



## MatchPort b/g Pro Wireless Device Server

- ▶ Adds Wi-Fi to devices with the highest WPA2/802.11i enterprise-grade security and authentication protocols
- ▶ Lantronix SmartRoam™ technology provides seamless mobile connectivity and improved reliability
- ▶ Includes full TCP/IP stack, CGI, AJAX web server and Windows deployment software
- ▶ Low power consumption mode option
- ▶ Powerful applications customization platform with 32 Bit 159 MIPS (Dhrystone 2.1) Processor, 8 MB Flash/8 MB SDRAM



## The Most Secure, Deployment-Ready Wi-Fi Networking and Web Server Module

MatchPort® b/g Pro is a programmable device server that delivers Wi-Fi networking with the highest levels of security to virtually any electronic product. It provides affordable connectivity in the same compact, single-socket form factor as other MatchPort modules, enabling OEMs to add Wi-Fi or wired Ethernet networking to their products on a single PCB design.

With a choice flexible, media-independent modules ranging from Ethernet, Wi-Fi and ultra-secure Wi-Fi, the MatchPort family takes the complexity out of RF design and networking. OEMs can focus on their core competencies while minimizing engineering risk, shortening development time and reducing development cost.

### Wi-Fi Network Co-Processor Module

MatchPort b/g Pro is a dedicated co-processor module that manages wireless connectivity and web services, enabling the device's host microcontroller to function at maximum efficiency. Using a dual-processor design (one for converting wired serial data into TCP/IP packets, adding authentication and web server; the other an 802.11 b/g baseband and radio chipset) MatchPort b/g Pro adds secure Wi-Fi connectivity and web services to any device with a serial interface on its host microcontroller.

### Bulletproof Security

With an unmatched portfolio of security technologies, MatchPort b/g Pro goes far beyond compliance with the popular 802.11i, WPA and WPA2 wireless security specifications. It ensures data integrity and privacy for highly sensitive requirements, such as medical or financial applications.

- IEEE 802.11i-compliant radio with AES-CCMP and TKIP encryption
- Complete suite of 802.1x Enterprise Authentication Protocols (EAP) including EAP-TLS, EAP-TTLS, PEAP and LEAP
- End-to-end SSL TLS and SSH tunneling
- End-to-end AES 128-bit encrypted tunneling

### Highly Reliability Wi-Fi for Better Mobility

With exclusive SmartRoam technology, MatchPort b/g Pro continuously tracks the signal strength of access points (AP) within range. If necessary, pre-authentication and caching enable smooth and automatic transition to an access point with a stronger signal. This enhances mobility within a building, warehouse or across a campus network with less time spent re-authenticating due to a lost connection or re-associating to a stronger signal.

### Scan, Gather and Report Radio Parameters

MatchPort b/g Pro scans current AP and Received Signal Strength radio parameters, as well as authentication and negotiated encryption types for the current association, and displays them on a web page. This enables remote technicians to diagnose problems as they occur and troubleshoot over any IP network without a service call, reducing support costs and unnecessary visits.

### Advanced OS and Web Server Technologies

Featuring the Lantronix Evolution OS™ operating system, MatchPort's integrated CGI-capable web server transforms a standalone device into a networked product that can be managed remotely via a standard web browser. CGI capability enables users to remotely monitor and collect information from the device in real-time and send the information to dynamic web pages. AJAX technology ensures smooth browsing of dynamic content served from the edge device. Additionally, MatchPort b/g Pro supports open standards such as "Cisco-like" CLI, XML and serial and Telnet management options.

### Flexible & Intelligent Design

Designed without an attached antenna, it provides the flexibility to locate the antenna and connector based on design requirements. It also includes a user-controlled, intelligent power management option to shut down the radio during periods of inactivity, minimizing current consumption.

### FCC Certified for Immediate Deployment

MatchPort b/g Pro is certified by the U.S. Federal Communications Commission (FCC) enabling OEMs to leverage the Lantronix FCC license grant and bypass 802.11 regulatory testing. MatchPort b/g is also pre-tested for European telecommunications regulations.



## Features and Specifications

### Wireless Specifications

Wireless Standards: IEEE 802.11b; 802.11g  
 Channel Frequency Range: 2.412 – 2.484 GHz  
 Output Power: 14dBm +2.0dBm/-1.5dBm  
 (does not include antenna gain)  
 Maximum Receive Sensitivity: -91dBm @ 1Mbps  
 Data Rates With Automatic Fallback: 54Mbps – 1Mbps  
 Range: Up to 328 feet indoors (100m)  
 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 230,000 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, Ethernet  
 Protocols Supported: ARP, UDP, TCP, Telnet, ICMP, SNMP, v2C, DHCP, BOOTP, Auto IP, HTTP, HTTPS, SMTP, TFTP

