

DS-42-W/IW

Industrial 4-port RS232/422/485 to 802.11b/g & 2-port LAN Device Server

Features

- Redundant Dual Ethernet Ports: Recovery time < 10ms
- Switch Mode Supported: Daisy Chain support to reduce usage of switch ports
- High Speed Air Connectivity: WLAN interface support up to 54Mbps link speed
- Highly Security Capability: WEP/WPA/WPA2/802.1X/Radius/TKIP supported
- NAT-pass through: User can manage DS-42-W/IW through NAT router
- Redundant Power Inputs: 12~48VDC on 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, Relay and Beeper
- Various Windows O.S. supported: Windows NT/2000/ XP/ 2003/VISTA



Introduction

DS-42-W/IW is an innovative 4 ports RS232/422/485 to 802.11b/g WLAN and 2 ports LAN device server. Users are able to configure the Switch 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. DS-42-W/IW offers many powerful features for HW & SW redundant functions. When the connection between master-link and LAN fails, DS-42-W/IW can automatically switch to another LAN port within 10mS, and still guarantees a non-stop connection. DS-42-W/IW also supports switch mode, users can use Daisy Chain to reduce the usage of ethernet switch ports. Secondly, DS-42-W/IW can simultaneously transfer data into 5 host PCs. This feature can assure all critical data that saved in different host PCs to avoid ethernet break or host PCs failure. Thirdly, DS-42-W/IW provides dual redundant power inputs on terminal block. DS-42-W/IW also provides NAT pass through function so that users are able to manage DS-42-W/IW inside or outside the NAT router. It is easy for different IP domain users to use DS-42-W/IW. Therefore, DS-42-W/IW is the best communication solution for wireless application of quad-port serial devices.

Redundant 5 multiple host devices

DS-42-W/IW can work in various communication modes, including virtual com, TCP server, TCP client, UDP, and serial tunnel. In addition, it also provides event notification by SNMP trap or email when IP changed, HW/SW reset...etc. For industrial redundant solutions, DS-42-W/IW supports up to 5 simultaneous connections for virtual com, TCP server, TCP client modes, and sending data to 5 hosts simultaneously. This feature can assure all critical data that saved in different host PCs to avoid Ethernet break or host PCs failure.

High Speed and High Security Capability

With IEEE802.11b/g dual mode capability, DS-42-W/IW is able to operate with a maximum link speed of 54Mbps to maximize the capacity of communication channel. The security standards include WEP, WPA, WPA2, 802.1X, Radius and TKIP. These various kinds of security standards for WLAN are also configurable to ensure the security of data transmission.

Security management by HTTPS & SSH

DS-42-W/IW supports HTTPS & SSH protocol over LAN or WLAN to assure the data security when users make configuration remotely.

Redundant Dual LAN & build in Ethernet Switch Design

With the Redundant technology to device, DS-42-W/IW has dual Ethernet ports for redundant design. If both ethernet ports are linked to different switches, only one link will be activated. When the master link breaks, the redundant back-up link will be activated in 10mS to guarantee a non-stop data communication. DS-42-W/IW also support switch mode. Users are able to use the Daisy Chian to reduce usage of Ethernet switch port.

Redundant power input- terminal block

The redundant DC power inputs help to guarantee a non-stop operation. The backup power input will take over immediately when the primary DC power input fails.

Versatile modes & event alarm by mail

DS-42-W/IW can work in various communication modes, including virtual com, TCP server, TCP client, UDP, and serial tunnel. In addition, it also provides event notification by SNMP trap or email when IP changed, HW/SW reset...etc.

NAT Pass Through

DS-42-W/IW supports powerful Virtual COM driver and windows utility which can be used to pass through NAT router. Users can use private IP to manage DS-42-W/IW in internet domain. It helps users to setup the DS-42-W/IW anywhere and extend users manage domain.

