LANTRONIX®

MatchPort b/g Wireless Device Server

- ▶ **Extremely affordable embedded 802.11 b/g wireless networking**
- ▶ **Wired Ethernet-to-wireless bridging**
- ▶ **Common platform form factor for a family of wired and wireless modules**
- ▶ **Bulletproof security with IEEE 802.11i-PSK, WPA-PSK, TKIP and optional 256-bit AES end-to-end encryption**
- ▶ **Full TCP/IP stack, web server and Windows deployment software**
- ▶ **Two serial channels; up to 921 Kbps data rate**
- ▶ **FCC Class B, UL and EN EMC and safety-compliant**
- ▶ **Compact: 45mm x 45mm with 40-pin 2 mm header**

RoHS
WEEE COMPLIANT

The Ultimate in Flexibility, Security, Performance and Affordability in Embedded Wireless Networking

MatchPort™ b/g enables you to build wireless networking into virtually any electronic device with a serial interface. With this full-featured, turnkey embedded device server module your products can be wirelessly accessed and controlled over the Internet!

Pin-compatible Wireless/Wired Module Family

MatchPort b/g is the first in a family of pin and form-factor compatible wireless and wired module solutions. The MatchPort family enables you to "future proof" your designs with a choice of flexible media-independent 802.11 b/g or Ethernet networking products. It takes the complexity out of RF design and embedded Ethernet networking, enabling you to focus on your products. And it minimizes engineering risk, reduces cost and shortens development time.

Complete Wireless Network Processing Module

MatchPort b/g is a dedicated co-processor module that manages wireless and network activity, permitting the device's host microprocessor to function at maximum efficiency. Using a dual processor design (one for converting wired serial data into TCP/IP packets and providing web server capabilities, the other an 802.11 b/g baseband and radio chipset) MatchPort b/g enables 802.11 wireless connectivity and web services on any device with a serial interface on its host microcontroller.

Powered by a Lantronix DSTni™ x86 class processor SoC with 256 KB of on-chip SRAM, MatchPort b/g also includes 2MB of Flash memory for web page storage and firmware.

Bulletproof Security

With IEEE 802.11i-PSK (AES-CCMP) or WPA-PSK (TKIP) security, MatchPort b/g offers the highest levels of wireless encryption. It also optionally supports 256-bit Advanced Encryption Standards

(Rijndael) encryption for true end-to-end (along the wired/wireless path) secure data transfer.

Robust, Feature-Rich Software Suite

Eliminating the need to negotiate the intricacies of Transmission Control Protocol (TCP) or Internet Protocol (IP), MatchPort b/g incorporates:

- Robust operating system
- Full-featured network protocol stack and radio system driver
- Proven, ready-to-use serial-to-wireless application
- Built-in web server for device communication and configuration via a standard browser
- Windows-based DeviceInstaller™ – making configuring one or more units in a subnet quick and easy

FCC Certified for Immediate Deployment

MatchPort b/g is module certified by the U.S. Federal Communications Commission (FCC). This allows you to leverage the Lantronix FCC license grant and bypass 802.11 regulatory testing, speeding time-to-market and minimizing development and testing costs. MatchPort b/g is also pre-tested for European telecommunications regulations.

Flexible, Efficient Design

Designed without an attached antenna, MatchPort b/g provides the flexibility to design and place the antenna and antenna connector based on your design requirements. MatchPort b/g includes a user controlled intelligent power management option to shut the radio off during periods of inactivity minimizing unnecessary current consumption.

Ethernet-to-Wireless Bridging

With a separate Ethernet port, MatchPort b/g offers the unique ability to transparently bridge existing Ethernet-ready devices to a wireless network.

Scan, Gather and Report Radio Parameters

With its Scan command, MatchPort b/g enables the ability to report BSSID, RSSI and SSID. The Network Status command reports BSSID, authentication and negotiated encryption types for the current association.

