



## Mini Socket iWiFi™ Serial-to-Wireless LAN Device Server

### General Description:

Mini Socket iWiFi™ is a secure serial-to-Wireless LAN device server module that also acts as a bridge to connect serial devices to 802.11b/g Wireless LANs. It includes the iChip™ CO2128 IP Communication Controller™ chip and Marvell 88W8686 WiFi chipset. It is packaged in RoHS-compliant ultra-slim form factor and uses a standard industry pin-out.

Mini Socket iWiFi offers much more than many other device servers on the market. It acts as a security gap between the application and the network; supports up to 10 simultaneous TCP/UDP sockets; 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.

Mini Socket iWiFi supports the SSL3/TLS1 protocol for secure sockets, HTTPS and FTPS, WEP, WPA and WPA2 WiFi encryption.

Mini Socket iWiFi minimizes the need to redesign the host device hardware. It easily inserts into headers on the host PCB and connects to an external antenna. Minimal or no software configuration is needed for Mini Socket iWiFi to access the Wireless LAN.

Connect One's high-level AT+i™ API eliminates the need to add WiFi drivers, security and networking protocols and tasks to the host application. The AT+i SerialNET operating mode offers a true plug-and-play mode that eliminates any changes to the host application.

Mini Socket iWiFi firmware – the IP stack and Internet configuration parameters – are stored in on-board flash

memory. The module is power-efficient: the core operates at 1.2V, while I/Os operate at 3.3V. Power Save mode further reduces power consumption.

The II-EVB-362MW evaluation board provides an easy environment for testing the Mini Socket iWiFi prior to designing it into your product.

### Hardware Description:

- Size: 41.0x31.5x5.0mm
- Core CPU: 32-bit RISC ARM7TDMI, low-leakage, 0.13 micron, at 48MHz
- Operating Voltage: +3.3V +/-10%
- Operating Humidity: 90% maximum (non-condensing)
- Operating Temperature Range: -20° to 75°C (-4° to 167°F)
- Power Consumption:
  - Transmit –250mA@16dbm, 235mA@12dbm (typical)
  - Receive – 190mA (typical)
  - Power Save mode – 8mA
  - Power Down mode – 40uA (typical)
- RF Connector: SMA reverse polarity
- Header: 6x2 male
- Host Interface: TTL serial interface
- RoHS-compliant; lead-free

### Performance Specifications:

- Host Data Rate: up to 3Mbps in serial mode
- 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 (-RTS, -CTS) and software flow control.

12	-RF_LED	Output	RF Status Indication
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### Internet Protocols:

- ARP, ICMP, IP, UDP, TCP, DHCP, DNS, NTP, SMTP, POP3, MIME, HTTP, FTP and TELNET
- Security protocols: SSL3/TLS1, HTTPS, FTPS, RSA, AES-128/256, 3DES, RC-4, SHA-1, MD-5, WEP, WPA and WPA2
- Protocols accelerated in hardware: AES, 3DES and SHA

### Wireless Specifications:

- Standards supported: IEEE 802.11b/g
- Frequency: Europe – 2.412-2.472GHz  
USA – 2.412-2.462GHz
- Channels: Europe – 13 channels  
USA – 11 channels

### Pin Assignments:

Pin	Name	Type	Description
1	VDD	Power	V <sub>DD</sub> power supply
2	GND	Power	GND power supply
3	RXD	Input	Host Data Receive
4	TXD	Output	Host Data Send
5	-RTS	Output	Request to Send Host
6	-DTR	Output	Host Data Terminal Ready
7	-CTS	Input	Clear to Send Host
8	-CD	Output	Not in use
9	-DSR	Input	Host Data Set Ready
10	-RES/ -PD	Input	Reset / Power-Down
11	MSEL	Input	Mode Select

### Application Program

#### Interface:

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

#### Warranty:

One year

#### Certifications:

- FCC and CE pending

#### Installation Requirements:

The Mini Socket iWiFi must be installed within a full-enclosure device that is safety certified.

#### Safety Warning:

Power supply output to the Mini Socket iWiFi must be limited to 2A Max.

