



## Embedded Device Server - MatchPort AR

- ▶ Application-ready, secure SSL/SSH networking module for high-volume applications
- ▶ Low cost, high-performance, 32-bit, 166Mhz 159 MIPS platform
- ▶ Built-in CGI and AJAX web server
- ▶ Pin compatible family includes 802.11 b/g wireless
- ▶ Ethernet MAC/PHY; add only RJ45 jack and magnetics to device's PCB
- ▶ SNMP V2c ready, MIB II support
- ▶ "Cisco-like" CLI, XML, serial and Telnet management capability

## Secure, Powerful, Application-Ready Networking with Advanced Web Server Capability

MatchPort™ Architect (AR) delivers SSL/SSH ready Ethernet networking capability to virtually any product with a serial interface on the host microcontroller. This flexible product provides affordable connectivity in the same compact, single-socket form factor as its wireless cousin, the MatchPort b/g. With MatchPort, OEMs can design wired Ethernet or WiFi networking into their products using a single PCB design.

MatchPort AR is a powerful networking co-processor module. Without burdening the device's main processor, it sends and receives serial data in packets over Ethernet. It incorporates state-of-the-art CGI and AJAX web server capabilities for remote data acquisition, device monitoring and configuration, and virtually no programming is required.

With a simple connection between the device microcontroller's serial port and one of MatchPort AR's two serial ports, it enables OEMs to create feature-rich applications for medical, security, retail/POS, industrial/building automation, metering, gaming and more.

### Pin-Compatible Wired Module Family

The MatchPort family lets you "future proof" your designs with a choice of flexible, media-independent 802.11 b/g or Ethernet networking modules. It takes the complexity out of RF design and embedded Ethernet networking so you can focus on designing your products. And it minimizes engineering risk, reduces cost and shortens development time.

### Bullet-Proof Security

The MatchPort award-winning operating system, Evolution OS™, offers a variety of robust data encryption and authentication options, including secure SSH v2.0, SSL v3.0 protocol

support with a choice of AES or 3DES encryption coupled with SHA-1 or MD5 authentication. *Evolution OS supports both public and private key infrastructures and provides the flexibility to use any key size up to 1024-bit.*

Evolution OS is designed to survive hostile Internet attacks such as denial of service (DoS) and port mapping. It also ensures that MatchPort cannot be used to bring down other devices on the network.

### Advanced Web Server Technologies

MatchPort's advanced, integrated CGI-capable web server transforms a standalone device into a fully functioning networked product that can be configured and managed remotely via a standard web browser. Users can remotely monitor and collect information from the device in real-time using the CGI (Common Gateway Interface)-capable server and send the information to dynamic web pages. MatchPort AR incorporates AJAX technology to ensure smooth browsing of dynamic content served from the edge device. Additionally, it supports open standards such as "Cisco-like" CLI, XML and serial and Telnet management options.

XML and RSS support provide a useful way to transfer information for machine-to-machine communication. An RSS aggregator can collect readings from various machines and push them to a supervisory program for monitoring and control. In a security system, XML data sent to an application can provide enough information to decide whether to call the police or fire department. Similarly, facilities managers could use an aggregator to collect RSS feeds from remote locations to check for open or closed doors, for example.

### Processing Power and Flexibility

MatchPort AR effortlessly handles the most computationally demanding applications with a 32-bit, 159 MIPS (Dhrystone 2.1) 166 MHz processor. With 8 MB SDRAM and 4 MB Flash, it provides enough memory capacity for OEM customization, loading web pages and data 'store-and-forward' applications. Seven control pins (CP/GPIO) are available to enable customizable, pre-programmed responses such as email notifications, SNMP traps or I/O control of peripherals.

