know Your Device Server

1.1 About the IDS-5042 Serial Device Server



IDS-5042 / 5042+ / 5042-I+ is an innovative 4 ports RS232/422 /485 to 2 ports LAN device server with optional isolation RS-422 / 485 serial ports and one P.O.E PD Ethernet port.. Users are able to configure IDS-5042 by DS-Tool via LAN port. IDS-5042 offers many powerful features for HW & SW redundant functions. When the connection between master-link and LAN fails, the IDS-5042 can automatically switch to another LAN port within 10mS, and still guarantee a non-stop connection.

IDS-5042 also supports switch mode, users can use Daisy Chain to reduce the usage of Ethernet switch ports. Secondly, the IDS-5042 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. Device also supports the data encryption with SSL, so it can assure the data transfer safely.

Thirdly, the IDS-5042 provides dual redundant power inputs on terminal block. IDS-5042 also provides NAT pass through function so that users are able to manage IDS-5042 inside or outside the NAT router. It is easy for different IP domain users to use IDS-5042. Therefore, IDS-5042 is the best communication redundant solution for current 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-5042 through NAT router
- PPPoE for internet connection.
- Data Encryption with SSL for Security data transfer.
- DDNS for domain name service.
- 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 60°C
- Storage Temperature: -40 to 85°C
- Operating Humidity: 5% to 95%, non-condensing
- Casing: IP-30
- 2 10/100Base-T(X) Ethernet port
- 1 optional P.O.E PD port (IDS-5042+ and IDS-5042-I+)
- 4 isolated serial port (IDS-5042I+)
- Dimensions(W x D x H) : 52 mm(W)x 106 mm(D)x 144 mm(H)



Hardware Installation

2.1 Install IDS-5042 on DIN-Rail

Each IDS-5042 has a Din-Rail kit on rear panel. The Din-Rail kit helps IDS-5042 to fix on the Din-Rail. It is easy to install the IDS-5042 on the Din-Rail:

2.1.1 Mount IDS-5042 on DIN-Rail











Step 2: Push the IDS-5042 toward the Din-Rail until you heard a "click" sound.

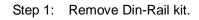


2.2 Wall Mounting Installation

Each IDS-5042 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-5042 on the wall:



2.2.1 Mount IDS-5042 on wall



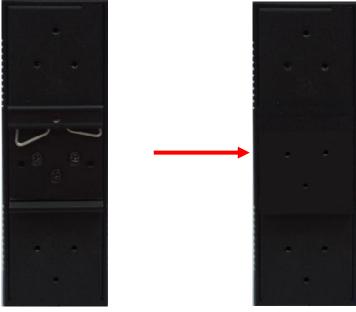


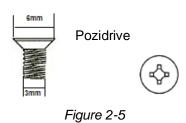
Figure 2-3





Step 2: Use 6 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 IDS-5042 from any damage, the size of screws should not be larger than the size that used in IDS-5042.







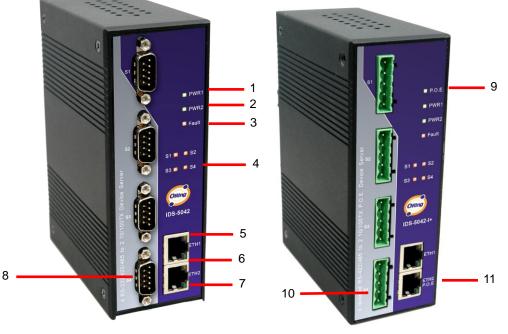
Step 3: Mount the combined IDS-5042 on the wall. .

Figure 2-6



Hardware Overview

3.1 Front Panel





- 1. LED for PWR1 and system status. When the PWR1 links, the green LED will be light on.
- 2. LED for PWR2 and system status. When the PWR2 links, the green LED will be light on.
- 3. LED for fault indicator. When fault occurred, this red LED will be light on.
- 4. LED for Serial ports status. When data transmitted, the green LED will be light on. When data received, the red LED will be light on.
- 5. LED of 10Base-T connection on Ethernet port.



- 6. 10/100Base-T(X) Ethernet port
- 7. LED of 100Base-TX connection on Ethernet port.
- 8. RS-232/422/485 serial port. Mode configured by DS-Tool.
- 9. LED for P.O.E. and system status. When the P.O.E. power connected, the green LED will be light on.. (IDS-5042+ and IDS-5042-I+)
- 10. RS-422/485 serial port with 2KV isolation. Mode configured by DS-Tool.
- 11. 10/100Base-T(X) Ethernet port. (P.O.E. PD port, IDS-5042+ and IDS-5042-I+)

3.2 Front Panel LEDS

The following table describes the labels that stick on the IDS-5042.

