CATTRON

Bi-Directional Amplifier

SIAMnet™

UNDERGROUND MINING COMMUNICATION SYSTEMS

HIGHLIGHTS

- 800 MHz LMR band, supports multiple wireless voice and data channels concurrently
- CATV Cable Modem band, supports DOCSIS high-speed Ethernet and WIFI networks
- Diagnostic system, supports remote monitoring and configuration

FEATURES

- Excellent 800MHz signals propagation, covers long distances
- Supports analog and/or digital, conventional and/or trunking two-way radio systems
- Uses low-cost CATV cable and accessories available worldwide
- Power from the CATV coaxial cable eliminates costly AC power outlet installations and allows for an efficient battery backup system
- Diagnostic capability enables troubleshooting and remote configuration without going onsite

APPLICATIONS

- Combining two-Way voice and mobile data communication technologies with high speed data networks make the SIAMnet the perfect communication system for underground mines.
- Wireless vehicular communication systems for dispatch, monitoring and production control
- Underground mines (non-coal)
- Railway tunnels

TECHNICAL DATA AND SPECIFICATIONS

800 MHz amplifier	Downlink	Uplink	Remarks
800MHz SMR Band	851-870 MHz	806-825 MHz	
Flatness	0.5 dB	0.5 dB	
Gain	34 dB or better	34 dB or better	
Maximum Input Power (port P1)	0 dBm	0 dBm	
Input Attenuator Option	10 dB	10 dB	Separately activated, locally or remotely
Maximum Power, Single Carrier	+33 dBm	+30 dBm	± 1 dB
Manual Gain Control	0–34 dB	0–34 dB	Independently, in 1 dB steps
Noise Figure	6 dB	6 dB	
1 dB Compression Point	+33 dBm	+26 dBm	± 2 dB
Channel Separation	>40 dB	>40 dB	
Port Impedance	75 ohm	75 ohm	CATV compatible KS connexion
Test Points	F female	F female	20 dB attenuation
Cable Modem Amplifier	**Downstream**	**Upstream**	**Remarks**
Frequency Bands	150-190MHz	5-90 MHz	DOCSIS & EuroDOCSIS
Flatness	0.5dB	0.5 dB	
Gain	0–25 dB	0–25 dB	
Equalizer Adjustment	0.5–2 dB	0–8 dB	
Maximum Power, Single Carrier	+ 54 dBmv	+54 dBmv	0 dBm=48.75 dBmv
Electrical & Mechanical			
Uplink Port (P1), Downlink Port (p2)	5-870 MHz	Bi-directional port, 800 MHz and cable modem	
RF and AC Power	45-60 Vac 10 A		
AC Power Source	P1 or P2	Select port from which AC power is present	
AC Power Pass Through P1-P2	On/Off	Locally or remotely activated relay contact	
AC Power Breaker	10 Amps	Resettable locally or remotely	
Internal Diagnostic LEDs	5 total	P1 AC power, P2 AC power, PA power OK, AC Trip, F1 fuse blown	
Operating Ambient Temperature	-20 to +50C	The ambient temperature may be less once the amplifier has started and reached its operating temperature	
Housing	NEMA 4	Aluminum casting, used as heat sink, IP67, RF sealed.	
Overall Dimensions	10.5 X 7.5 X 4.5”		
Weight	3 kg		
Connectors	KS female	P1, P2	

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