ASi Controls

ASIC/3-9500 Features

- 32-bit ARM9 processor

- 100Mb Ethernet port; optional WiFi

- BACnet MS/TP or ASI on System Bus

- 2 Local Buses support ASI or Modbus Master RTU

- Works with ASI WebLink & ASI Data Server products

- USB Device Service Port

- Local Bus Polling

- Dial-in, Dial-out (Future)

- Alarm & Event Notification

- SD Card expansion slot

The ASIC/3-9500 Multi-port System Interface provides communication access to a network of ASI controllers from a system host computer or modem. The device runs ASIC/2 or ASIC/3 control sequences but has no physical IO.

The ASIC/3-9500 provides access via USB Device Service port or 100 MB Ethernet, and three RS-485, 1/2 duplex balanced line communication buses. Red and green LEDs indicate receive and transmit status of the System and Local RS-485 communication busses. ASI protocol communication is supported up to 57,600 baud. RS-485 inputs and outputs are protected by 100 mA polyswitches, 24 VAC power input is protected by a 1.35A polyswitch.

The ASIC/3-9500 supports Ethernet TCP/IP and UDP communications via a wired or wireless connection. A Wi-Fi card can be installed in the XBee slot of the ASIC/3-9500, which supports WPA2 and other security protocols. Future releases will support dial-in and dial-out using a dedicated USB modem.

Notify alarm messages can be sent to ASI WebLink for annunciation. Note the device does not currently support forwarding of Notify messages from other ASIC/2 or ASIC/3 controllers on the system bus.

The ASIC/3-9500 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.

The ASIC/3-9500 supports polling on the local buses and allows pass-through communication from the Ethernet or USB ports. Alternately either local bus can support Modbus Master RTU. A real time hardware clock enables network time broadcast and synchronizing of time on networks of ASIC/3, ASIC/2 or ASIC/1 controllers.

The ASIC/3-9500 can act as an optional baud rate buffer to allow linking of networks communicating at differing baud rates. A typical application includes a modem link at 9600 baud connected directly to a control system at 19,200 baud. Another typical use case is adding new controllers communicating at up to 19,200 baud to a legacy ASIC/1 controller network running at 1,200 baud.

ASIC/3-9500 functional configuration is held in non-volatile Flash memory that retains program data during power interruption. Configuration of values like System Baud Rate and System Bus Addresses is done using Windows based ASI Visual Expert software.

Specifications

Power Supply (non-Isolated)

Supply Voltage:	24 Vac +/- 15%, 50/60 Hz or +/- 24 to 48 Vdc
Power Consumption:	27 VA (plus loads)
Protection:	1.35 A Polyswitch, MOV
Connection	2-part screw terminal
Indication	Yellow LED

RS-485 Communications (3)

Format:	RS-485 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

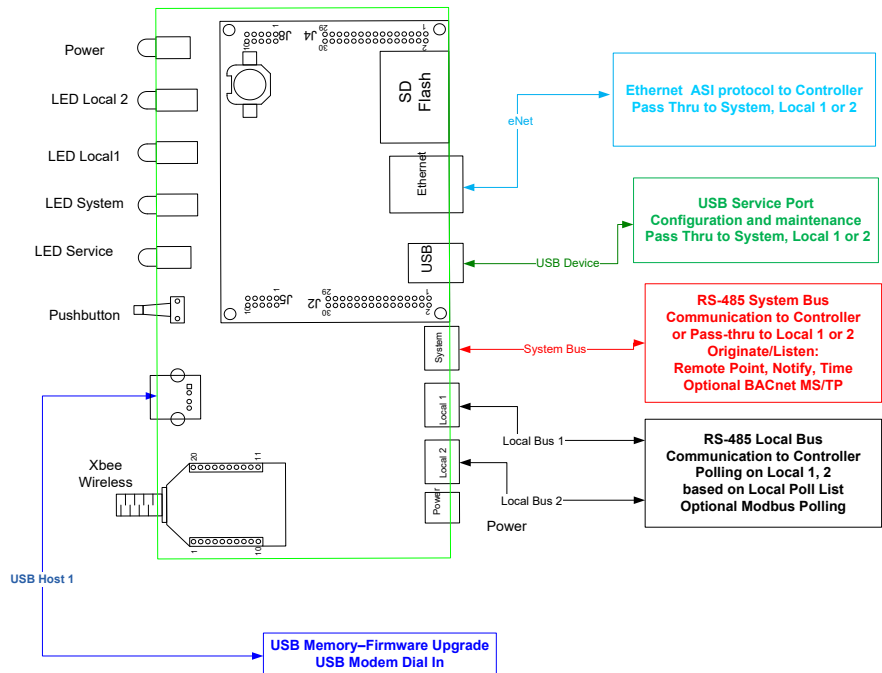|	
Address Range:	1 to 65535 except for group and global addresses
Maximum Size:	Up to 255 devices with repeaters
Alternate Protocol:	BACnet MS/TP 76,800 bps

Local Bus Communication

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

Ethernet Networking

Communication: auto-sense	UDP/IP or TCP/IP 10 Mbit/s or 100 Mbit/s Ferrite Core for FCC/CE
Optional Wireless:	XBee WiFi Module

Physical

Dimensions:	Length 6.00" (152 mm) Width 8.00" (2.03 mm) Height 2.0" (51 mm)
Weight:	1.0 lb (0.45 kg)

Power

LED Local 2

LED Local1

LED System

LED Service

Pushbutton

Xbee Wireless

USB Host 1

Ethernet ASI protocol to Controller Pass Thru to System, Local 1 or 2

USB Service Port Configuration and maintenance Pass Thru to System, Local 1 or 2

RS-485 System Bus Communication to Controller or Pass-thru to Local 1 or 2 Originate/Listen: Remote Point, Notify, Time Optional BACnet MS/TP

RS-485 Local Bus Communication to Controller Polling on Local 1, 2 based on Local Poll List Optional Modbus Polling

USB Memory–Firmware Upgrade USB Modem Dial In

Other

Microprocessor:	32-bit ARM9 at 384MHz
Memory:	8MB SDRAM, 4MB FLASH
Data Storage:	SD Memory Card – future
Hardware Clock:	Real Time Clock with 10 year Battery Backup
Service Port:	USB Device (with ASI/USB driver.)
Firmware Upgrade:	USB Host Memory Stick with Service Switch or ASI Expert

Environmental

Operating:	-20 to 45 $^{\circ}$C (-4 to 113 $^{\circ}$F) 10 to 95% RH non-condensing
Storage:	-37 to 80 $^{\circ}$C (-35 to +180 $^{\circ}$F) 5 to 95% RH non-condensing

How to Order:	Order Number
ASIC/3-9500	ASIC/3-9500

Software & Documentation:	Order Number
ASI Expert Configuration Software	ASI Expert
ASIC/3-9500 Users' Manual	9500 Manual

Accessories:	Order Number
ASI Compatible Modem	TELMODEM
ASI Compatible WiFi Module	XBWiFi