LED	Color	Status	Description	
		On	Power supplied over Ethernet Cable	
P.O.E	Green / Red	Red Blinking	Indicates and IP conflict, or DHCP or BOOTP server did not respond properly	
DMD4	Green/Red	On	DC power 1 activated.	
PWR1	Green/Red	Red blinking	Indicates an IP conflict, or DHCP or BOOTP server did not respond properly	
DM/DO	Green/Red	On	DC power 2 activated.	
PWR2		Red blinking	Indicates an IP conflict, or DHCP or BOOTP server did not respond properly	
Fault	Red	On	Fault event occurred.	
S1 ~ S4	Green	Blinking	Serial port is transmitting data	
01 ~ 04	Red	Blinking	Serial port is receiving data	



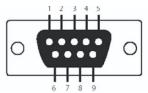
ETH1	Green/Amber	Green On/Blinking	100Mbps LNK/ACT
		Amber On/Blinking	10Mbps LNK/ACT
ETH2	Green/Amber	Green On/Blinking	100Mbps LNK/ACT
		Amber On/Blinking	10Mbps LNK/ACT

Table 3-1 Front panel LEDs

3.3 Serial Ports

There 4 serial ports on the front panel of IDS-5042 shown as below:

DB9 connector



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



•	•	•	•	•
1	2	3	4	5

Pin #	RS 422	RS 485 (4 wire)	RS 485 (2 wire)
1	GND	GND	GND
2	RXD -	RXD -	
3	RXD +	RXD +	
4	TXD -	TXD -	DATA -
5	TXD +	TXD +	DATA +

3.4 **Bottom Panel**

The bottom panel components of IDS-5042/42+/42-I+ are shown as below:

- 1. Terminal block includes: PWR1, PWR2 (12 ~ 48V DC) and Relay output (1A@24VDC).
- 2. Reset button. 5 seconds for factory default.

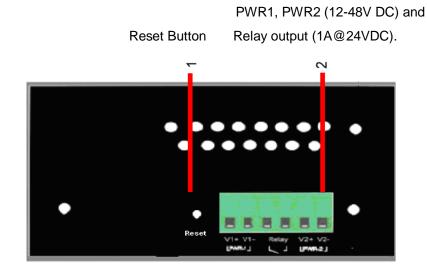


Figure 3-2 Bottom Panel



3.5 Rear Panel

The rear panel components of IDS-5042 are shown as below:

- 1. Screw holes for wall mount kit.
- 2. Din-Rail kit

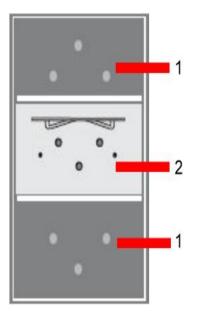


Figure 3-3 Rear Panel



Cables

4.1 Ethernet Cables

The IDS-5042 has standard Ethernet ports. According to the link type, the IDS-5042 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	P.O.E. power input +
5	P.O.E. power input +
6	RD-
7	P.O.E. power input -
8	P.O.E. power input -

Table 4-2 RJ-45 Pin Assignments

The IDS-5042 supports auto MDI/MDI-X operation. You can use a straight- through cable to connect PC to IDS-5042. The following table below shows the 10BASE-T/ 100BASE-TX MDI and MDI-X port pin outs.

Pin Number	Number MDI port MDI-X por	
1	TD+(transmit)	RD+(receive)
2	TD-(transmit) RD-(receive)	
3	RD+(receive) TD+(transmit)	
4	P.O.E. power input + P.O.E. power input +	
5	P.O.E. power input + P.O.E. power input +	
6	RD-(receive)	TD-(transmit)
7	P.O.E. power input -	P.O.E. power input -
8	P.O.E. power input - P.O.E. power input -	

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 Insta	ller			X
ORing	Destination Directory C:\Program Files\DS-Tool Required: 7543 K Available: 210228 K		Browse	
		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	onfiguration Options Help
Broadcast DS-Tool Device List VCDM List Setup Wizard IP Collection System Log	P COM Broadcast Searching MAC 00:AA:BB:CC:DD:77 Original IP 192.168.10.2 ✓ 192.168.10.2 ✓ Using Static IP IP Address 192.168.10.2 Netmask 255.255.0 Gatway 192.168.10.2 DNS1 DNS2 EQ. Auto Scan Password
	Cancel Clear All Select All Add
	A lot of IPs need to be re-config? Click here Your best choice. Group IP Wizard.

