The Modicon M580 ePAC (Programmable Automation Controllers) feature openness, flexibility, robustness and sustainability. The M580 are designed with an Ethernet backbone to optimize connectivity and communications. They support X80 common I/O modules which can be easily integrated into its architecture. The powerful processors offer high levels of computation for complex networked communication, display and control applications.

**Modicon M580 ePAC**

**Control at the heart of PlantStruXure**

Modicon M580 combines Unity PAC’s existing features with innovative technologies to deliver Schneider Electric’s complete Ethernet based PAC.

**Innovative**

**ePAC concept**

- Top-to-bottom standard Ethernet network
- Open architecture with direct Ethernet connection on backplane

**Cyber Security ready**

- Cyber Security ready with Achilles Level 2 certification and advanced built-in cyber security features
- Embedded security features as defined by standard IEC 62443
- M580 hardware platform:
  - Unused services can be disabled
  - Remote access to PLC can be controlled
- M580 programming software with integrity check of Unity Pro executable files

**Open and secure solution based on standards**
Innovative (continued)

**Advanced technologies**

- Based on high-speed dual-core processor (ARM® type)
- High-speed communication, application and execution
- Innovative mechanical and electronic design for high EMC immunity and ruggedness that is superior to the required IEC standards
- Supports extended temperature range from $-25\degree C$ to $+70\degree C$

**High precision**

- Native deterministic Ethernet network
- Ability to deliver 1 ms I/O resolution through native time-stamping at source with specific time-stamping modules via OPC server
- Applications include functions such as:
  - sequence of events recording (SER)
  - utility substation automation
  - protective relay trip history
  - alarm/event logs
  - time-stamping of power monitoring data logs
Modicon M580 automation platform
Simple and flexible

**Flexibility in design**

- Flexible topology allows simple integration of devices
- Ability to mix remote equipment, distributed equipment and other devices on the same Ethernet field network with complete software integration
- Transparent access to data through Ethernet backbone
- Simple HMI integration via third port on remote I/O head
- Interface to other popular fieldbus and device networks including AS-Interface, Modbus, Profinet, and HART

**Optimized architecture**

- Simple daisy chain loop

Design your architecture without constraints

Extend your process or application easily with flexible Modicon M580 topology

No switches required for simple main loop
Simple and flexible (continued)

Easy diagnostics

- Ethernet delivers information everywhere
- Simple remote and mobile diagnostics (smartphone, tablet, etc.)
- Embedded web server for web access
- Manage SCADA screens on HMI and access HMI screens
- Built-in Vijeo Citect objects for advanced integrated diagnostics

(1) This schematic diagram will operate with the new BMENOC03 modules (available Q2 2014 to replace the existing BMXNOC0402) with complete Ethernet transparency via connection to the Ethernet backplane.
Modicon M580 automation platform
Simple and flexible, sustainable

Simple and flexible (continued)
Change configuration on the fly without stopping the process

- Add or remove discrete and analog I/O modules on RIO drop (not time-stamped)
- Add a new RIO drop

- Modify channel configuration parameters
- Automatic reconfiguration of modules on hotswap
- Online application changes during process runtime including adding new variables shared with HMI (Human/Machine Interfaces)

Sustainable
Protect investments

- Standardize on the Modicon family with common X80 modules and reduce training and maintenance costs

Modicon family with common X80 modules

Installed base migration: keep your existing I/O and wiring
Modicon M580 automation platform
Winning associations in PlantStruXure architecture

**Winning associations in PlantStruXure architecture**

Modicon M580 Ethernet PACs have strong associations with:

**Partners**
- Able to develop X80 modules on Ethernet backplane with Ethernet tool kit backplane
- For specific applications or communication modules: weighing, Wi-Fi, etc.

**Vijeo Citect SCADA**
- To manage time-stamped events through OPC server in a system approach
- To display Unity Pro diagnostic buffers
- To integrate objects quickly and easily to provide advanced diagnostic information

**Altivar variable speed drives**
- Simple integration of Altivar variable speed drive range on Ethernet network through FDT/DTM
- Dual-port connection is possible for high availability

**HMI Magelis™ range**
- Connection through X80 Wi-Fi, Web server access, multiple screens on Ethernet backbone, diagnostic buffers supported by Vijeo Designer, export of Unity Pro data to Vijeo Designer

**Services on installed base**
- Schneider Electric provides smooth migration paths to migrate existing wired legacy I/O to M580. Contact our Customer Care Center for more details.