

SMX Transceivers

ONYXWorks® Network Medium Interfaces


Network Systems

General

The SMX Transceiver is an interface between the ONYXWorks™ Echelon® Gateway and the Network Input/Output Nodes (NIONs). The network SMX Transceiver daughter board is a component of every NION-232B, NION-NPB, NION-2C8M, NION-16C48M, 4WRMB, ROUTMB, and NCB routers. These transceivers provide the LonWorks™ network medium interface for NION network communication. There are two styles of SMX transceivers: FTXC for wire-based FT-10 topology, FOXC for fiber-optic-based FT-10 topology. The transceivers are easily mounted to the NION motherboard using a header strip and two standoffs.

Features

The FTXC and FOXC have the following common features:

- Compatible with ONYXWorks Network Input/Output Nodes (NION).
- Supports the high-speed proprietary LonWorks network with wire or multi-mode fiber media.
- Provides transparent network communication.
- ESD protection circuitry.
- Powered by the NION motherboard.
- LonWorks transceiver components for FT-10.

The following features are for the FOXC fiber-optic transceiver:

- Ability to communicate over long distances (8 dB attenuation per segment with FOXC).
- Supports 62.5/125-micron multimode fiber.
- Operating voltage: +5 volts DC.
- Uses ST®-type fiber-optic connectors.
- No spark or fire hazard.
- Immunity to electrical noise (EMI and HIRF), lightning, and ground-potential differences.

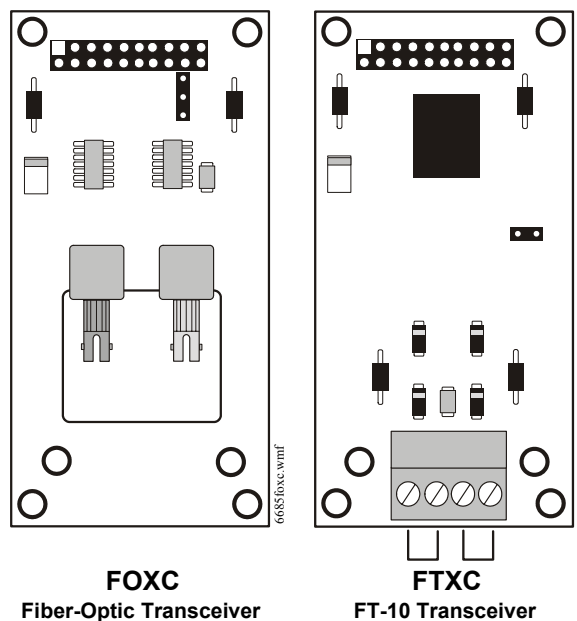
Specifications

ALL TRANSCEIVERS

- Power requirements: 5 VDC (powered by NION motherboard).
- Operating temperatures: 0°C to 49°C (32°F to 120°F).
- Contains ESD protection circuitry.
- Listed to UL 864.

FTXC TRANSCEIVER

- Communicates on LonWorks-based network operating at 78.5 Kbaud over twisted-pair wiring using FT-10 protocol.
- FT-10 allows 8,000 feet (2438.4 m) per segment in a point-to-point configuration, 6,000 feet (1828.8 m) per segment in a bus configuration, or 1,500 feet (457.2 m) per segment in a star configuration. Each segment can support 64 nodes, and with routers, the system can be expanded up to 200 nodes.



FOXC
Fiber-Optic Transceiver

FTXC
FT-10 Transceiver

- Riser, plenum, or non-plenum, wire according to local fire alarm wiring codes.
- 24 AWG to 16 AWG (0.205 to 1.31 mm²) wire. Refer to NION manuals for the latest specifications and recommended models of wire.

FOXC TRANSCEIVER

- Communicates at 78.5 Kbaud using FT-10 protocol.
- Uses ST-type fiber-optic connectors (one Transmit and one Receive).
- Supports 62.5/125-micron multimode fiber.
- Supports point-to-point topology only.
- FT-10 with fiber optic cabling allows 8 dB attenuation per segment in a point-to-point configuration only.

Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain agencies, or listing may be in process. Consult factory for latest listing status.

- **UL:** S5697; S6010; SS6011 (ALL)
- **ULC:** S5697
- **MEA:** 292-98-E (FTXC); 156-97-E (FTXC)
- **CSFM:** 7300-1525:102 (ALL)

Applications

The SMX Transceivers are compatible with:

- NION-232B
- NION-NPB
- NION-2C8M
- NION-16C48M
- 4WRMB
- ROUTMB
- NCB-EL, NCB-FL, and NCB-IM routers

Ordering Information

FTXC: Free-topology twisted-pair transceiver.

FOXC: Fiber-optic star-configuration transceiver.

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