

Preliminary Product Specifications

HLN3 EBS Downconverter Solution For ITFS and Commercial MMDS Applications

Educational Broadcast System (EBS)

proponents and operators now have a new choice for new installations and replacement downconverters. The HLN 3 commercial quality down-converter fulfills today's EBS needs by addressing immediate requirements for FCC Rule Part 27 specified replacement downconverters for existing receive sites. Industry consolidation has left the educational market with few choices in new products supporting operational systems. The HLN 3 addresses this need by addressing the new FCC mandated replacement downconverter specification. The first truly new design in years has enhanced technology to increase reliability and increased immunity from interference generated by adjacent band fixed and mobile services. This unit replaces the Conifer HLN Series 1 and 2 converters which have been the ITFS industry standard for many years.

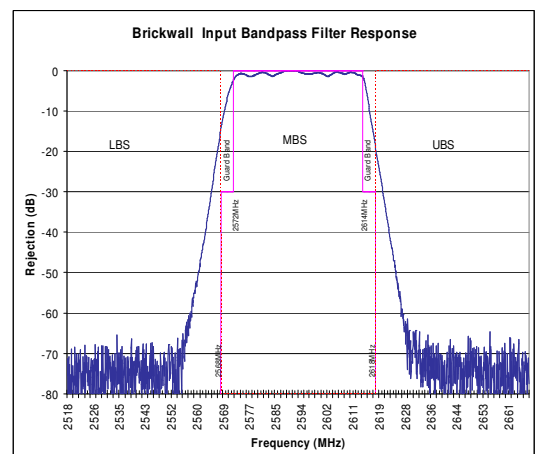


State-of-the-Art Design Techniques Utilizing

- **Embedded Microprocessor Control**
- **DSP Technology**

Features and Benefits

- **Ruggedized** powder coated aluminum case with stainless steel hardware provides years of corrosion free service in harsh environments
- **Sophisticated** power supply system switching technology to mitigate voltage sensitivity and lightning damage. It also provides for long IF cable runs and short circuit protection.
- **Brickwall** Input Bandpass Filtering
- **Gain and Noise Figure** options available to meet your requirements
- **Compatible** with QAM, VSB, and Analog signals
- **OptiMode™** Interference Rejection Circuitry



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CONIFER
WIRELESS TELECOMMUNICATION TECHNOLOGY

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Specifications

HLN-3

Input Frequency	2572MHz-2614MHz
Output Frequency	42MHz Bandwidth 294-336MHz
Gain	32dB
Gain Flatness	±2dB over Bandwidth
Maximum Output Power	+25dBm/Channel
Input Filter	Dual Stage High Rejection 12 Pole
Noise Figure	3.5dB
Group Delay	± 20 ns over any 6 MHz channel
LO Frequency	2278MHz
LO Frequency Stability	± 10 KHz set point ± 30 KHz -40°C to +60°C
LO Phase Noise	> -60 dBc/Hz @ 100Hz > -80 dBc/Hz @ 1 KHz > -88 dBc/Hz @ 10 KHz > -105 dBc/Hz @ 100 KHz
Input Intercept Point (Out of Band)	+9dBm
IF Rejection	80 dB minimum
Third Order IM (two tone test)	- 50dBc w/ two -10dBm tones @ output
Output Impedance	75 Ohms
Output Connector	F-type female
LNB Return Loss	10 dB minimum
Temperature	-40 to +60 degrees C
Supply Voltage	16-24VDC
Supply Current	<300mA
Lightning Protection / Surge Protection	Transient voltage suppression at RF input must exceed 1500 Watts @ 1 mS w/ < 1 nS response time
Input Connector	"N" Type Female
Input AC Voltage (to Power Inserter)	90-240VAC (Switching Supply)
Converter Dimensions (w/o Bracket or Connectors)	H: 8.92" W: 4.97" D: 1.65"

Specifications are preliminary and subject to change without notice