

## ASIC/3 Features

- BACnet B-BC certified
- 32-bit ARM9 processor
- 100Mb Ethernet and optional wireless
- BACnet/IP with routing capabilities
- System Bus for ASI or BACnet MSTP communication
- 2 Local Buses for BACnet MS/TP, ASI, and/or Modbus Master RTU
- Compatible with ASI IntelliFRONT & Niagara
- USB Device Service Port
- Isolated switching power supply for AC or DC operation
- 10 Year hardware clock
- Two-part screw terminal input, output and power connections
- 16 Universal Inputs, expandable to 32 with USB-IO Expanders
- 16 Binary Relay Outputs, expandable to 32 with USB-IO Expanders
- 8 Analog Outputs, expandable

The ASIC/3 Programmable System Controller represents a new generation of communicating distributed direct digital control for unitary equipment and building systems. The ASIC/3 controller is designed to be hardware compatible with the ASIC/2 Programmable controllers and offers expanded communication capability including USB, BACnet, Ethernet and Wireless.

The BTL B-BC certified ASIC/3 provides energy management and control of a wide range of building systems including air handlers, chillers, cooling towers, boilers, pumps, lighting, etc. Applications range from autonomous control of retail stores, branch banks, and telephone company buildings to networked control of very large buildings. It has an isolated switching power supply for AC or DC operation and flash memory for program and data storage.

The controller is easily configured using ASI Visual Expert configuration software that links ready-made objects including scheduling, logic, PID control, alarming, optimum start, trending, run-time accumulation, and electrical demand management. The ASIC/3 has an on-board battery-backed calendar clock and allows special events, holidays, and schedules to be defined in advance. Configuration data is stored in non-volatile memory that is retained through power loss.

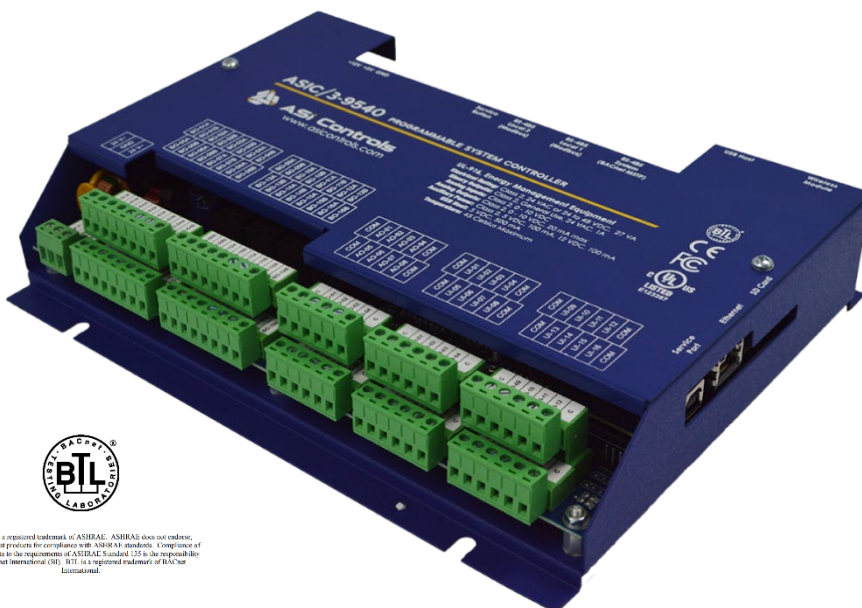
The ASIC/3 controller has three separate RS-485 system and local buses. The system bus is used to network multiple ASIC/3 and ASIC/2 controllers, or optionally the system bus can support BACnet MS/TP. Two local buses can poll ASIC/1 terminal controllers and make control decisions based on the data received. No central system is needed to supervise the controller. Alternately either local bus can support Modbus Master RTU. Red and green LEDs indicate the controller's receive and transmit communications.

The ASIC/3 can operate as part of a larger communicating control network. The ASIC/3 offers Ethernet communication and alarm notification via wired 10/100 Mbps connection or optional WiFi module. The ASIC/3 also features a full-speed 12 Mbps USB Device connection for service in the field. The RS-485 connections support baud rates up to 57,600 bps, and standard BACnet MS/TP baud rates up to 76,800 bps are also supported.

Under selected event conditions the controller can send notify messages via Ethernet to a computer running ASI Weblink software. Temperatures,

setpoints, and other controller data may be easily reported to ASI Weblink or other OPC client software.

The sixteen 24 Vac relay outputs are ideal for driving contactors and starters. The eight analog outputs are used for modulating actuators, electronic-pneumatic transducers, variable speed drives and other analog signal devices. The 16 universal inputs may be used for counting pulses, for reading thermistors and contact closures directly, and for reading 4 to 20 mA and 0 to 10 Vdc input signals.



