

# MiiNePort W1 Series

## Wireless LAN embedded serial device servers



Antenna ordered separately

- > IEEE 802.11 b/g compatible
- > AES, WEP 64/128-bit, WPA, WPA2, PSK, 802.11i security support
- > Low power consumption (1.18W)
- > 1 Serial port, up to 921.6k bps
- > 1 Ethernet port, 10/100Mbps
- > SSL/SSH support for configuration
- > Fast roaming to enhance connection reliability



### Overview

The MiiNePort W1 series provides serial to IEEE 802.11 b/g embedded wireless solution with compact size, and ultra low power consumption features. Numerous operation modes are designed to fulfill the

requirements of embedded module application. Complete driver support reduces software redesign effort and accelerate time to market.

### Specifications

#### Form Factor

**Type:** Drop-in module  
**Dimensions:** 44.4 x 44.4 x 9.7 mm (1.75 x 1.75 x 0.38 in)

#### System Information

**CPU:** 32-bit ARM Core  
**RAM:** 64 MB built in  
**Flash:** 16 MB built in

#### Ethernet Interface

**Number of Ports:** 1  
**Speed:** 10/100 Mbps, auto MDI/MDIX

#### WLAN Interface

**Standard Compliance:** IEEE 802.11b/g  
**Network Modes:** Infrastructure mode (b/g), Ad-Hoc mode (b/g)  
**Spread Spectrum Technology:** DSSS, CCK, OFDM

#### Transmit Power:

IEEE 802.11b: 16 dBm (typical)  
 IEEE 802.11g: 14 dBm (typical)

**Receive Sensitivity:** -71 dBm (Min)

#### Transmission Rate:

IEEE 802.11b: 11 Mbps  
 IEEE 802.11g: 54 Mbps

#### Transmission Distance:

Up to 100 meters (in open areas)

#### Wireless Security:

AES, WEP 64/128-bit, WPA, WPA2, PSK, 802.11i

#### Serial Interface

**Number of Ports:** 1  
**Serial Standards:** TTL

#### Serial Communication Parameters

**Data Bits:** 7, 8  
**Stop Bits:** 1, 2  
**Parity:** None, Even, Odd  
**Flow Control:** RTS/CTS, XON/XOFF  
**Baudrate:** 50 bps to 921.6 Kbps

#### Serial Signals

TTL: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

#### Digital I/O Pins

GPIO: 8 programmable I/O pins

#### Software

**Network Protocols:** ICMP, IP, TCP, UDP, DHCP, Telnet, DNS, SNMP V1/V2c/V3, HTTP, SMTP, SNTIP, SSH, HTTPS  
**Configuration Options:** Web Console, Telnet Console, Windows Utility, Serial command mode (configured through the data port)  
**Windows Real COM Drivers:** Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7 x86/x64, Embedded CE 5.0/6.0, XP Embedded  
**Fixed TTY Drivers:** SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x  
**Linux Real TTY Drivers:** Linux kernel 2.4.x, 2.6.x, 3.0.x  
**Operation Modes:** Real COM, TCP Server, TCP Client, UDP, RFC2217

#### Environmental Limits

**Operating Temperature:**  
 Standard Models: 0 to 55°C (32 to 131°F)  
 Wide Temp. Models: -40 to 85°C (-40 to 185°F)  
**Storage Temperature:** -40 to 60°C (-40 to 140°F)  
**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Power Requirements**

