



Above picture represents new enclosure model.  
Current enclosure may be different than displayed.



## DESCRIPTION

The AspectFT-Matrix™ Area Controller is a base hardware platform designed to provide flexible area control applications to a building automation system. Through the use of AAM's Facilitating Technology (FT), AspectFT®, the AspectFT-Matrix Area Controller has the ability to provide traditional control features such as alarming, trending, scheduling, and extensive custom programming. In addition, it integrates with popular internet programs to allow end-users more freedom. With AspectFT, your PC, tablet, or smart device can integrate with your building easily and efficiently.

Also included are next generation features such as the ability to push and pull data with popular networked databases, and to serve graphical user interface pages - thus eliminating the need for a dedicated operator workstation or expensive add-on software to view a system.

## FEATURES & OVERVIEW

### HARDWARE SPECIFICATIONS

ARM920T Processor  
NEMA Rated Enclosure (Lockable)  
Optional Integrated 56k Modem

### COMMUNICATIONS

10/100 MB Ethernet Port  
RJ-45 Connection  
1 or 2 EIA-485 Ports (model dependent)  
with pluggable terminal blocks  
128MB RAM

### OPERATING SYSTEM

Embedded Linux OS  
Java™ Virtual Machine (JVM)  
AspectFT Runtime Engine



**AMERICAN  
AUTO-MATRIX®**

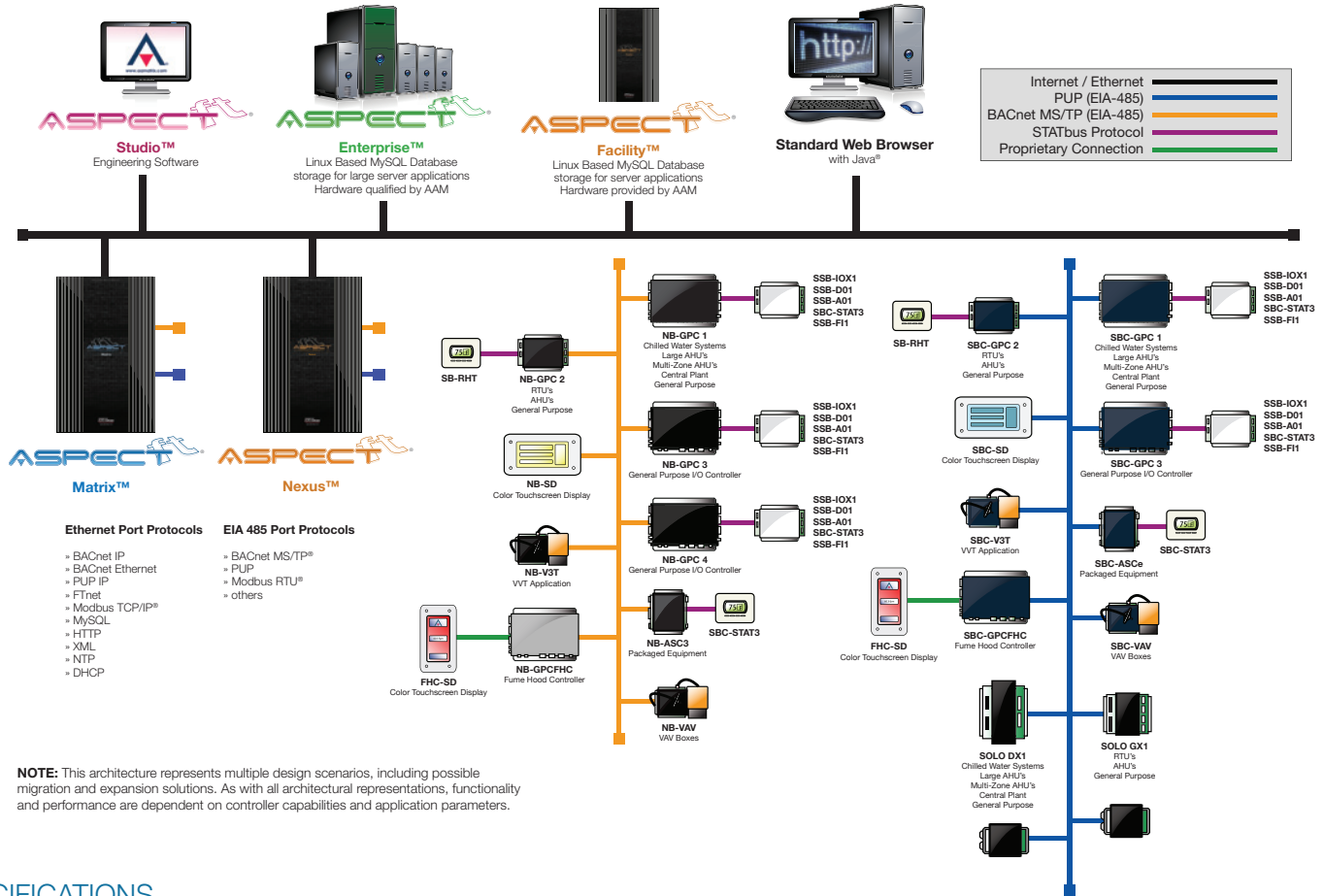
www.aamatrix.com

- ▶ **Multiple Communication Protocols**  
Interacts seamlessly with AAM PUP and BACnet® protocol products, as well as other third-party protocols like MODBUS®
- ▶ **AspectFT Control Engine**  
Alarm, trend, energy and schedule management, and custom programming capabilities
- ▶ **Java-based Graphical User Interface**  
Accessible from most standard web browsers and does not require a proprietary software plug-in
- ▶ **Receive Important Building Information**  
AspectFT utilizes common web technologies to allow the end-user more freedom. Through common e-mail and internet protocols, almost any smart device or computer can receive critical data without the need for special add-on software from AAM.  
(For RSS, Aspect Viewer can be downloaded from AAM Toolbox)
- ▶ **Schedule & Calendar Implementation**  
Interact with iCalendar format tools such as Microsoft Outlook® 2007, iCal®, Google Calendar™ and other popular programs  
(maximum of 10 schedules recommended)  
  
(for more compatibility, please see the AspectFT-Nexus and AspectFT-Facility datasheets)
- ▶ **Remote Commissioning Access**  
AAM products can be programmed and flash upgraded over IP through this device
- ▶ **Comprehensive User/Group Based Security**  
Restrict or allow access to myriad of points based on individual or group credentials
