
Media Convertor Network Card (FR-NC4)



Overview

The FR-NC4 card is a dual channel media convertor designed for use in Wheatstone Bridge audio networks. The card must be housed in a Wheatstone E-Satellite (E-SAT) card rack, which provides the electrical power for the circuits. The FR-NC4 card finger configuration is compatible with input slots only; up to four FR-NC4 cards can be fitted into an E-SAT rack (slots 3 - 6), for a total of eight media convertors.

Each media convertor has an RJ-45 connector and an SFP style optical transceiver socket. Various optical transceivers can be plugged into the SFP socket, depending on the optical characteristics desired. These transceivers are designed to be hot pluggable.

The RJ-45 connector is for CAT-5 “AT” style connections.

The FR-NC4 media convertors allow changing the relatively short-haul (<100 meters) CAT-5 based “AT” network connections in a Wheatstone Bridge system to long haul (as much as 100 kilometers, depending on the transceiver selected) fiber based connections, allowing for audio racks to be located many miles apart yet remain connected to the same system.

The SFP optical transceivers are sold separately, as price varies greatly with configuration. Wheatstone normally stocks the following types:

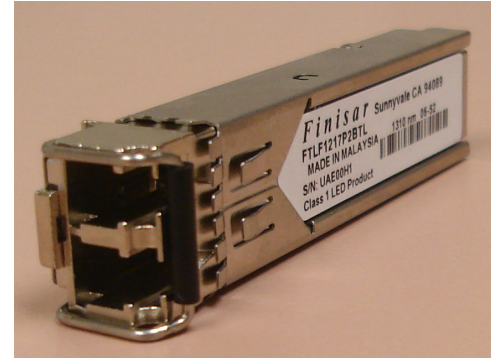
#290001, single-mode, LC connector, 1310nm Fiber, <40km

#290002, multi-mode, LC connector, 1310nm Fiber, <2km



Optical Transceiver

Optical Transceivers convert physical signals from electrical to optical (and vice-versa) in a network and couple the optical signals into (and out of) optical fiber. Small form factor pluggable (SFP) transceivers are designed to be hot-swappable in industry standard cages and connectors (for easy field repair), and offer high speed and physical compactness.



Optical Transceiver

Connector Type

The high-density *LC Duplex* connector has a tabbed locking mechanism similar to what you would find on a phone jack. This enables secure connectivity and easy removal.

Optical Fiber Cable

Optical fiber cables are manufactured with a variety of jacket materials, which directly affect cable cost, including Thermo-plastic Elastomer (TPE), Kynar® and Teflon® FEP. Physical properties of the jacket material determine a cable's resistance to abrasions, flame retardancy, etc. *Check local codes to be sure the cable you plan on using is compliant in your application, and that the optical characteristics match the intended transceiver.*

