

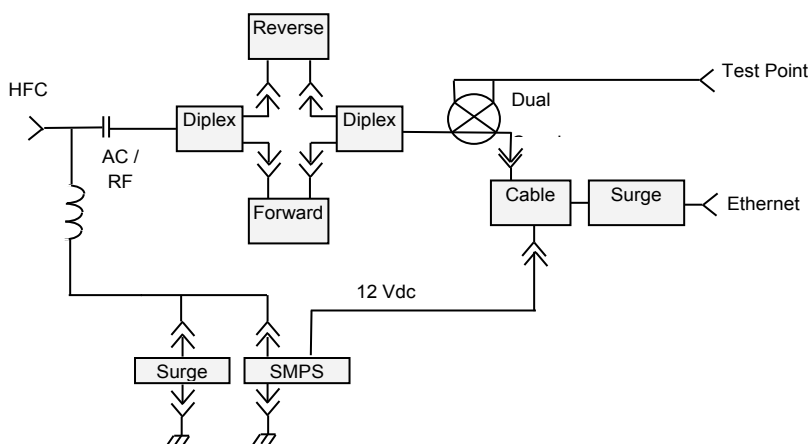
DOCSIS® SMALL CELL BACKHAUL GATEWAY

LBDG-FEC

The Lindsay LBDG-FEC is a cost effective, EMI filtered DOCSIS® backhaul solution designed specifically for the Small Cell Industry. The Lindsay hardened cable modem is engineered to maintain reliability in the harsh HFC environment. Utilizing existing street level HFC infrastructure the LBDG-FEC can be strand, vault, pedestal, and wall mounted. The LBDG-FEC uses a standards based DOCSIS® 3.0 cable modem that is wholly under the control of the MSO through the CMTS used in conjunction with SNMP monitoring.



BLOCK DIAGRAM



FEATURES

- Die-cast aluminum housing (clamshell design)
- Mounting configurations: wall, pole, vault, mast, or strand
- 15-PSI weather-proof seal
- Temperature cycled, from -40°C to +60°C (-40°F to +140°F)
- DOCSIS® 3.0
- Cable plant-powered (40-90 Vac)
- Electromagnetic interference (EMI): -100 dB
- 6Kv Surge protection
- HFC access at any Lindsay approved directional coupler or power-passing tap
- Weather-tight Ethernet connector
- Coax power interface protects RF performance of HFC plant
- Monitor and configure via SNMP agent, SSH or Web browser

SPECIFICATIONS

HFC 3.0 GATEWAY 6183 Specifications	
Cable Modem	
Band Plan	DOCSIS® (Annex B)
Network Configuration and Management	TFTP, SNMP (V2c, V3), Telnet, HTTP
Input Impedance	75 Ohm
Privacy	BPI+
Downstream Modulation	64 or 256 QAM
RF Input	Modem F Port +15 to -15 dBmV (-10 dBmV for 256 QAM)
Sensitivity ⁽¹⁾	Housing 5/8" Port +20 to -10 dBmV (-5 dBmV for 256 QAM)
Upstream Modulation	QPSK and 8, 16, 32, 64, 128 QAM
Max Transmit Power	Modem F Port 54 dBmV (45 – 51 dBmV recommended)
(ATDMA QAM 64) ⁽¹⁾	Housing 5/8" Port 49 dBmV (40 – 46 dBmV recommended)
HFC Interface	
Return Loss ⁽²⁾	16 dB (min, with 75 ohm termination) 10 dB (min, when terminated by modem)
Insertion Loss ⁽¹⁾	5 dB (+/-1 dB)
Pad Type	0 to 20 dB (JXP, Separate Fwd and Rev)
Temperature Range	-40 to +60 Deg. C
EMI Isolation	100 dB (5 to 1000 MHz)
Surge Withstand (HFC)	ANSI-IEEE C62.41 Category B3 (6KV) (Solid State Crowbar)
Ethernet	
Throughput	10/100/1000 Mbps
Reach	100 meters
Interface	Ethernet
Physical	
Dimensions	290 x 220 x 130 mm (11.5 x 8.5 x 5 in.)
Weight	2.5 Kg (6 lbs.)
Ingress Protection	IP68 (15 psi for 10 seconds)

Notes:

(1) Levels reported by the modem management interfaces reference the modem F port. Levels at the Gateway 5/8" KS port incorporate the internal 5dB loss of the HFC Interface.

(2) Overall return loss is dependent on the modem.