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.

Model IDS-5642+	DDNS Notification Managem		Power 1 2 2 E
LAN IP Address 192.168.0.38	LAN MAC Address 00:00:56:04:02:07	Version	Networking 1 📩 2 🛄 2 Locate On
Device Name/Location DeviceServer-DEFAULT			
🔲 Using SNTP Time Server	🔲 Auto IP Report		
🧿 Refresh			🐟 Apply Only 🌧 Apply and S

Figure 5-5 General settings

The following table describes the labels in this screen.

Label	abel 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 IP Report	By Clicking the "Get current Host" button you will get your local IP, and then set the
	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.

Se	ecurity			
General Security Ne	etworking DI	DNS Notification	Management	Upgrade Firmware Save/Load
Access IP Table				Password
IP1	Mask	Г	Enabled	New Password
IP2	Mask	Г	Enabled	J
IP3	Mask	Г	Enabled	Confirm New Password
IP4	Mask	Г	Enabled	l Old Password
IP5	Mask	F	Enabled	
IP6	Mask	Γ.	Enabled	
IP7	Mask	[Enabled	Change Password
IP8	Mask	[Enabled	
IP9	Mask	F	Enabled	
IP10	Mask	Γ.	Enabled	
IP11	Mask	[Enabled	
IP12	Mask	[Enabled	
IP13	Mask	Г	Enabled	
IP14	Mask	Г	Enabled	
IP15	Mask	Г	Enabled	
IP16	Mask	Г	Enabled	
🧐 Refresh				Apply Only 😽 Apply and Save

Figure 5-6 Security

The following table describes the labels in this scree	en.
--	-----

Label	Description
Accessible IP Setting	To prevent unauthorized access by setting host IP addresses and network masks.



Password setting	You can set the password to prevent unauthorized access from your server.	Factory
rassword setting	default is no password.	

Table 5-2 Security

Network Setting

Device can connect the Network by wire. 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**"

			Notification Management Upgrade Firmware Save/Load
	PPPoE	IP 🔲 Using DHCP/BO	отр
	- Setting:		
IP Add	dress	192.168.0.34	
Netma	ask	255.255.255.0	
Gatwa	зу	192.168.0.1	
DNS1		192.168.0.1	
DNS2	2		
Etherne	t Mode		
	edundani	t Mode 🕜 Switch Mod	e
No Re	fresh		🕹 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
DNS Server	IP address.
	Redundant:
	When the connection between master-link and LAN fails, the DS can automatically
Switch Mode	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

PPPoE

PPPoE (Point-to-Point Protocol over Ethernet), Device can use PPPoE mode to connect the Network. Input the **"username**" and **"Password**", then click **"Connect**" button. If the device has been connected, the **"Link Status**" will become the "Link up" and device will get an IP address from PPPoE server. Click "**Disconnect**" button to disconnect the PPPoE connection.



Wire PPPoE	
PPPoE Setting	
User Name	
Password	
Link Status	Link down
Connec	Disconnect
崎 Refresh	🛛 🕹 Apply Only 🛛 🗼 Apply and Save

Figure 5-8 PPPoE Setting

DDNS

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname, allowing your computer to be more easily accessed from various locations on the Internet.



General Security Networking DDNS Notification Management Upgrade Firmware Save/Load
I DDNS Enable
DDNS Setting
Service Provider dyndns-static
Hostname
Account
Password
Check WAN IP Schedule Every Hour Start at -5368 (Hour): -1879 (Minute)
Sefresh Apply Only Apply and Save

Figure 5-9 DDNS Setting

The following table describes the labels in this screen.

Label	Description
Service Provider	Choose the DDNS service Provider
Hostname	You must first apply an account from the DDNS service Provider such as www.dyndns.org,
	then register with the dynamic DNS service. Input the fixed hostname you got from the
	DDNS service.
Account mand	Input the Account and Password you have registered from the DDNS service Provider.
Password	
Check WAN IP	Davida will shock the ID address Status at interval time you get
Schedule	Device will check the IP address Status at interval time you set.

