

Three band single channel with standard external reference.



Three band, dual channel with external reference and dual power supply options.



Option 34-7 Front panel display with RS485/422 and Ethernet remote control

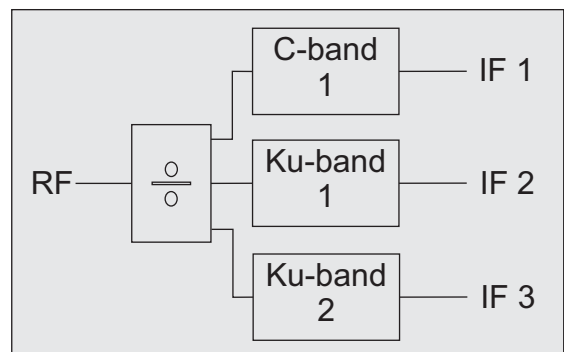
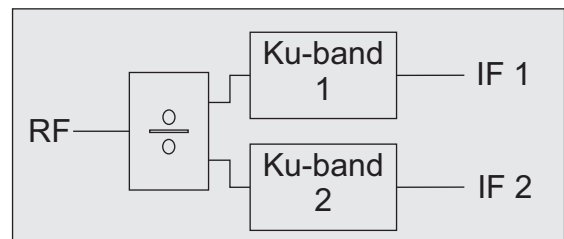
These block converter systems have a single RF connector and utilize GeoSync block converter modules to provide multiple IF connections. Converter modules are also available individually from GeoSync. Refer to data sheet GSC27-SPC for details.

STANDARD FEATURES

- Single power supply
- External 10 MHz reference
- Low phase noise, better than IESS-308/309
- Low intermodulation distortion
- Summary Alarm
- CE Mark

OPTIONS

- Two channels (for multiple polarizations)
- Redundant power supplies
- External 10 MHz reference with auto-select to either internal reference or to a high stability reference oscillator.
- RS422, RS485 and 10/100 Base-T Ethernet remote
- Input filter
- Four way input divider to provide input sample port



MODEL NUMBERS

<i>Model Number Reference</i>	<i>Frequency Input (GHz)</i>	<i>Frequency Output (MHz)</i>	<i>Local Oscillator (MHz)</i>
C1	3.4-4.2	950-1750	5150
C2	5.85-6.425	950-1750	4900
X1	7.25-7.75	950-1450	6300
X2	7.9-8.4	950-1450	6950
K1	10.7-11.7	950-1950	9750
K2	11.45-12.45	950-1950	10500
K3	11.7-12.75	950-2000	10750
K4	12.2-13.25	950-2000	11250
K5	13.75-14.5	950-1700	12800
K6	14.0-14.5	950-1450	13050

Downconverter Model Numbers consist of the series name DMBR followed are any combination of two or three RF bands;

Example: Single channel receive band monitor unit: DMBR-K1K3

**Downconverter with two modules -
10.7-11.7 GHz and 11.7-12.75 GHz to L-band**

Example: Single channel receive band monitor unit: DMBR-C1K1K3

**Downconverter with three modules -
3.4-4.2 GHz, 10.7-11.7 GHz and 11.7-12.75 GHz to L-band**

Example: Dual channel transmit band monitor unit: DMBR2-C2K5

**Downconverter with two inputs and four modules -
5.85-6.425 GHz and 13.75-14.5 GHz to L-band**

BLOCK DOWNCONVERTER SPECIFICATIONS

Conversion Gain	35 dB minimum (- divider loss)
Gain Flatness	±1 dB over the frequency range
Noise Figure	10 dB maximum (+ divider loss)
Gain Stability	±1 dB over the operational temperature range
Output 1 dB Compression	+3 dBm minimum
Output Third Order Intercept	+13 dBm
Image Rejection	20 dB minimum
Non-signal Related Spurious	-85 dBm
Signal Related Spurious	-65 dBc up to -15 dBm output
Input/Output VSWR, 50 Ohm	1.8:1
External Reference Input	10 MHz at 13 ±3 dBm
Single Side Band Phase Noise	-75 dBc at 1 kHz offset
	-85 dBc at 10 kHz offset
	-95 dBc at 100 kHz offset