Specifications

Network Interface		WLAN Feature	
Ethernet	2x 10/100Base-T(X) which support Redundant Dual Ethernet or Switch Mode support. Auto-recover less than 10ms	Operating Mode	Client mode
Connector	RJ-45	Antenna Connector	Reverse SMA
Protection	Built-in 1.5 KV magnetic isolation	Radio Frequency Type	DSSS
Protocols	ICMP, IP, TCP, UDP, DHCP, BootP, ARP / RARP, DNS, SNMP MIB II, HTTPS, SSH	Modulation	IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM

* All specifications are subject to change without

DS-42-W/IW

Industrial 4-port RS232/422/485 to 802.11b/g & 2-port LAN Device Server

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: 18dBm
Receiver Sensitivity	-81dBm @ 11Mbps, PER< 8%; -64dBm @ 54Mbps, PER< 10%
Encryption Security	WEP: (64-bit ,128-bit key supported) WPA: WPA2 : 802.11i(WEP and AES encryption) PSK (256-bit key pre-shared key supported) TKIP encryption
Wireless Security	SSID broadcast disable
Serial Interface	
Interface	DS-42-W: 4x RS232 / RS422 / 4(2)-Wire Rs485. DS-42-IW: 4x RS422 / 4(2)-Wire RS485. Which can be configured by DS-Tool
Connectors	DS-42-W: Male DB9 DS-42-IW: 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
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
RS-422	Tx+,Tx-, Rx+, Rx-,GND
RS-485 (4-wire)	Tx+,Tx-, Rx+, Rx-,GND
RS-485 (2-wire)	Data+, Data-,GND
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR
Serial Line Protection	Build-in 15KV ESD protection 2KV DC isolation for each port (DS-42-IW only)
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(2) Link / ACT: Orange ON/Blinking: 10 Mbps Ethernet Green ON/Blinking:100 Mbps Ethernet WLAN Link /ACT: Green: Link, Orange: Poor signal WLAN Strength: 1<25%, 2<50%, 3<75%, 4<100% Serial TX / RX LEDs: Red: Serial port is receiving data Green: Serial port is transmitting data. Fault: WLAN link down (Red)

Software Utility	
Utility	DS-Tool for Windows NT/2000/XP/2003/VISTA Device discovery Auto IP report Device setting (run-time change, no rebooting) Access control list Group setting Device monitoring Serial port monitoring Log info Group Firmware update
Serial Mode	Virtual Com / TCP Server / TCP Client / UDP /Serial Tunnel TCP Alive Check Timeout Inactivity Timeout Delimiter for Data Packing Force TX Timeout for Data Packing
Multiple Link	5 Hosts simultaneous connection: Virtual Com / TCP server / Client / UDP
VCOM Driver	Windows NT/2000/XP/2003/VISTA
Configuration	Web HTTPS console, SSH console, DS-Tool for Windows NT/2000/XP/VISTA
Environmental	
Operating Temperature	-10 to 55°C (14 to 131°F)
Operating Humidity	5% to 95%(Non-condensing)
Storage Temperature	-20 to 85°C (-4 to 185°F)
Mechanical	
Dimensions	52mm(W)x106mm(D)x144mm(H)
Casing	IP-30 protection
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
Warranty	5 years
Regulatory Approvals	
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), Level 3, EN61000-4-6 (CS), Level 3
MTBF	200,000 hours at least
Warranty	5 years

Ordering Information

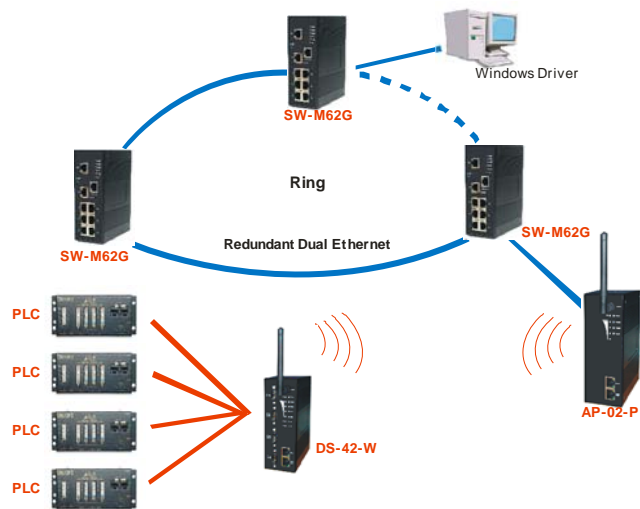
Part Number	Description
DS-42-W	Industrial 4-port RS232/422/485 to 802.11b/g and 2-port LAN Serial Device Server
DS-42-IW	Industrial 4-port isolated RS422/485 to 802.11b/g and 2-port LAN Serial Device Server