Table 5-4 DDNS setting



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 DDNS Notification Management Upgrade Firmward	e Save/Load
SNMP Trap 🔲 Email Notification 🔽 Syslog Notification	
Syslog Setttings Notified Items Hardware Reset (Cold Start) DI_1 Changed Software Reset (Warm Start) DI_2 Changed	
Login Failed DI_3 Changed IP Changed DI_4 Changed DO_1 Changed Access IP Blocked DO_2 Changed Redundant Power Changed	
System Log Settings Server IP Port	
192.168.0.33 514 Using Current Host's Log Server	
S Refresh	Apply Only

Figure 5-10 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 5-5 Notification

Management

General Security	Networking DDN	IS Notification	Management	Upgrade Firmware	Save/Load		
🔽 Web Manag	ement Enable	Goto Web M	lanagement				
🔽 Telnet Mana	igement Enable	Goto Telnet I					
🔽 SNMP Mana	agement Enable			l .			
SNMP Manager	nent Settings						
Community							
Location							
Contact							
Trap Server1							
Trap Server2							
Trap Server3							
Trap Server4							
🍤 Refresh					🌛 Apply (Inly	🗼 Apply and Save

Figure 5-11 Management

The following table describes the labels in this screen.

Label	Description			
Web Management	To enable management from Web. Click "Goto Web			
Enable	Management" button to access web.			
Telnet Management	To enable management by Telnet. Click "Goto Telnet			



Enable	Management" button to execute Telnet command.			
SNMP Management	To enable management by SNMP.			
Enable	To enable management by SNMF.			
SNMP Management	To configure SNMP related settings			
Settings	To configure SNMP related settings.			

Table 5-6 Management

Upgrade Firmware

General Security Net	working DDNS	Notification Ma	anagement	Upgrade I	Firmware	Save/Load	
Firmware Image			_				
			Brov	wsing	Upgrade	•	



The following table describes the labels in this screen.

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

Table 5-7Upgrade Firmware



Save/Load	
General Security Networking DDNS Notification Management Upgrade Firmware	Save/Load
Save Configuration to Flash	
Load Default	
Reboot Device	
Import/Export Configuration	
Refresh	🌛 Apply Only 🔒 🍌 Apply and Save

Figure 5-13 Save / Load

Label	Description				
Save Configuration to	Course surrent configuration into flack memory				
Flash	Save current configuration into flash memory.				
	Load default configuration except the network settings. If you want to load all factory				
Load Default	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 5-8 Save / Load

5.1.2.3 Configure serial port

Serial Settings

Serial Settings Service Mode Notification			
port1			
Port Alias Port0			
,			
Baudrate 38400 V Stop Bits 1 V Performance Throughput V			
Parity No Flow Control No Flow			
Data Bits 8 Interface RS232			
Delimiter Settings			
Serial to Ethernet Ethernet to Serial			
Delimiter 1 (HEX) Delimiter 2 Delimiter 3 Delimiter 4 (HEX) Delimiter 4 (HEX) Delimiter 4 (HEX)			
Enabled Enabled Enabled			
Flush Serial to Ethernet Data Buffer After			
0 (0-65535) ms			
The received data will be gueueing 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 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.			
Pefresh Save			

Figure 5-14Serial Settings



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		
Derformance	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. When the timeout is reached or TX buffer is full (4K Bytes), the queued data will be sent.	
Force TX Interval Time		
	0 means disable. Factory default value is 0.	

Table 5-9 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	
Service Mode Virtual COM Mode	
Virtual COM Mode	
−Virtual COM Settings 「Encryption with SSL	Misc. Idle Timeout 0 (0-65535) Seconds
Data Port 4000 Edit IP Port Number Control Port 4001 Map Virtual COM	Alive Check 420 (0-65535) Seconds
Multilink	
Max Connections	
Destination Host VCOM Name	
Waiting for VCOM connect	Goto VCom Unmap VCom
2	Goto VCom Unmap VCom
3	Goto VCom Unmap VCom
4	
9 Refresh	👟 Apply Only 🗼 Apply and Save

Figure 5-15 Virtual COM



Label	Description		
Encryption with SSL	Use SSL to encrypt data.		
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.		

The following table describes the labels in this screen.

Table 5-10 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.



Serial Settings Service Mode	Notification			
port1 Service Mode TCP Se	rver Mode 🗾 💌			
TCP Server Mode				
TCP Server Settings	Telnet Negotiation	Misc. Idle Timeout 0	(0-65535) Second	ds
Data Port 4000	🕰 Auto Scan	Alive Check 40	(0-65535) Second	st
Control Port 4001				
Multilink				
Max Connections	崎 Refresh			
Destination Host				
	📃 💪 Disconne	ct		
2	Disconne	ct		
3	Disconne	ct		
4	Disconne	ct		
5	Risconne	et		
崎 Refresh			🜛 Apply Only	Apply and Save

Figure 5-16 TCP Server mode

Label	Description
Encryption with SSL	Use SSL to encrypt data.
Data Port	Set the port number for data transmission.
Telnet Negotiation	Full Telnet command / symbol compatible
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.