### Management & Configuration

Serial login  
 Telnet login  
 Internal WebManager (SSL Option for secure login)  
 Cisco-like CLI (over Serial Ports, Telnet or SSH)  
 XML Configuration Records via CLI or FTP  
 Windows-based DeviceInstaller software  
 Firmware: Upgradeable via FTP, Web, Serial Port

### Wireless Security

IEEE 802.11i Encryption: AES-CCMP and TKIP Encryption  
 WPA2- Enterprise (EAP, PEAP, LEAP), WPA2-PSK, WPA - PSK  
 64/128-bit WEP

### Wired Security

SSL Client & Server, Selectable 128/256/512/768/1024 Bit Certificates  
 SSH Client, 8 Server Selectable 128/256/512/768/1024 Bit Public/Private Key support  
 TLS  
 ENCRYPTION: AES, 3DES and RC4 Encryption for SSH & SSL  
 Lantronix end-to-end AES 128 Bit Encryption  
 AUTHENTICATION: SHA-1, MD5, Base-64

### Internal Web Server

CGI with AJAX support

### Architecture

CPU, Memory: Lantronix 32-bit processor, 166Mhz (159 MIPS - Dhrystone 2.1) 7 GPIO  
 Memory: 8 MB SDRAM, 8 MB Flash (Factory default). Flash wear leveling and erase cycle statistics

### Nominal Current Consumption (@3.3v)

Wireless On; Standby: 160mA  
 Wireless On; Continuous Max Transmit Power: 350mA

### 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: 29g  
 Material: Plastic shell, 260°C tolerant

### Warranty

2-year limited warranty

**Lantronix Corporate Headquarters**  
 167 Technology Drive  
 Irvine CA 92618  
 t: 800.422.7055  
 sales@lantronix.com

**European Headquarters**  
 t: +31 (0) 76 52 36 74 4  
 EMEA@lantronix.com

**Asia/Pacific Headquarters**  
 t: +852 3428 2338  
 asiapacific\_sales@lantronix.com

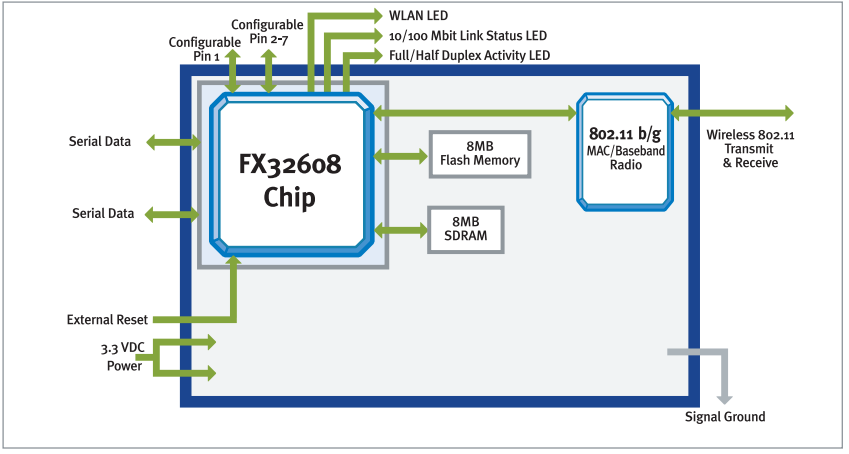
**Japan Headquarters**  
 t: +81.3.6277.8802  
 japan\_sales@lantronix.com

## Included Software

Windows® XP/Server 2003/Vista/7 (x86 and x64)/Server 2008 (x86 and x64) based DeviceInstaller™ configuration software and Com Port Redirector™, web manager

## LANTRONIX EVOLUTION OS™ Architecture

APPLICATIONS	TUNNELING		COMMAND & CONTROL		3rd PARTY		
APPLICATIONS SUPPORT	WEB MANAGER		XML	RSS	CONFIGURATION STORE	CFG LOGGING	
SECURITY	SSH		SSL		PACKET FILTER	PAP	
	SHA-1	MD5	3DES	AES		RC4	CHAP
NETWORK	UDP	HTTP	CGI	DNS	RS232 MIB	MIB II	FTP
	IP	TCP	ICMP	PPP	SNMP	DISCOVERY	TFTP
DRIVERS	MANUFACTURING TESTS		WATCH DOG		EEPROM		
	ETHERNET		SERIAL LINES		FLASH DRIVER	PIO (CP) DRIVER	
KERNEL	THREADING MODULE		BUFFER POOLS		SEMAPHORES		TIMERS
	PREEMPTIVE SCHEDULER		MEMORY (HEAP) MODULE		MUTUAL EXCLUSIONS		



## Ordering Information

Part Number	Description
MPP300200G-01	– MatchPort b/g Pro 802.11 Wireless Device Server, bulk – Minimum order quantity 50 units
MPP300200SG-01	– MatchPort b/g Pro 802.11 Wireless Device Server, sample – 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 <i>no module</i> Demonstration Kit, sample must be purchased
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)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Lantronix:](#)

[MPP3002000G-01](#) [MPP300200SG-01](#)