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LANTRONIX®

DeviceLinx™



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

LANTRONIX® EVOLUTION OS™

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.

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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.

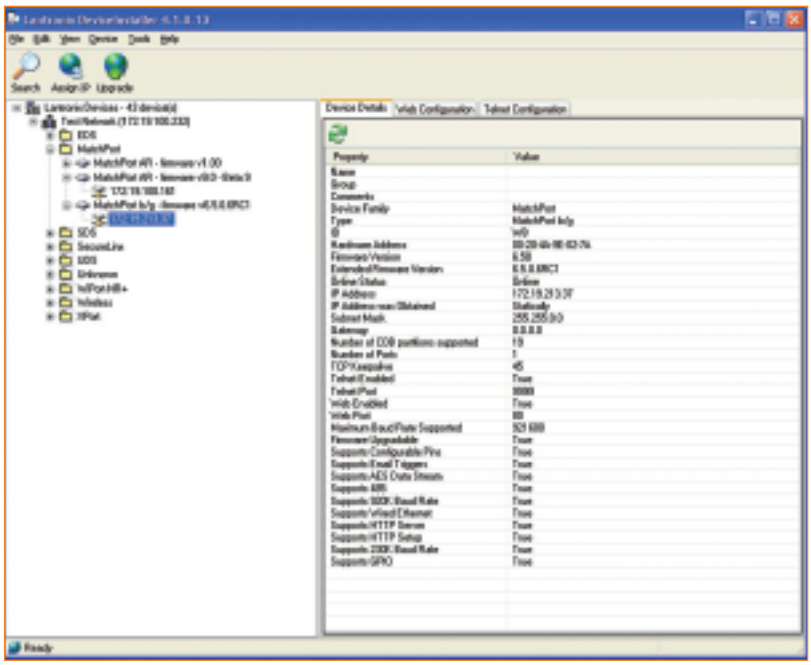
Power Consumption
Average Power Consumption:0.67W (210mA) at 3.3V.

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	Description
MPR3002000-01	– MatchPort AR AES bulk pack – Minimum order quantity 50 units
MPR300200S-01	– MatchPort AR sample case – One MatchPort AR enclosed – Secure Com Port Redirector™ – Order quantities of up to 10
MP10010NMK-01	– MatchPort AR Demonstration Kit
MPDK1000-01	– MatchPort Development Kit

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