- ▶ **SQLite Support**  
USB Based onboard database storage  
(requires license and customer supplied USB drive)

Model	RS-485 Ports	Device Limit	Port Limit	
MATRIX-SPO*	1	32	32	<b>* -M : integrated 56k modem variant available for dial in connectivity for:</b> ▶ AAM Engineering Tool access to network controllers ▶ Project webpage viewing ▶ Project Deployment
MATRIX-SPX*	1	64	64	
MATRIX-DPO*	2	64	32	
MATRIX-DPX*	2	128	64	

**NOTE:** Depending on project size and resource load, modem access may provide less than desirable response times

# SYSTEM ARCHITECTURE



## SPECIFICATIONS

### CPU

**Processor:** ARM9 with embedded Linux OS  
**Memory:** 128 MB SDRAM, 128 MB flash

### Connections

**EIA-485:**  
**Connection Type:** 3 position  
**Termination Count:** model dependent - up to 2 connections  
**Baud Rates:** 9.6 / 38.4 / 57.6 / 76.8 / 115.2 kbps  
**Termination:** 249 Ohm - switch selectable  
**Biassing:** 510 Ohm - switch selectable  
**LED:** indication for TXD, RXD, Byte-Error, Parity-Error  
**Protocol:** license enforced, driver selectable  
**Network Load:** license enforced, up to 64 devices per port

### Ethernet:

**Connection Type:** 1 RJ-45 female - 10/100 MB auto-sensing

### Setup & Configuration

**Software:** AspectFT-Studio w/ USB copy protection key & license file  
**Browser:** Internet Explorer 7 or later, Mozilla Firefox 3.0 or later, Safari 3.2 or later, Google Chrome 1.0 or later

### Dimensions

**(see front disclaimer regarding new enclosures)**  
**(old/new):** 14" x 11" x 3.5" / 12.90" x 8.34" x 4"

### Power Requirements

**Connection / Source:** 2 position / 11-29 VAC/VDC - 50/60 Hz - 2.7 A max

### Operating Conditions

**Temperature:** 32° F to 122° F (0° C to 50° C)  
**Humidity:** 0 to 80% RH non-condensing  
**Altitude:** -2000 to +10,000 ft (-650 to 3500 m)

### Agency Approvals

**CE Approved**  
**FCC, Class A Computing Device: Part 15**  
**UL Listed 916**  
 Management Equipment, Energy (PAZX)  
**UL Listed 873**  
 Component Temperature-Indicating & Regulating Equipment (XAPX2)  
**UL Listed**  
 Component Temperature-Indicating & Regulation Equipment for Canada (XAPX8)

### Upgrade Options

**MATRIX-UPGR-SP64:** Matrix SPO License Upgrade - upgrades SPO hardware model to 64 devices max (32 per port)  
**MATRIX-UPGR-DP128:** Matrix DPO License Upgrade - upgrades DPO hardware model to 128 devices max (64 per port)  
**MATRIX-FTNET-EXP:** License expansion to support communications to an additional 5 Aspect FTNet devices. Limit one expansion per FTNet device  
**MATRIX-LCL-STW:** SQLite Factory licensed local storage option. Requires dedicated USB flash drive (not included)



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