The following table describes the labels in this screen.



Max Connection	The number of Max connection can support simultaneous connections are 5, default
	values is 1.

Table 5-11 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 Misc. Encryption with SSL Idle Timeout 0 (0-65535) Seconds
Destination Host Port 4000 4000 Auto Scan Connect on Startup
Image: Control Port 4001 Multilink 1
Destination Host Port
Auto Scan
2 eQ. Auto Scan
3 eQ. Auto Scan
4 Auto Scan
Sefresh Apply Only Apply and Save

Figure 5-17 TCP Client Mode

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

Label	Description		
Encryption with SSL	Use SSL to encrypt data.		



Destination Host	Set the IP address of host.		
Port	Set the port number of data port.		
	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		
Idle Timeout	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		
Alive Check	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 Startun	The TCP Client will build TCP connection once the connected serial device is		
Connect on Startup	started.		
Connect on Any	The TCP Client will build TCP connection once the connected serial device		
Character	starts to send data.		

Table 5-12TCP 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 Mode
UDP Settings Listening Port 4004 Auto Scan
Destination Host Begin Destination Host End Sending Port
1 192.168.0.1 to 192.168.0.100 10000 EQ. Auto Scan
2 to 2 Auto Scan
3 to 20 Auto Scan
4 to eQ. Auto Scan

Figure 5-18 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 Noti	ification
🔽 SNMP Trap 🔽 Er	mail Notification 🔽 Syslog Notification
SNMP Settings Email Settings Sy	vslog Settings
Notified Items	
DCD Changed	CTS Changed
DSR Changed	C Port Connected
🔲 RI Changed	Port Disconnected
– Email to Mail Server: Mail to:	
S Refresh	👌 Apply Only 🛛 🗼 Apply and Save

Figure 5-19 Notification

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

Label	Description			
DCD abanged	When DCD (Data Carrier Detect) signal changes, it indicates that the modem			
DCD changed	connection status has changed. Notification will be sent.			
DSD obspaced	When DSR (Data Set Ready) signal changes, it indicates that the data communication			
DSR changed	equipment is powered off. A Notification will be sent.			
DI abangod	When RI (Ring Indicator) signal changes, it indicates that the incoming of a call. A			
RI changed	Notification will be sent.			
CTC shanged	When CTS (Clear To Send) signal changes, it indicates that the transmission between			
CTS changed	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 5-13 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 5-20 Certificate



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

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

Figure 5-21 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 Save/Reboot Help	Syster	System Information			
		IP Address	192.168.10.2		
		MAC Address	00:00:56:04:02:07		
		Firmware Version	1.00		

Figure 5-21 System information



5.2.1.1 System

Time ((SNTP)			
	lustria	al Devic	e Server	
open all ভ Serial Device Server ⊂ Or System ভ Time(SNTP) ভ IP Configuration	SNT	P Configuration		
 DDNS Configuration User Authentication 		Name	DeviceServer-DEFAULT	
		Time		
i Save/Reboot i Help		SNTP	© Enable ⊙ Disable	
		Time Zone	(GMT+08:00)Taipei	
		Local Time	Thu Jan 1 08:03:58 1970	
		Time Server	pool.ntp.org Port 123	
		Console		
		Telnet Console	⊙ Enable ○ Disable	
		Apply		

Figure 5-22 Time (SNTP)

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.
Quina da	Telnet Console (SSH) is included for security reasons. In some cases, you may need
Console	to disable this function to prevent unauthorized access from internet. The factory default is enable.

The following table describes the labels in this screen.

Table 5-14 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**"

	Iustrial Device S	erver
open all ເ≩ Serial Device Server ⊂ • System ເ≩ Time(SNTP) (≩ IP Configuration	IP Configuration	
 DDNS Configuration User Authentication 	IP Configuration	DHCP/BOOTP V
 Port Serial Setting	IP Address	192.168.0.82
🗃 Help	Netmask	255.255.255.0
	Gateway	192.168.0.1
	DNS Server 1	192.168.0.1
	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.
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.