DS-42-W/IW

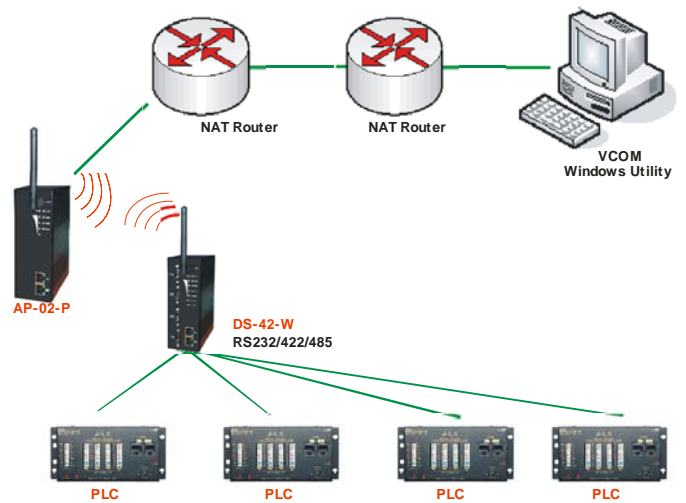
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Applications

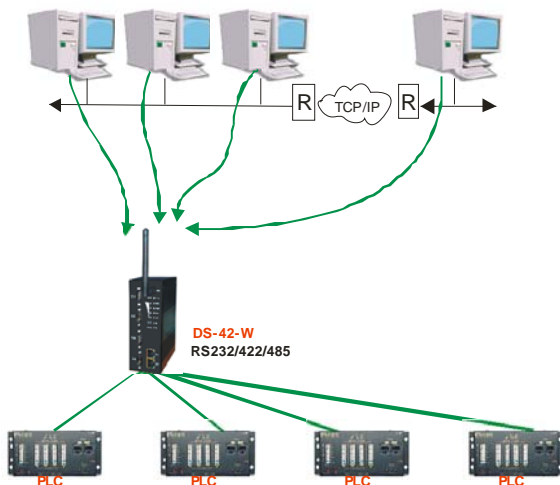
•Wireless LAN Client Mode



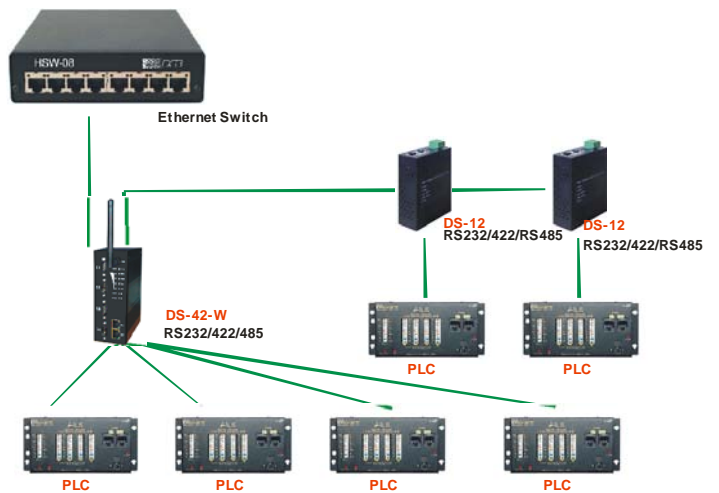
•NAT router Pass Through



•Redundancy 5 host devices



•Daisy Chain Switch mode



•Dual Ethernet Redundancy Mode

