Connect One™

Secure iWiFi™
Serial-to-WiFi Device Server

General Description:

Secure iWiFi™ is a serial-to-WiFi device server that enables installed devices to connect via their existing serial port to the Internet over an 802.11b/g Wireless LAN.

Secure iWiFi acts as a security gap between the host application and the network. It provides one secure SSL3/TLS1 socket; supports up to 10 simultaneous active TCP/UDP sockets and two listening sockets; a Web server with two websites; SMTP and POP3 clients; MIME attachments; FTP and Telnet clients, and SerialNET™ mode for serial-to-IP bridging.

Secure iWiFi eliminates the need for any hardware modifications to the host device. Simply connect a serial cable from Secure iWiFi's RS232 or RS485 connector to your device. Secure iWiFi is ready to connect to the WLAN via its integrated antenna.

The Internet engine inside Secure iWiFi is Connect One's remotely updateable iChip™ CO2128 Secure Internet Controller™.

Connect One's AT+i™ protocol eliminates the need for Internet programming and minimizes changes to the host application. Connect One's SerialNET™ operating mode completely eliminates the need for changes to the host application, as it is a true plug-and-play operating mode.

Secure iWiFi is powered by an external 9VDC power supply. Alternatively, it can be powered through pin 9 of the RS232/RS485 connector to the host device. It includes a Power Save mode for reduced power consumption.

Application Program Interface:

- Connect One's AT+i protocol
- SerialNET mode for transparent serial data-to-Internet bridging

Internet Protocols:

IP, UDP, TCP, ICMP, DNS, DHCP, NTP, SMTP, POP3, MIME, HTTP, FTP and TELNET

Security Protocols:

SSL3/TLS1, AES-128/256, SHA-1, HTTPS, FTPS, RSA, 3DES, RC-4, MD-5, WEP, WPA and WPA2

Hardware Description:

- Size: 94x63x28mm (3.7x2.5x1.1")
- Weight: 105g (3.7 oz.)
- Operating Humidity: 90% maximum (non-condensing)
- Operating Temperature Range: 5° to 50°C (41° to 122°F)
- Power Supply Input: 6-24VDC. 9V power supply included unless otherwise specified. Power from host device optionally available through pin 9 of serial connector.
- Power Consumption:
  1.2W @ 9VDC (typical)
  180mW @ 9VDC (Power Save mode)
- LEDs:
  LNK – Link status
  SNET – SerialNET mode activity
  PWR – Power
- Connectors: RS232/RS485, 2.1mm power jack
- Includes WLAN 802.11b/g antenna
- Plastic enclosure

Performance Specifications:

- Host Data Rate: Up to 1Mbps
- Serial Data Format (AT+i mode): Asynchronous character; binary; 8 data bits; no parity; 1 stop bit.
- Serial Data Format (SerialNET mode): Asynchronous character; binary; 7 or 8 data bits; odd, even, or no parity; 1 stop bit.
- Flow Control: hardware (DTR, RTS, CTS, DSR) and software flow control

Warranty: One-year limited warranty
Approvals: CE; FCC pending

Connect One™
The Device Networking Authority

Configuration:

Secure iWiFi firmware and device configuration parameters can be remotely updated over the Internet. Secure iWiFi can be easily configured via Connect One's iChipConfig utility. This Windows-based utility enables quick configuration of the iChip CO2128 via a local serial connection or via the Web. The iChipConfig utility also enables uploading an application's website into the Secure iWiFi.
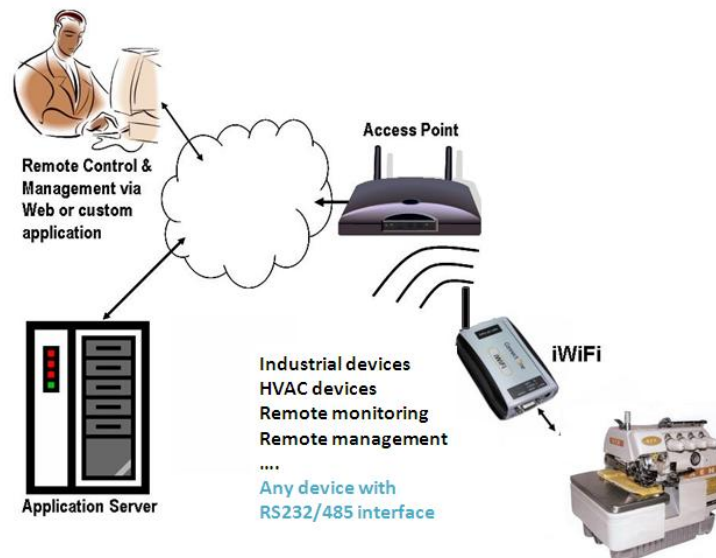
Pin Assignments:

Pin #	RS232 Connector	RS485 Connector
1	CDH Output	Not Connected
2	TXD Output	TXD+ Output
3	RXD Input	RXD+ Input
4	Short to pin 6	Short to pin 6
5	Ground	Ground
6	Short to pin 4	Short to pin 4
7	CTS Input	RXD- Input
8	RTS Output	TXD- Output
9	V_{in}=6-24V	V_{in}=6-24V

Side view: serial connector, power jack, mode select, SerialNET and power LEDs

Typical Application:

Ordering Information:

iW2128-232-EU-009: Secure iWiFi without power supply, RS232 connector, Europe
iW2128-232-US-009: Secure iWiFi without power supply, RS232 connector, USA
iW2128-232-EU-220: Secure iWiFi with 220V power supply, RS232 connector, Europe
iW2128-232-US-110: Secure iWiFi with 110V power supply, RS232 connector, USA
iW2128-485-EU-009: Secure iWiFi without power supply, RS485 connector, Europe
iW2128-485-US-009: Secure iWiFi without power supply, RS485 connector, USA
iW2128-485-EU-220: Secure iWiFi with 220V power supply, RS485 connector, Europe
iW2128-485-US-110: Secure iWiFi with 110V power supply, RS485 connector, USA

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