

## LINDSAY BROADBAND 4 PORT eMTA + DOCSIS 3.0 MANAGEMENT MODEM

### LBDEG-CA4

#### Increase Revenue and Expand Telephony Business Services Today.

Integrated with separate eMTA and DOCSIS 3.0 cable modem, the LBDEG-CA4 gives the operator the flexibility to deploy Third Party Voice Management platforms, maintaining Telephone Quality of Service.

Turn existing HFC assets into additional revenue quickly and easily with the Lindsay Broadband Business Services 4 port outdoor hardened eMTA. The LBDEG-CA4 delivers 4 high quality Voice over IP lines and is flexible to any installation be it strand, vault or wall. Designed with the Cable Operator in mind the DOCSIS 3.0 8X4 eMTA and second DOCSIS 3.0 8X4 management modem are wholly under the control of the system operator, it can be used in conjunction with his SNMP monitoring system.

Small and medium business environments have been mandated to reduce overhead. The LBDEG-CA4 is a cost effective solution for their communication needs while sustaining a high ROI for the MSO



## FEATURES

- Die-cast aluminum housing (clamshell design)
- Mounting configurations: wall, pole, vault, mast, or strand
- Dual gaskets provide 15-PSI weather-proof seal
- Operating range, from -30°C to +60°C (-30°F to +140°F)
- Designed to isolate EMI and protect against surges
- DOCSIS 3.0 compliant
- Cable plant-powered (40-90 voltage AC)
- Electromagnetic interference (EMI): -100 dB
- 6Kv Surge protection
- HFC access with directional coupler or power-passing tap
- Coax power interface provides for easy set up.
- Monitor and configure via SNMP agent, Telnet or Web browser
- 110 Volt option available

## CONFIGURATION

- Up to 4 lines of carrier-grade VoIP
- DOCSIS 3.0 compliant
- Flexible 8X4 downstream/upstream channel-bonding with superior throughput
- Backwards compatible with DOCSIS 1.0, 1.1 and 2.0
- Multiple Protocol Support:
  - Initiation Protocol (SIP)
- IPv4 or IPv6 addressing models for DOCSIS CM layer
- 10/100/1000 Base-T Ethernet Interface
- Second integrated DOCSIS 3.0 modem to support additional voice management software



## Specifications eMTA

<b>Interfaces</b>	
RF Interface	External 75 ohm "F" type connector
Data Interface	10/100/1000 Base-T Ethernet RJ-45
Telephony Interface	4 lines; RJ-14 (Line 1/2, Line 3/4") RJ-11 (Line 2, Line 4)
Input Voltage (nominal)	115-240 VAC 50/60Hz
Power Consumption	6 (idle) 16 (max)
<b>Telephony</b>	
Supervisory Voltage	48V DC nominal
Maximum Loop Length to CPE	1000ft (350M) of 26 AWG (0.4 mm) wire
Ring Load Capacity	10 REN total; 5 per line
Provisionable High Loop Current Mode	Yes
Telecordia GR 1089 (Lightning and Power Surge) Tested	Yes
Programmable Interface for	Yes
<b>RF Downstream</b>	
Frequency Range (MHz)	108-1002
Bonded Channels	up to 8
Number of Tuners	2
Capture Bandwidth (MHz)	96 (PER TUNER, 192MHz total)
Modulation (QAM)	64 to 256
Data Rate (Mbps, Theoretical)	up to 343 <b>** Note -</b>
RF Input Sensitivity Level (dBmV)	-15 to +15
Carrier Bandwidth	6MHz
MoCA Immunity Filter	Yes
<b>RF Upstream</b>	
Frequency Range (MHz)	5-42
Bonded Channels	up to 4
Modulation	QPSK, 8QAM, 32QAM,
Modulation Bandwidth (KHz)	TDMA: 200, 400, 800, 1600, 3200, 6400 S-CDMA: 1600, 3200, 6400
Data Rate (Mbps, Theoretical)	up to 122 <b>** Note- Maximum raw DOCSIS rate: actual data throughout is less due to overhead, configuration, and RF conditions</b>
RF Output Level (dBmV - one channel)	TDMA: +17 to 58(8QAM, 16QAM); +17 to 57 (32QAM, 64QAM) <b>**Note- A-TDMA max output power reduced 3dB when transmitting 2 channel sand 6dB when transmitting 3 or 4 channels</b> S-CDMA: +17 to +56 (all modulations) <b>**Note- S-CDMA max output reduced 3dB when transmitting 2 or more channels.</b>
Automatic Level Adjust	Yes
Frequency Stability (kHz)	±5
Output Impedence (Ohms)	75
<b>Standards</b>	
DOCSIS 3.0	RoHS, WEEE
UL 60950	RFC3261 SIP; Session Initiation (Protocol)
FCC Part 15 Calss B	Codec:G711, 64kbps, μ-law and A-law encoded speech
CE	Enhanced codec support
CB	T.38 Fax Relay

## Specifications Management Modem

<b>RF Downstream</b>	<b>Management Modem</b>
Operating Frequency Range	88 to 1002 MHz or 108 to 1002 MHz
Tuner Frequency Range	88 to 1002 MHz or 108 to 1002 MHz
Tuner	(2) Frequency agile block tuners, 32 MHz bandpass each
Demodulation	8 demodulators, 4 per tuner, each demodulator; 64 QAM or 256 QAM
Maximum Data Range	8 downstream channels, each 6 MHz channel: 42:88 Mbps for 256 QAM and 30.34 Mbps for 64 QAM
Bandwidth	6 MHz
Operating Level Range	-15 to +15dBmV
Input Impedence	75 ohms
<b>RF Upstream</b>	
Operating Frequency Range	5 to 42 MHz, 5 to 65 MHz; 5 to 85 MHz
Transmitter Frequency Range	5 to 42 MHz, 5 to 65 MHz; 5 to 85 MHz
Upstream Transmission	4 upstream channels
Modulation	QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM at ATDMA mode QPSK, 8QAM, 16 QAM, 64 QAM, 128 QAM at SCDMA mode

## General

Temperature Range	-30 to + 60 Deg C (22 F to 140 Deg F)
EMI Isolation	100 dB (5 to 1000 MHz)
Surge Withstand (Copper Port)	ANSI-IEEE C62.41 Category B3 (6kv)
Powering	60 / 90VAC(Psuedo Sine) 110 Volt power available
Dimensions	16 X 9.5 X 7 inches
Weight	16 lbs
Airtight	15 p.s.i.
Features	Separate Fwd. and Rev. Padding, Exterior HFC Testpoint

FOR MORE INFORMATION ON OUR WIRELESS, OPTICAL AND RF PRODUCTS  
CALL 1-800-465-7046 OR  
U.S. Sales Toll free: 877-672-4340

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