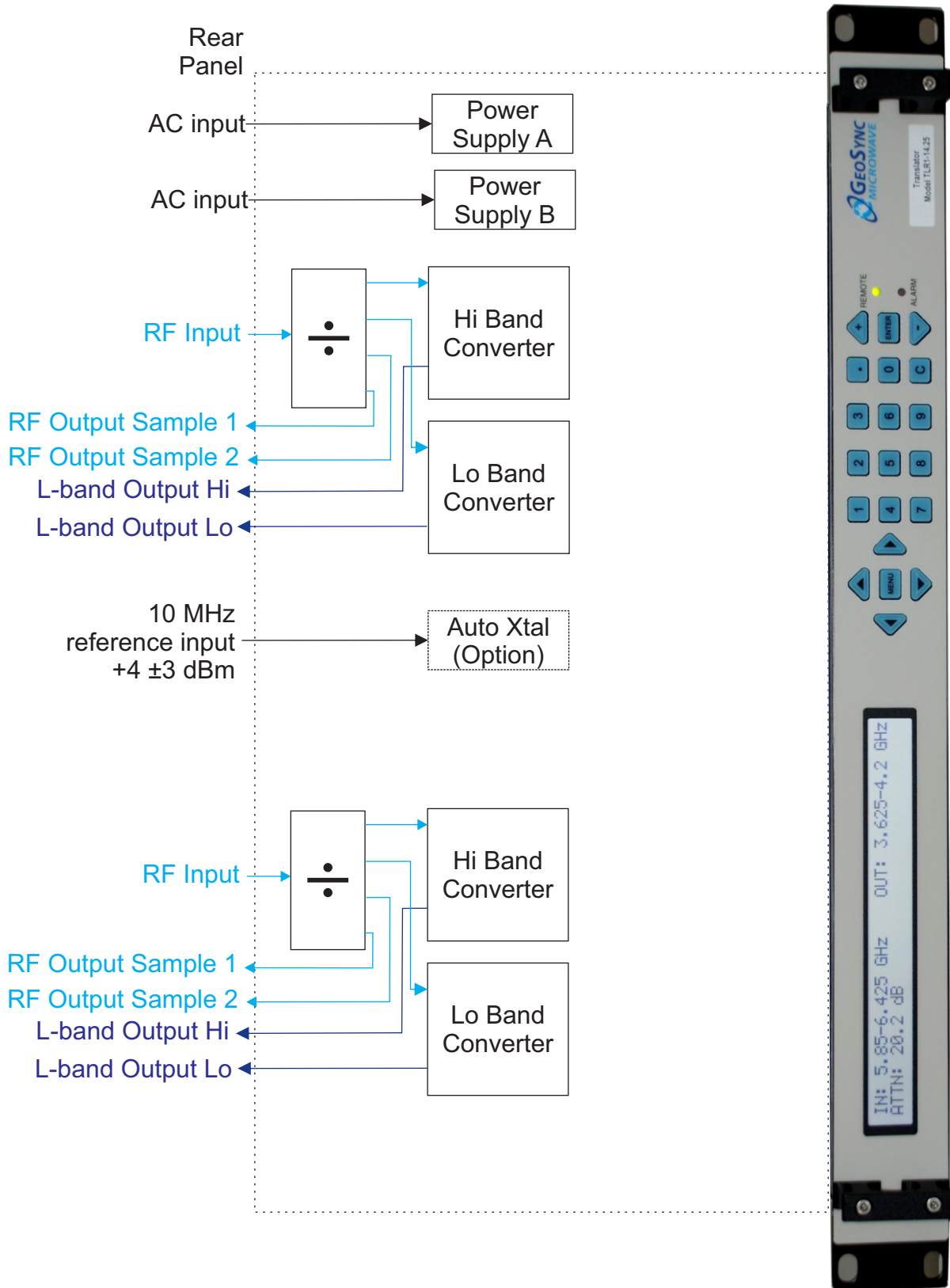
INDICATOR and ALARMS

Power	Green LED (front panel)
Alarm	Red LED (front panel)
Summary Alarm	Contact closure status for DC voltage and local oscillator

OPTIONS

- 34-1. Input Filter Image rejection 70 dBc minimum
- 34-2. Internal reference crystal ± 2.5 ppm over -40 to 60°C (each band independent)
- 34-3 Internal reference crystal with auto-reference select switch. External 10 MHz input at +4 ± 3 dBm, auto-switchover to internal crystal at +1 dBm nominal. SMA female connector for external reference. Internal/external status on summary alarm connector. Internal reference stability: ± 2.5 ppm over -40 to 60°C
- 34-4 Reference Clean-up Loop and Improved Frequency Stability Reference oscillator acts as an analog phase lock with a 0.1 Hz nominal loop bandwidth. Typical loop suppression of the external reference is as follows: 28 dB at 1 Hz offset, 65 dB at 10 Hz, 100 dB at 100 Hz offset
Frequency Stability: $\pm 2 \times 10^{-9}$, 0 to 50°C
Frequency Aging: 1×10^{-9} per day after 24 hours operation preceded by 10 days operation
- 34-5 Input four way power divider Four way input power provides input monitoring. Note: Gain decreases and NF increases per additional insertion loss
- 34-6 Redundant power supply Second diode summed power supply for additional reliability.
- 34-7 Remote controls -
Serial interface RS485/RS422
Ethernet Interface 10/100Base-T Ethernet interface providing:
HTTP-based web server
SNMP 1.0 configuration
Alarm reporting via SNMP Trap
Telnet access
Password protection

Sample configuration: Model DMBR2-K1K3 with options 34-3 internal reference with auto-reference select switch, 34-5 input four way power divider, 34-6 redundant power supplies, and 34-7 remote control



LCD panel supplied with Option 34-7



Typical rear panel view - Shown with no options



Typical rear panel view - Shown with options 34-3, 5, 6 and 7

PRIMARY POWER REQUIREMENTS

Voltage..... 90-250 VAC
 Frequency.....47-63 Hz
 Power Consumption40W typical
 FusesT1.5A

SUMMARY ALARM

Contact closure/open for DC voltage and/or amplifier alarm. Status alarm readout on remote control bus.

PHYSICAL

Weight 10 pounds (4.5 kg), nominal
 without rack slides
 14 pounds (6.4 kg), nominal
 with rack slides
 Chassis Dimensions19" x 1.75" panel height
 x 20" maximum
 Connectors -
 RFSMA female
 Summary AlarmDE-9P
 Remote InterfaceDE-9S for RS422, RS485
 RJ-45 female for Ethernet
 Primary PowerIEC-320

ENVIRONMENTAL

Operating -
 Ambient Temperature 0 to 50°C
 Relative Humidity Up to 95% at 30°C
 Altitude Up to 10,000 feet
 Non-operating –
 Ambient Temperature -50 to +70°C
 Relative Humidity Up to 95% at 40°C
 Altitude Up to 40,000 feet
 Shock and Vibration Normal handling by
 commercial carriers