LANTRONIX®  
EVOLUTION OS™





## Features and Specifications

### Serial Interface

CMOS 3.3V signals. Speed software selectable and customizable from 300bps to 230,400bps  
 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 Protocols

Protocols Supported: ARP,UDP,TCP,Telnet, ICMP,SNMP, DHCP,BOOTP, Auto IP,HTTP,SMTP,TFTP, HTTPS, SSH, SSI, FTP, PPP

### Network Interface

Ethernet 10/100 base TX with Auto Negotiation, and HP Auto MDIX

### Management (of MatchPort AR)

Internal WebManager (SSL Option for secure login)  
 Cisco-like CLI (over Serial Ports, Telnet or SSH)  
 XML Configuration Records via CLI or FTP  
 DeviceInstaller software  
 Firmware: Upgradeable via TFTP, FTP, Web, Serial Port  
 Flash wear leveling and erase cycle statistics

### Security

SSL Client & Server, Selectable 128/256/512/1024 Bit Certificates  
 SSH Client, 8 Server Selectable 128/256/512/1024 Bit Public/Private Key support  
 ENCRYPTION: AES, 3DES and RC4 Encryption for SSH & SSL  
 Lantronix end-to-end AES 128 Bit Encryption  
 AUTHENTICATION: SHA-1, MD5, Base-64  
 User Access Lists  
 Security hardened OS and Protocol Stacks

### Internal Web Server

CGI with AJAX support  
 Storage capacity: 1 MB with factory default firmware loaded

### Architecture

Lantronix DSTni-FX 32-bit processor, 166Mhz (159 MIPS - Dhrystone 2.1),  
 7 GPIO  
 Memory: 8 MB SDRAM, 4 MB Flash (Factory default).  
 Contact Lantronix for larger memory configuration.

### Power Consumption

Average Power Consumption:0.67W (210mA) at 3.3V.

### Environmental

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

### Packaging

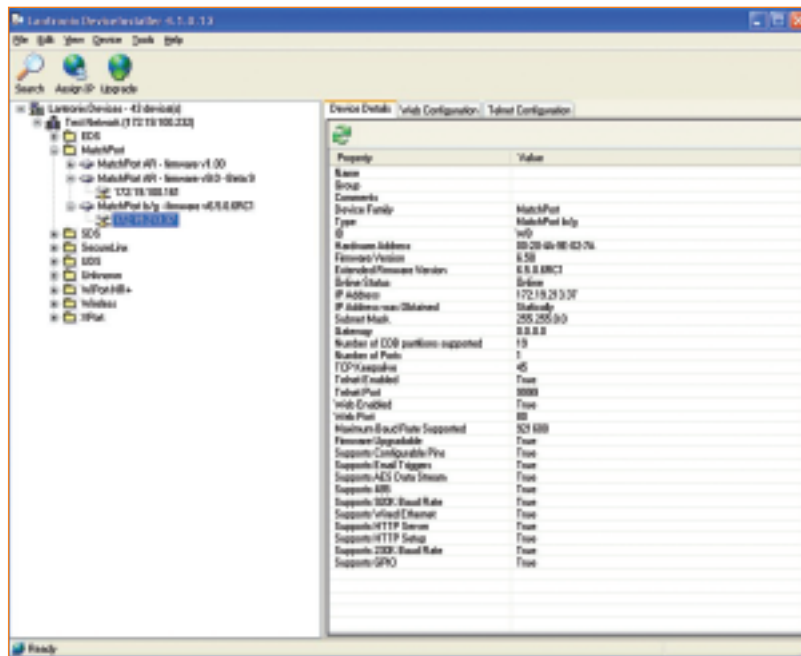
Dimensions: 44.4 x 44.4 x 10.4 mm (1.75 x 1.75 x .41 in)  
 Weight: 29g  
 Material: Plastic shell, 260°C tolerant

### Warranty

2-year limited warranty

### 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 AR Demonstration Kit

The demonstration kit contains the key accessories to evaluate a MatchPort AR product:

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

**Note: MatchPort sample must be purchased separately.**

## Ordering Information

### Part Number

MPR3002000-01

MPR300200S-01

MP10010NMK-01

MPDK1000-01

### Description

- MatchPort AR AES bulk pack
- Minimum order quantity 50 units
- MatchPort AR sample case
- One MatchPort AR enclosed
- Secure Com Port Redirector™
- Order quantities of up to 10
- MatchPort AR Demonstration Kit
- MatchPort Development Kit

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15353 Barranca Parkway | Irvine | CA 92618 | USA | Tel: 949.453.3990 | Fax: 949.453.3995 | [www.lantronix.com](http://www.lantronix.com)

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