NODE-DOCSIS

DOCSIS Status Monitor Transponder

A DOCSIS 2.0-based, embedded transponder solution that allows operators to monitor and control Motorola's SG4000, BTN, and MBN optical nodes using their existing DOCSIS infrastructure.

FEATURES

- Support for SG4000
- Support for BTN
- Support for MBN
- Ethernet Port
- Optical Tamper Switch
- Standard Cable Modem LEDs
- Web Page Access
- SCTE-HMS standards

The NODE-DOCSIS transponder utilizes the standards adopted by the SCTE-HMS subcommittee for fiber node monitoring and provides easy access to information and control through standard SNMP MIBs. Combined with the Cheetah Technologies' CheetahXD platform, the NODE-DOCSIS transponder also features the ability to conduct HSIA and VoIP testing through embedded software. Alternatively, an intuitive web page allows operators to remotely access the transponder via its IP address and view all monitored parameter status.

As a node monitoring device, the transponder allows operators to differentiate between RF problems in the HFC network and the headend. The full-featured Ethernet port can support CPE devices attached to the node, or can be disabled if preferred. The transponder can also be configured in either a single or dual IP mode. The dual-IP mode is designed to allow the customer to separate the DOCSIS and HMS functionality of the transponder using two separate IP addresses. It does not have any impact on the Ethernet port or IP management through the Ethernet port.

The transponder utilizes a double-shielded RF cable that directs the DS cable modem signal from the RF module test point to the transponder. The 20 dB of loss from the RF test point combined with 18 dB of internal loss within the transponder, ensures that the cable modem input range of -15 to +15 dBmV is maintained. A similar cable couples the US cable modem signal into the return path. Attenuation within the transponder (15 dB), combined with the coupled loss, ensures that the CM channel does not contribute to return laser clipping.

Also available in an 8 MHz channel bandwidth model for EURO-DOCSIS applications. The NODE-EURO-DOCSIS transponder features proprietary MIBs for enabling remote downloads.

The transponder also features optional eMTA VoIP test capabilities that can be unlocked via a software license key and purchase of the CheetahXD platform.

DATA SHEET

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Specifications

MONITORED PARAMETERS	
Receiver DC Current	mA
Receiver Optical Power	mW
Transmitter Laser Bias Current	mA
Transmitter Optical Power	mW
Power Supply Voltages	VDC
Node Internal Temperature	–40°C to 60°C
Receiver Optical Alarm	
A/B Switch Status and Alarm	
Tamper	
Wink Switch (ICS) Attenuation	

AVAILABLE CONTROLS
A/B Switch Control
Wink Switch (ICS) Control

GENERAL	
DOCSIS	Version 2.0
HMS Monitoring Protocol	SNMP v1
DOCSIS Monitoring Protocol	SNMP v1, v2, v3
RF Interface	Internal
Ethernet Interface	RJ45
EMI/EMC	FCC Part 15 Class A, CE EN50022 Class A
Current Consumption	210 mA DC

RF TRANSMIT/RECEIVE	
Tx Frequency Range	5 to 42 MHz
TX Output Power	+8 to +58 dBmV
RX Frequency Range	88 MHz to 860 MHz
RX Input Level	–15 to +15 dBmV
Bandwidth	6 MHz (-004-00) 8 MHz (-003-00)

MECHANICAL/ENVIRONMENTAL	
Dimensions	6.5 in L x 1 in W x 2.2 in D
Weight	<1.0 lb
Operating Temperature	–40°C to 60°C
Humidity	10 to 90% (non-condensing)

Ordering Information

Model	*Part Number*
NODE-EURO-DOCSIS	**548568-003-00**
NODE-DOCSIS	**548568-004-00**

All features, functionality, and other product specifications are subject to change without notice or obligation.

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