CANTADA

Constellation CMDL-1R
L-Band Downlink Module

Advantages

- ✓ Hot Swappable
- ✓ Modular Design
- ✓ Integrated L-Band Mux-Tee
  - Flat Gain Profile
  - Linear Phase
- ✓ Integrated Power Injection
  - 24 VDC / 50W
  - Overload Protection
  - Short Circuit Protection
  - Fully Redundant Power
  - Selectable Output Voltage
- ✓ Integrated Distribution Amp
  - Adjustable L-Band Gain
- ✓ Integrated 10 MHz Reference
  - Adjustable Output Level
- ✓ Integrated 22 kHz Reference
- ✓ Integrated Micro-controller with Ethernet backplane interface
  - System parameter monitoring
  - Output Voltage
  - Output Current
  - Input L-band Power
  - Output Reference Signal Levels
  - Ambient Module Temperature
  - Remote Signal Level Control

Details

The Constellation CMDL-1R Remotely Monitored L-Band Downlink Module integrates a high gain broadband distribution amplifier, LNB power insertion, 22 kHz insertion, 10 MHz reference insertion and micro-controller into a single module. The CMDL-1R Module plugs into any of the Constellation chassis platforms which provide full redundant DC power and reference clock distribution. When deployed in the SE-12R platform the module is polled for system operational status and alarms. System status flows up to the Network Operations Center over a SNMP agent provided in the SE-12R Chassis. The intelligence provides early detection for impending failures, decreasing system outages. RF levels, Reference Clock levels, and DC parameters can be remotely configured, or a Local Override is available when on-site for manual adjustments. Modules are hot swappable making adding circuits or reconfiguring sites non-interfering. Devices are autonomously added and deleted from the chassis inventory. The CMDL-1R can also be configured locally and deployed in the SE-12 chassis. All device configurations are available via a console interface and stored locally.

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Satellite Solutions

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Specifications

DC Operation	Min	Typical	Max
Operation Current	210 mA	270 mA	290 mA
Operation Voltage	16 Volts	24 Volts	30 Volts
Output Voltage	23.5 17.5 11.5	24 Volts 18 Volts 12 Volts	- 18.2 12.2
Output Current	@24 Volts @18 Volts @12 Volts	- - -	2.35 Amps 2.80 Amps 4.00 Amps

10 MHz Reference Frequency	Min	Typical	Max
Adjustable Range	-15 dB	-	+15 dB
Output Level	-	10 dBm	14 dBm

22 kHz Reference Frequency	Min	Typical	Max
Frequency	-	22 kHz	+/- 2 kHz
Level	-	2.2 Vpp	+/- 0.2

RF	Min	Typical	Max
Bandwidth	0.9 GHz	-	2.2 GHz
Gain	-10dB	-	+20 dB
Impedance Order Option	-	50 Ω/ 75 Ω	-
Gain Step Size	1.5 dB	2 dB	2.5 dB
Gain Flatness	-1 dB	-	+1 dB
Antenna Port Return Loss (S11)	8 dB	12 dB	-
Modem Port Return Loss (S11)	9 dB	11 dB	-
Group Delay	-	+/- 0.5 nS	+/- 1.0 nS
Input Power (Antenna Port)	-	-10 dBm	-
Output Power (Modem Port)	-	10 dBm	-

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