Scientific Atlanta

Neon TX/RX - Telecom Network Adapters

Description

Telecom Networks are increasingly used for the transport of Digital TV signals to Regional sites, like Cable TV Headends and DTTV Transmitters. This so-called Primary distribution can be achieved in an efficient and simple way using E3 or DS3 Interfaces for SONET/SDH networks. With the Neon adapter, Scientific-Atlanta offers the solution to carry MPEG-2 Transport Streams over Telecom Networks. The Neon adapter is a module of the Galaxy Modular Rack System.

The Neon adapter is available in two versions, a transmitter (Tx) and a receiver (Rx). The Neon Tx accepts an ASI compliant Transport Stream and provides an E3 or DS3 output signal ready to interface with SONET/SDH network equipment. Neon Rx does exactly the opposite. The Network Adapters are fully compliant with the ITU-T telecommunication standards to guarantee interoperability with existing equipment. The Neon adapter can operate in unframed or framed mode with an internal or external clock reference.

The compact and power saving design allows up to 12 Neon adapters in only 3RU height. It can be managed from the ROSA™ Management System.

Features

- Network adapter for signal conversion between ASI and E3 or DS3
- Complies with ITU-T G.703
- Supports framing according to G.832 / G.751 (E3) or G.804 / G.752 (DS3)
- All signal format parameters individually selectable
- DVB-C compliant channel encoding
- Automatic input signal selection (Rx)
- ASI input with active loop-through (Tx)
- PCR Re-stamping and stuffing(Tx)
- Dual ASI output (Rx)
- External reference clock in- or output
- Hot-swappable
- Compact design allows up to 12 modules in 3RU Galaxy rack
- User-friendly front panel control
- Full remote control and diagnostics with the ROSA management system
- Software programmable relay contact

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Specifications

Electrical Specifications	
NEON Tx Specific	
ASI Input	
Connector (on paddle board)	BNC
Impedance	75 Ω
Interface type	ASI according to EN 50083-9
Packet format	188 or 204 byte packets, non-channel encoded
SPI Input	
Connector (on paddle board)	25-pins female Sub D
Format	Identical to ASI input
External Clock Input	
Connector (on paddle board)	BNC
Impedance	75 Ω
Format	E3 / DS-3 according to G.703
Output	
Connector (on paddle board)	BNC
Impedance	75 Ω
Interface type	E3 (34.368 Mbit/s) or DS3 (44.736 Mbit/s) according to G.703
Format	Unframed or framed Framing according to G.832 / G.751 (E3) or G.804 / G.752 (DS3)
Reference Clock Output	
Connector (on paddle board)	BNC
Impedance	75 Ω
Format	Byte clock (1 Vpp)
NEON Rx Specific	
Input	
Connector (on paddle board)	BNC
Impedance	75 Ω
Interface type	E3 (34.368 Mbit/s) or DS3 (44.736 Mbit/s) according to G.703
Format	Unframed or framed Framing according to G.832 / G.751 (E3) or G.804 / G.752 (DS3)
Input loop-through	
Type	Active
Connector (on paddle board)	BNC
Impedance	75 Ω
ASI Output	
Number of outputs	2
Connector (on paddle board)	BNC
Impedance	75 Ω
Interface type	ASI according to EN 50083-9
Packet format	188 or 204 byte packets with or without RS (follows input format)
SPI Output	
Connector (on paddle board)	25-pins female Sub D
Format	Identical to ASI outputs

Relay Contact	
Connector (on Galaxy Chassis)	2 x 25 pins female Sub D
Contacts	1 contact (3-pins) per card (COM, NO & NC)
Contact type	Relay
Alarms	Software configurable (with ROSA)

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Specifications - continued

Remote Control	
Connector (on Galaxy Chassis)	9-pins male Sub D (on rack)
Type	RS-485
Format	RCDS
Speed	Up to 19200 bit/s

Front Panel Functions
Status Information
Input loss
TS sync loss
Input format
Loss of frame signal (LOF)
Alarm indication signal (AIS)
Number of frames with errors
Corrected & uncorrected errors
Temperature

Environmental Specifications	
Temperature within specs	+50°F to +104°F (10°C to 40°C)
Operating temperature	+32°F to +104°F (0°C to 40°C)
Storage temperature	-4°F to +158°F (-20°C to 70°C)
Power supply (nominal)	-48 VDC
Power consumption (nominal)	7 W

Mechanical Specifications	
Height	3.94 in. / 100 mm
Width	1.18 in. / 30 mm
Depth	7.87 in. / 200 mm
Weight	Approx. 0.57 lbs / 0.26 kg
Module width	6 HP (1 slot in GALAXY Rack)

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Ordering Information

Neon	Part Number
Neon Tx – E3	V9521401
Neon Tx – DS3	V9521406
Neon Rx – E3	V9521411
Neon Rx – DS3	V9521416
Paddles for Neon	
Connector Card for Neon Rx (ASI Output)	V9521356
Connector Card for Neon Tx (ASI Input)	V9521360

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