



AM-9220/1 Series Indoor IF to L-Band Up/Down Converter

The Amplus AM-9220/1 Series IF to L-Band Converter is a fully synthesized frequency converter designed for the convenience of operability control. The Converter offers users the control options of RS232/RS485 interface, Ethernet webpage and a local control interface panel.

Capable of converting a 70/140 MHz input to an output within the range of 950 MHz to 1750 MHz, as well as capabilities of the reverse (converting 950~1750 MHz to 70/140 MHz), the Converter provides the vital function of an interface between the modem and the BUC/LNB.

Features

- Automatic 10 MHz Internal/External Reference Selection
- BUC/LNB DC Power & 10 MHz Located on RF Ports
- Selectable Non-Invert/Invert Frequency Spectrum
- Selectable RS232/RS485 Remote Control
- High Frequency Stability
- Tricolour LED Status Indicator
- Two Monitor & Control Ports:
- RS232/RS485 Remote Interface
- TCP/IP Ethernet Interface

Beneficial Features (Optional)

- 140 MHz IF Frequency
- 75 Ω IF Impedance
- Annual Maintenance Service

Frequency Range (MHz)

Transmit (Tx)	950 - 1750
Receive (Rx)	950 - 1750



Cert No. E08093



ISO 9001



ISO 14001



OHSAS 18001



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Technical Details

Transmit Specifications

Input Frequency	70 MHz \pm 18 MHz (140 MHz \pm 18 MHz optional) (140 MHz \pm 27 MHz optional)
Output Frequency	950 to 1750 MHz
Frequency Step Size	1 MHz
Frequency spectrum	Non-invert/Invert selectable
IF Input Power Level	-35 dBm to -10 dBm
Output Power P-1dB	0 dBm
Gain	15 dB Typical
Gain Flatness over RF BW	\pm 1.5 dB typical
Gain Flatness over IF BW	\pm 1 dB typical
Gain Control Range	25 dB with 0.5 dB step
Spurious	-50 dBc max
IF Input Return Loss	20 dB min
RF Output Return Loss	12 dB min
Phase Noise:	
100 Hz	-70 dBc/Hz max
1 KHz	-75 dBc/Hz max
10 KHz	-85 dBc/Hz max
100 KHz	-95 dBc/Hz max
1 MHz	-110 dBc/Hz max
Input Interface	BNC (F)
Input Impedance	50 Ω (75 Ω optional)
Output Interface	N-type
Output Impedance	50 Ω

Operating Power Requirement

Operating Voltage	100~250 VAC
Frequency	47 -63 Hz
Power Consumption	50 W Typical

External Reference Requirement

Frequency	10 MHz
Level	0 to 5 dBm; Unit will automatically switch to internal reference if external reference level falls below 0 dBm nominal
Input Interface	BNC (F)

Built-In Reference & DC

Frequency Ref for BUC & LNB	10 MHz built-in (Switchable)
DC Voltage for BUC	24V, 4A max (Switchable)
DC Voltage for LNB	18V, 0.5A max (Switchable)

Environmental Conditions

Operating Temperature	0°C to +50°C
Non-Operating Temperature	-40°C to +70°C
Relative humidity	Up to 95%, non condensing

Receive Specifications

Input Frequency	950 to 1750 MHz
Output Frequency	70 MHz \pm 18 MHz (140 MHz \pm 18 MHz optional) (140 MHz \pm 27 MHz optional)
Frequency Step Size	1 MHz
Frequency spectrum	Non-invert/Invert selectable
RF Input Power Level	-60 dBm to -30 dBm
Output Power P-1dB	0 dBm
Gain	30 dB Typical
Gain Flatness over RF BW	\pm 1.5 dB typical
Gain Flatness over IF BW	\pm 1 dB typical
Gain Control Range	25 dB with 0.5 dB step
Spurious	-50 dBc max
RF Input Return Loss	12 dB max
IF Output Return Loss	20 dB max
Phase Noise:	
100 Hz	-70 dBc/Hz max
1 KHz	-75 dBc/Hz max
10 KHz	-85 dBc/Hz max
100 KHz	-95 dBc/Hz max
1 MHz	-110 dBc/Hz max
Input Interface	N-type
Input Impedance	50 Ω
Output Interface	BNC (F)
Output Impedance	50 Ω (75 Ω optional)

Monitor & Controlling Functions

Monitor	Channel & Gain setting LO status BUC & LNB supply BUC & LNB Current Status update
Control	Channel & Gain setting BUC Supply ON / OFF LNB Supply ON / OFF
Remote Control	RS-232/485 Ethernet optional
Connector Interface	DE-9S for RS232/RS485 RJ-45 female for Ethernet

Mechanical

Dimensions	19" Rack x 1" RU Height x 15.7" Depth
Weight	6.2 kg / 13.7 lbs

**All specifications & designs are subject to changes without notice*

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