Table 5-15 IP configuration

PPPoE setting

PPPoE (Point-to-Point Protocol over Ethernet), Device can use PPPoE mode to connect the Network. Input the "**username**" and "Password", then click "**Connect**" button. If the device has been connected, the "**Status**" will become the "**Link up**" and device will get an IP address from PPPoE server. Click "Return" button, return the "**IP Configuration**" default page.



	dustrial Device	e Server
open all 중 Serial Device Server System Time(SNTP) FIP Configuration	PPPoE Setting	
 DDNS Configuration User Authentication 	User Name	
 ■ Port Serial Setting ■ Management 	Password	
i Save/Reboot B Help	Status	Link down
	Connect	isconnect Return

Figure 5-24 PPPoE setting.

DDNS Configuration

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname, allowing your computer to be more easily accessed from various locations on the Internet.



	dustria	al Device Se	rver
open all	DDN	S Configuration	
 DDNS Configuration User Authentication 		DDNS	○ Enable ⊙ Disable
		Service Provider	ezip
😫 Save/Reboot 🗃 Help		Host Name	
		Account	
		Password	
		Check WAN IP Schedule	Every Hour 🕑 start at 0 : 0
		Apply	

Figure 5-26 DDNS setting

Label	Description	
Service Provider	Choose the DDNS service Provider	
Hostname	You must first apply an account from the DDNS service Provider such as	
	www.dyndns.org, then register with the dynamic DNS service. Input the fixed hostname	
	you got from the DDNS service.	
Account and Password	Input the Account and Password you have registered from the DDNS service Provider.	
Check WAN IP	Device will check the IP address Status at interval time you set.	
Schedule		

Table 5-16 DDNS Setting



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.

	dustrial	Device S	erver	
open all Serial Device Server System Time(SNTP) IP Configuration	User Au	uthentication		
 DDNS Configuration User Authentication 	0)ld Password		
 Port Serial Setting Management Save/Reboot 	N	lew Password		
E Help	с	Confirm New Password		
	A	pply		

Figure 5-27Authentication



5.2.1.2 Port serial setting

Serial	configu	ration
--------	---------	--------

open all Serial Device Server System Port Serial Setting	al Device S	erver	
 Serial Configuration Port Profile Service Mode Management 		Port1 V	
i≊ Save/Reboot i≊ Help	Port Alias Interface	Port1 RS422	
	Baud Rate	38400 💌	
	Data Bits	8 🛩	
	Stop Bits Parity	1 V	
	Flow Control	None V	
	Force TX Interval Time	0 ms	
	Performance	⊙ Throughput ○ Latency	
	Apply		

Figure 5-28 Serial configuration

Label	Description
Port Alias	Remark the port to hint the connected device.
Interface	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)

The following table describes the labels in this screen.



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 5-18 Serial configuration

Port Profile

open all Serial Device Server System Port Serial Setting Serial Configuration	I Device S	erver	
 Port Profile Service Mode 		Port1 V	
	Local TCP Port	4000	
🗎 Help	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	
	Apply		

Figure 5-29 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 5-18 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.

	dustria ⁼∣ c		Server
open all Serial Device Server System Port Serial Setting Serial Configuration Serial Configuration	Serv	ice Mode	
Port ProfileService Mode	Porti		
 Management Save/Reboot 		Data Encryption	○ Enable ⊙ Disable
🗎 Help		Service Mode	Virtual COM Mode 💌
		Idle Timeout	0 (0~65535)seconds
		Alive Check	420 (0~65535)seconds
		Max Connection	1 v max. connection (1~5)
		Apply	

Figure 5-30 Virtual COM mode

The following table describes the labels in this screen.

Label	Description			
Data Encryption	Use SSL to encrypt data.			
	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 5-19 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.

	dustria	al Device S	Server	
open all Serial Device Server System Time(SNTP) P Onfiguration	Serv	ice Mode	www.oring-netw	orking.com
Wireless Configuration DDNS Configuration			Port1	
User Authentication Ort Serial Setting		Data Encryption	◯ Enable ④ Disable	
 Serial Configuration Port Profile 		Service Mode	TCP Server Mode 💌	
 Service Mode Management 		Telnet Negotiation	◯ Enable ④ Disable	
Save/Reboot		TCP Server Port	4000	
		Idle Timeout	0 (0~65535)seconds	
		Alive Check	40 (0~65535)seconds	
		Max Connection	1 v max. connection(1~5)	
		Apply		

Figure 5-31 TCP Server Mode



Label	Description
Data Encryption	Use SSL to encrypt data.
Telnet Negotiation	Full Telnet command / symbol compatible
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 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 Check	alive, the connection will be closed and the port will be freed. 0 indicate disable this
	function. Factory default is 0.
May Connection	The number of Max connection can support simultaneous connections are 5, default
Max Connection	values is 1.