**Input Voltage:** 3.3 to 5 VDC (±5%)

**Power Consumption:** 360 mA @ 3.3 VDC, 290 mA @ 5 VDC input max.

**Standards and Certifications**

**Safety:** UL 60950-1, EN 60950-1

**EMC:** CE, FCC

**EMI:** EN 55022 Class A, FCC Part 15 Subpart B Class A

**EMS:**

EN 55024,

EN 61000-4-2 (ESD),

EN 61000-4-3 (RS),

EN 61000-4-4 (EFT),

EN 61000-4-5 (Surge),

EN 61000-4-6 (CS),

EN 61000-4-8,

EN 61000-4-11

**Radio:** EN301 489, EN300 328, EN300 893, FCC 15C,

EN61121/EN500 385

**Shock:** IEC-68-2-27

**Freefall:** IEC-68-2-34, IEC-68-2-32

**Vibration:** IEC-68-2-6

**Green Product:** RoHS, CRoHS, WEEE

**Reliability**

**Automatic Reboot Trigger:** Built-in WDT (watchdog timer)

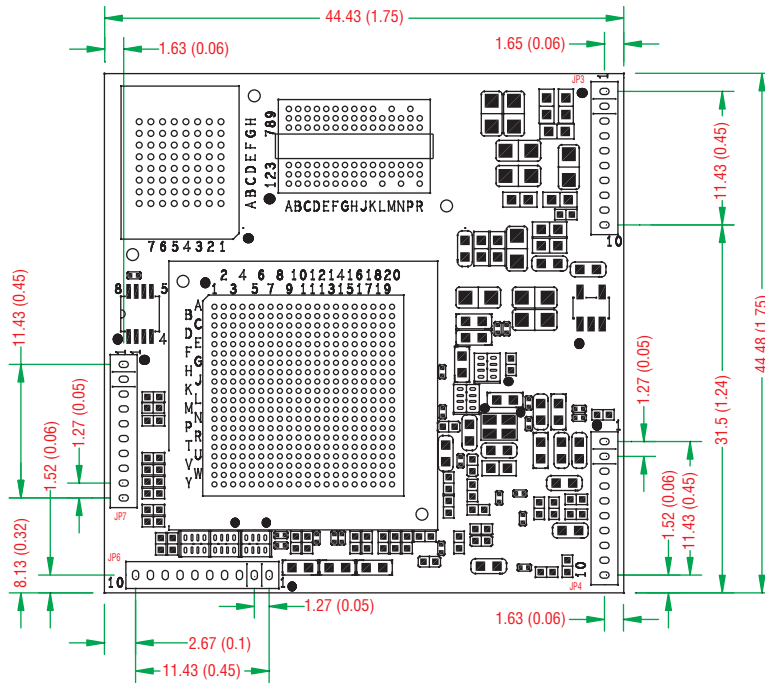
**Warranty**

**Warranty Period:** 5 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Dimensions**

Unit: mm (inch)



**Pin Assignment**

Pin	JP3	JP4	JP6	JP7
1	N.C.	Eth_10M_LED	PI00	LTXD0
2	N.C.	Eth_100M_LED	PI01	LRTS0
3	N.C.	Eth_Rx+	PI02	LDTR0
4	RDY_LED	Eth_Rx-	PI03	LRXD0
5	FLT_LED	Eth_center_tap	PI04	LCTS0
6	HW_RESET	Eth_center_tap	PI05	LDSR0
7	SW_RESET	Eth_Tx+	PI06	LDCD0
8	WLAN_Link	Eth_Tx-	PI07	N.C.
9	Vin	GND	LTXD1	LCTS1
10	Vin	GND	LRTS1	LRXD1

## Ordering Information

### Available Modules

**MiiNePort W1:** Embedded wireless device module supporting IEEE 802.11 b/g, 0 to 55°C operating temperature (internal antenna not included)

**MiiNePort W1-T:** Embedded wireless device module supporting IEEE 802.11 b/g, -40 to 85°C operating temperature (internal antenna not included)

### Available Starter Kits

**MiiNePort W1-ST:** Starter kit for MiiNePort W1, module included

### Optional Accessories (can be purchased separately)

**ANT-WDB-ARM-02:** 2.4/5GHz, Dual band Omni-directional antenna, 2 dBi, R-SMA (male), Dipole

**CRF-MHF/SMA(M)-14.2:** Mini1.13 cable, MHF to RP-SMA (female), 0.14 meters



ANT-WDB-ARM-02



CRF-MHF/SMA(M)-14.2

### Package Checklist (modules)

- MiiNePort W1 series wireless module (Antenna ordered separately)

### Package Checklist (starter kits)

- 1 MiiNePort W1 series wireless module
- MiiNePort W1 evaluation board
- Antenna - ANT-WDB-ARM-02
- Antenna - CRF-MHF/SMA(M)-14.2
- 1 cross-over Ethernet cable
- 1 null modem serial cable
- Universal power adaptor
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card