CONTEMPORARY CONTROLS®

BASrouterSX

BACnet Multi-Network Routing with SSL and Wireshark® Capture with Optional GSA Compliance

The BASrouterSX is a high-performance BACnet router that provides stand-alone routing between BACnet networks such as BACnet/IP, BACnet Ethernet (ISO 8802-3), and BACnet MS/TP. Besides a high-speed processor, it has advanced features such as MS/TP Backbone, Backward Routing, Allowlist option for enhanced security, MS/TP slave proxy support (allowing auto-discovery of MS/TP slaves) and MS/TP frame capture and storage for use with Wireshark®. As a BACnet/IP Broadcast Management Device (BBMD), up to 50 BDT and 147 Foreign Device Registration (FDR) entries can be supported. The BASrouterSX has two physical communication ports—a 10/100 Mbps BACnet/IP Ethernet port and an optically-isolated EIA-485 port for MS/TP. Router configuration is accomplished via web pages using HTTPS (HTTP over SSL). The BASrouterSX-GSA is a GSA-compliant model which has been tested and approved for use in U.S. government buildings.

Versatile Routing Between...

- BACnet/IP and BACnet MS/TP
- BACnet Ethernet and BACnet MS/TP
- BACnet/IP and BACnet Ethernet
- BACnet/IP and BACnet Ethernet and BACnet MS/TP
- Two BACnet/IP networks (between two UDP ports)

IP Network Support

- Web server for commissioning and trouble-shooting
- MS/TP capture using Wireshark
- 50 BBMD entries, 147 FDR entries

Flexible Communications

- 10/100 Mbps Ethernet with auto-negotiation and Auto-MDIX
- MS/TP slave auto-discovery and proxy support
- MS/TP Backbone
- Backward Routing
- Allowlist
- Optically-isolated MS/TP port
- MS/TP baud rates from 9.6–115.2 kbps

Convenient Installation

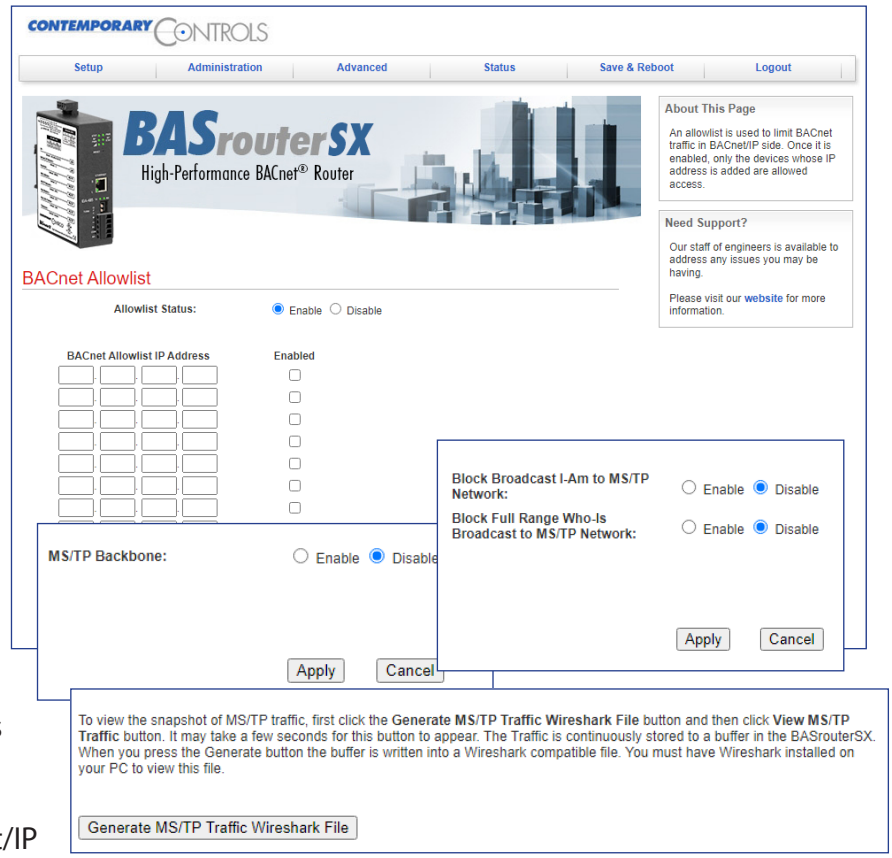
- 24 VAC/VDC (± 10%), 47–63 Hz input voltage
- DIN rail mount

BACnet/IP Network Security

Although the BACnet MS/TP network is secure by nature, the BACnet/IP network could contain security weaknesses. The BASrouterSX can optimize BACnet/IP network security by utilizing an Allowlist. By configuring the Allowlist, only specific BACnet/IP devices can communicate to the BACnet internetwork. The BASrouterSX-GSA is a GSA-compliant model which has been tested and approved for use in U.S. government buildings.

MS/TP Backbone

MS/TP backbone allows BACnet communication to occur in some special cases, for example when two routers are connected via MS/TP. The BACnet/IP devices on either side of the routers in this case have no idea of the MS/TP link in between and this results in the messages being dropped because of smaller size of the Max APDU on the MS/TP side. Enabling this feature allows the BACnet/IP devices to work properly.



BACnet MS/TP capture using Wireshark

MS/TP Traffic capture is continuously stored to a buffer in the BASrouterSX. By clicking the Generate button, the buffer is written into a Wireshark compatible file. The file can then be viewed on a PC with the free Wireshark tool.

Broadcast I-Am

In normal operation, the router forwards broadcast I-Am messages received from the BACnet/IP side to the BACnet/MSTP side. For MS/TP devices with small memory, this may cause an issue if they receive a flood of I-Am messages. When this feature is enabled, the router does not forward the broadcast I-Am messages to the MS/TP side.

Ordering Information

Model	*RoHS*	*Description*
BASRTSX-B	✓	BACnet/IP to MS/TP to Ethernet Router with SSL
BASRTSX-B-GSA	✓	BACnet/IP to MS/TP to Ethernet Router for GSA

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