Table 5-20 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.



	dustria	al Device S	Server	
open all B Serial Device Server ● System ● Not Serial Setting B Serial Configuration	Serv	ice Mode		
Port Profile Service Mode			Port1 💌	
Management Save/Reboot		Data Encryption	◯ Enable	
🗎 Help		Service Mode	TCP Client Mode 💌	
		Destination Host	: 4000	
		Idle Timeout	0 (0~65535)seconds	
		Alive Check	420 (0~65535)seconds	
		Connect on	⊙Startup ○Any Character	
		Connect Mode	O Manual Connect Close	
		Destination Host	Port	
		1.	65535	
		2.	65535	
		з.	65535	
		4.	65535	
		Apply		

Figure 5-32 TCP client mode

Label	Description
Data Encryption	Use SSL to encrypt data.
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 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
Character	send data.

Table 5-21 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 . Of Serial Setting	 al Device S	Server		
 Serial Configuration Port Profile Service Mode Management Save/Reboot Help 	Service Mode Listen Port	Port1 UDP Mode 4000		
	Host start IP	Host end IP	Send Port	
	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 5-33 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



ven all ⊠ Serial Device Server _ System _ Port Serial Setting	ss IP Cor	evice So	erver		
Management Access IP Control	🔲 Enabli	e IP Filtering (Not	check this option w	rill allow any	IP to have assessibility)
 SMTP/SNMP Conf. System Event Conf. 	No.	Activate the IP	IP Address		Netmask
🖺 Save/Reboot 🗎 Help	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15	_			
	16				

Figure 5-34 Access IP



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.

	dustrial De	vice Serv	er	
open all Serial Device Server System Port Serial Setting	SMTP/SNMP (Configuration		
Management Access IP Control	E-mail Se	ttings		
SMTP/SNMP Conf.	SMTP Se	rver	Port	
📓 Save/Reboot 🖺 Help	🗌 My se	rver requires authentica	tion	
	User Nam	18		
	Password	I		
	E-mail Se	ender		
	E-mail Ac	idress 1		
	E-mail Ac	Idress 2		
	E-mail Ac	ldress 3		
	E-mail Ac			
	SNMP Tra	p Server		
	SNMP Se	rver 1		
	SNMP Se	rver 2		
	SNMP Se	rver 3		
	SNMP Se	rver 4		
	Communi	ty		

Figure 5-35 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.

ORing In	dustria	al Device	e Ser	ver			
open all		Device Event Notifi	cation				
 Serial Device Server System 		Hardware Reset (C	old Start)	🔲 SMTP Mail	🔲 SNMP Trap	Syslog	
Port Serial Setting Management		Software Reset (W	arm Start)	🔲 SMTP Mail	🔲 SNMP Trap	Syslog	
Access IP Control		Login Failed		🔲 SMTP Mail	🔲 SNMP Trap	Syslog	
🖺 System Event Conf.		IP Address Change	d	🔲 SMTP Mail	🔲 SNMP Trap	Syslog	
📰 Save/Reboot 🗎 Help		Password Changed		🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog	
		Access IP Blocked		🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog	
		Redundant Power (Changed	🔲 SMTP Mail	🔲 SNMP Trap	🔲 Syslog	
		Redundant Etherne	t Changed	🔲 SMTP Mail	🔲 SNMP Trap	Syslog	
		Port Event Notifica	tion	Port1 🖌	▼		
		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	
		Fault Event Notification and Fault LED/Relay					
		Power 1 Fault	SMTP M	ail 🔲 SNMP Trap	Syslog	Fault LED/Relay	
		Power 2 Fault	SMTP M	ail 🔲 SNMP Trap	Syslog	Fault LED/Relay	
		Eth1 Link Down	SMTP M	ail 🔲 SNMP Trap	Syslog	Fault LED/Relay	
		Eth2 Link Down	SMTP M	ail 🔲 SNMP Trap	Syslog	Fault LED/Relay	
		Apply					

Figure 5-36 SMTP / SNMP conf

The following table describes the labels in this screen.