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## Features

Analog Inputs	Binary Inputs
Maintained Binary Outputs	Pulsed Outputs
Analog Outputs	
Scheduled Start/Stop	Afterhour Override
Calendar Events	Special Day Schedules
Multiple Control States	Multiple PID Loop
Counters and Timers	Optional Demand Limit
Conditional Logic	
Notify Alarm Configuration	Value Trending
Ethernet Communications	Optional Wireless
Remote Point Broadcast	Message Pass-thru
Local Bus Polling	Local Bus Broadcast
Hardware Clock	Brownout Protection
Optional Modbus Master RTU	
Optional BACnet MS/TP	

## Specifications

### Power Supply (Isolated)

Supply Voltage:	24 Vac +/- 15%, 50/60 Hz or +/- 24 to 48 Vdc
Power Consumption:	27 VA (plus loads)
Protection:	PS8, Polyswitch, MOV
Connection	2-part screw terminal
Indication	Red LED

### Binary Outputs 16 (Expandable to 32)

Type:	Form "A" Relay SPST N.O. Dry Contacts
Voltage Rating:	Class 2, 24 Vac or 24 Vdc
Current Rating:	1 A General Use
Connection	2-part screw terminal
Indication	Red LED, Binary Outputs

### Analog Outputs 8 (Expandable to 16)

Type:	Analog 0-10Vdc
Resolution:	0.4% full scale
Current Rating:	20 mA
Protection:	TVS, 10 V, 600W peak
Connection	2-part screw terminal

### Aux Power

Aux Power:	5 V, 100 mA max 12V, 100 mA max
Connection	fixed screw terminal

### Inputs 16 (Expandable to 32)

Type:	Universal Analog/Binary
Range:	0 to 10 Vdc
Accuracy:	0.1% full scale
Connection	2-part screw terminal

### UL Listing

UL-916 Open Energy Management  
Equipment File E123287 (PAXZ) Rated as a Class 2  
Device Canada: C22.2 No. 205-M1983

### CE

Meets CE requirements. EN 61326 Class A,  
EN 61000-3-2 Class A and EN 61000-3-3  
Complies with FCC Part 15 (CISPR 22) Class A

### RS-485 Communications (3)

Format:	RS-485 with optional 120 ohm Termination
Baud Rate:	Up to 57,600 bps
Protection:	500 mW-s TVS with 100 mA Polyswitch
Maximum Length:	4000 ft (1.2 km) RS-485
Connection:	3 Position, screw terminals
Indication:	Red LED Receive, Green LED Transmit

### System Bus Communication

Address Range:	1 to 65535 except for group and global addresses
Maximum Size:	Up to 255 devices with repeaters
Alternate Protocol:	BACnet MS/TP 76,800 bps

### Local Bus Communication

ASI Address Range:	1 to 65535 except for group and global addresses
Maximum Size:	Up to 64 devices with repeaters
Alternate Protocol:	Modbus Master RTU

### Ethernet Networking

Communication:	UDP/IP or TCP/IP; auto-sense 10 Mbit/s or 100 Mbit/s Note: Requires 100 MHz Ferrite Core on Ethernet cable.
Optional Wireless:	XBee Module Ready

### Other

Microprocessor:	32-bit ARM9 at 210MHz
Memory:	8MB SDRAM, 4MB FLASH
Data Storage:	SD Memory Card – Trend/Web page
Hardware Clock:	Real Time Clock with 10 year Battery Backup
Service Port:	USB Device (with ASI/USB driver.)
USB Host Port:	5 Vdc 500 mA max
Firmware Upgrade:	USB Host Memory Stick with Service Switch
Overall Dimensions with base:	

7.8" x 10.3" x 1.90" (WxLxH)  
198 mm x 262 mm x 48 mm  
with mounting holes on center  
7.2" x 7.2" (183 mm x 183 mm )

Weight: 3.4 lb (1.6 kg )

### Environmental

Operating:	-20 to 45 °C (-4 to 113 °F) 10 to 95% RH non-condensing
Storage:	-37 to 80 °C (-35 to +180 °F) 5 to 95% RH non-condensing

How to Order:	Order Number
Programmable Controller with enclosure	ASIC/3-9540

Accessories:	Order Number
Four Input Multiplex Kit	QUADMUX
USB-IO Expander	ASIC/3-USB
USB WiFi Module	IntelliFi

Software & Documentation:	Order Number
ASI Expert Configuration Software	ASI Expert
ASIC/3 Object Definitions	ASIC3 OBJ DEF
ASIC/3 Installation Guide	ASIC3 Manual