Features and Specifications

Wireless Specifications

Wireless Standards: IEEE 802.11b; 802.11g

Channel Frequency Range: 2.412 – 2.484 GHz

Maximum Output Power: 14dBm +2.0 dBm/-1.5 dBm
(does not include antenna gain)

Maximum Receive Sensitivity: -91dBm @ 1Mbps

Data Rates With Automatic Fallback
54Mbps – 1Mbps

Range: Up to 328 feet indoors

Modulation Techniques: OFDM, DSSS, CCK, DQPSK, DBPSK, 64 QAM, 16 QAM

Serial Interface

Two Serial Ports

Interface: CMOS (Asynchronous) 3.3V-level signals, rate is
software selectable (300 bps to 921,000 bps)

Serial Line Formats: 7 or 8 data bits, 1-2 Stop bits

Parity: odd, even, none

Modem Control: DTR, DCD

Flow Control: XON/XOFF (software), CTS/RTS (hardware), none

Network Interface

Interface: Wireless 802.11b and 802.11g

Protocols Supported: ARP, UDP, TCP, Telnet, ICMP, SNMP,
DHCP, BOOTP, Auto IP, HTTP, SMTP, TFTP

Management

Internal web server

SNMP (read only)

Serial login

Telnet login

DeviceInstaller software

Security

IEEE 802.11i - PSK with AES-CCMP Encryption

WPA - PSK

TKIP Encryption

64/128-bit WEP

Internal Web Server

Serves web pages

Storage capacity: 1.2 MB

Architecture

CPU, Memory: Lantronix DSTni-EX x86 CPU, on-chip 256 KB
zero wait static SRAM, 2,048 KB Flash, 16 KB Boot ROM,
8 GPIO

Firmware: Upgradeable via TFTP and serial port

Power Consumption

Average Power Consumption: Data Transfer
• 740 mW (Low cpu); active
• 250 mW (Low cpu); inactive

Peak Supply Current: 360 mA Data Transfer

Environmental

Operating range, WLAN: -40° to 70°C (-40° to 158°F)

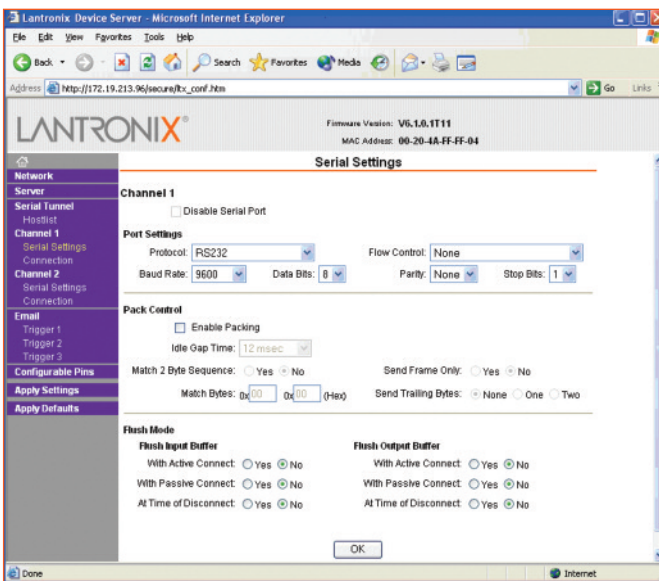Storage range: -40° to 85°C (-40° to 185°F)

Packaging

Dimensions: 44.4 x 44.4 x 10.4 mm (1.75 x 1.75 x .41 in)

Weight: 14g

Material: Plastic shell, 260°C tolerant

Warranty

2-year limited warranty

Included Software

Windows® 98/NT/2000/XP/Vista based DeviceInstaller
configuration software and Com Port Redirector™,
Web-Manager

The included DeviceInstaller software makes configuration quick and easy!

MatchPort b/g Demonstration Kit

The demonstration kit contains the key accessories to evaluate a MatchPort b/g product:

• MatchPort b/g demonstration board
• RS-232 cable, DB9F, null modem
• Cat5e UTP RJ45M/M Ethernet cable
• 3.3V power supply
• Antenna

Note: MatchPort b/g sample must be purchased separately.

Ordering Information

Part Number	Description
MP1001000G-01	– MatchPort b/g bulk pack – Minimum order quantity 50 units
MP1002000G-01	– MatchPort b/g AES bulk pack – Minimum order quantity 50 units
MP100200SG-01	– MatchPort b/g AES sample case – One (6 in.)Antenna cable U.FL to R-SMA (p/n 500-180-R-ACC) – One MatchPort b/g enclosed – Free 30-day Secure Com Port Redirector™ evaluation license – Order quantities of up to 10
MP10010NMK-01	– MatchPort b/g Demonstration Kit
930-033-R	– Accessory antenna
500-180-R-ACC	– Antenna cable (6 in.) U.FL to R-SMA (10 pack)
500-181-R-ACC	– Antenna cable (6 in.) U.FL to U.FL (10 pack)

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