Label	Description	
Hardware Reset (Cold	This refers to starting the system from power off (contrast this with warm start).	When



Start)	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 (Warm	This refers to restart the computer without turning the power off. When performing a	
, ,	warm start, DS will automatically send an E-mail, log information or SNMP trap after	
Start)	reboot.	
Login Foiled	When an unauthorized access from the Console or Web interface, a notification will be	
Login Failed	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. Notificat	
	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 turned on.	
Power 2 Fault	When Power 2 Fault, a notification will be sent and Fault LED will be turned on.	



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

Table 5-22 System event conf

5.2.1.4 Save/Reboot

	dustrial Device Server
open all Serial Device Server System Or Port Serial Setting Management Access IP Control	Factory Default Reset to default configuration. Click Reset button to reset all configurations to the default value.
 SMTP/SNMP Conf. System Event Conf. Save/Reboot Help 	Reset Restore Configuration You can restore the previous saved configuration to Device Server.
	File to restore:)(浏览 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:
	Reboot Device Please click [Reboot] button to restart device.

Figure 5-37 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		
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 5-23 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.

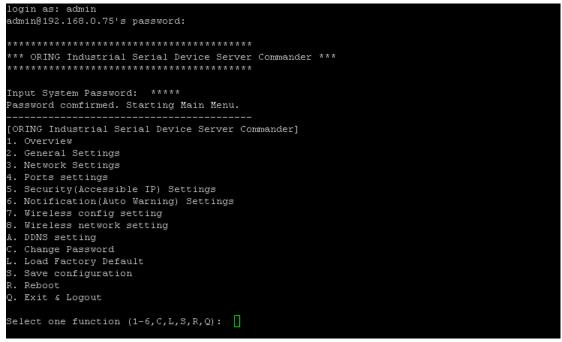


Figure 5-38 SSH





Technical Specifications

Network Interface			
Ethernet	2x 10/100Base-T(X) which support Redundant Dual Ethernet or		
Ethernet	Switch Mode support. Auto-recover less than 10ms		
connector	RJ-45		
Protection	Built-in1.5KV magnetic isolation		
	ICMP, IP, TCP, UDP, DHCP, BOOTP, ARP/RARP, DNS, SNMP		
Protocols	MIB II, HTTPS, SSH		
Serial Interface			
	IDS-5042/IDS-5042+:		
	4x RS232 / RS422 / 4(2)-Wire RS485. Which can be configured by		
	DS-Tool		
Interface	IDS-5042-I+:		
	4x RS422 / 4(2)-Wire RS485. Which can be		
	configured by DS-Tool		
Connector	IDS-5042/IDS-5042+: Male DB9		
Connector	IDS-5042-I+: 5 pin terminal block		
Serial Baud Rate	110 bps to 460.8 Kbps		
Data Bits	5, 6, 7, 8		
Parity	odd, even, none, mark, space		
Stop Bits	1. 1.5, 2		
	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND		
RS-232 signals	(IDS-5042/IDS-5042+)		
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		
	2KV DC isolation for each port (IDS-5042-I+ only)		
	PWR P.O.E.(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.		
LED Indicators	ETH1(2) Link / ACT:		
	Amber ON/Blinking: 10 Mbps Ethernet		
	Green ON/Blinking:100 Mbps Ethernet		
	Serial TX / RX LEDS:		
	Red: Serial port is receiving data		
	Green: Serial port is transmitting data.		
	Fault: Fault alarm (Red)		
Power Requirements			
Power Input	PWR1/2: 12~48VDC in 6-pin Terminal Block		
Reverse Polarity Protection	Present at terminal block		
Power Consumption	7 Watts MAX		
Software Utility			
	DS-Tool for Windows NT/2000/XP/ 2003/VISTA which include		
	Device discovery		
	Auto IP report		
	Device setting (run-time change, no rebooting)		
Utility	Access control list		
	Group setting		
	Device monitoring		
	Serial port monitoring		
	Log info		



	Virtual Com / TCP Server / TCP Client / UDP /Serial Tunnel		
	TCP Alive Check Timeout		
Serial Mode	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		
Configuration	NT/2000/XP/VISTA		
Environmental			
Operating Temperature	-10 to 60°C (14 to 140°F)		
Operating Humidity	5% to 95% (Non-condensing)		
Storage Temperature	-40 to 85°C (-40 to 185°F)		
Mechanical			
Dimensions(W x D x H)	52mm(W)x106mm(D)x144mm(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		
	EN61000-4-2 (ESD), EN61000-4-3 (RS),		
EMS	EN61000-4-4 (EFT), EN61000-4-5 (Surge),		
	EN61000-4-6 (CS).		
Warranty	5 years		