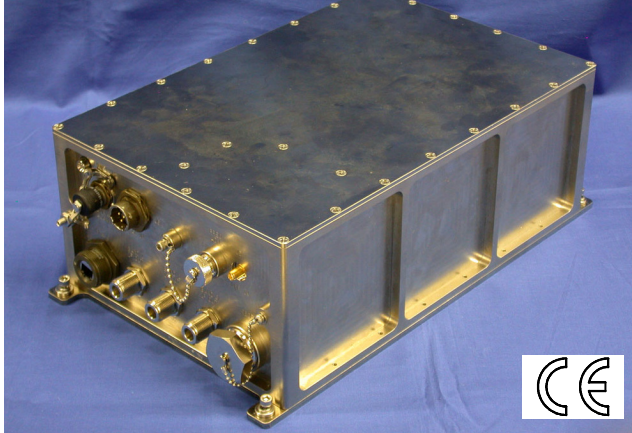




Tri-Band Block Upconverters for Satellite Earth Stations



These tri-band block upconverters provide a frequency translation of L-band inputs to Ka-band outputs.

FEATURES:

- High linearity.
- Low phase noise.
- Outdoor antenna hub mount suitable for severe environments.
- Automatically operate from the internal reference when the external reference is not present.
- Three frequency bands operate simultaneously or individually.

Model Number	Input Frequencies (MHz)	Output Frequencies (GHz)
UC-27A028A50TR-1525	Band 1: 950 – 1450	Band 1: 27.000 – 27.500
	Band 2: 950 – 1450	Band 2: 27.500 – 28.000
	Band 3: 950 – 1450	Band 3: 28.000 – 28.500
UC-28A1030A00TR-1525	Band 1: 950 – 1450	Band 1: 28.100 – 28.600
	Band 2: 950 – 1450	Band 2: 28.600 – 29.100
	Band 3: 950 – 1450	Band 3: 29.500 – 30.000
UC-28A0029A35TR-1525	Band 1: 900 – 1500	Band 1: 28.000 – 28.600
	Band 2: 900 – 1500	Band 2: 28.500 – 29.100
	Band 3: 900 – 1500	Band 3: 28.750 – 29.350

Other frequency bands available. Contact ITS for details.

ITS Proprietary information

*Specifications are Subject to Change without Notice
Errors & Omissions Excepted*



Tri-Band Block Upconverters for Satellite Earth Stations

INTERFACE

IF INPUT CHARACTERISTICS:

Frequency Bands	See Model Number Table
Return Loss (50 Ohm)	19 dB Minimum
Power Level per Band	Up to -15 dBm

RF OUTPUT CHARACTERISTICS:

Frequency Bands	See Model Number Table
Return Loss (WR-34)	18 dB Minimum
P _{1dB} @ Max. Gain Setting	+15 dBm Minimum
IP3 @ Max. Gain Setting	+22 dBm Minimum

EXTERNAL REFERENCE INPUT:

Frequency	10 MHz
Power Level	-10 to +13 dBm
Input SSB Phase Noise	-120 dBc/Hz @ 10 Hz, -150 dBc/Hz @ 100 Hz, -160 dBc/Hz @ 1 kHz, -160 dBc/Hz @ ≥ 10 kHz

INTERNAL REFERENCE CHARACTERISTICS:

Frequency Stability	±5 × 10 ⁻⁸ , -40 to +50 °C
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REMOTE MONITOR AND CONTROL:

Interface	10/100 Base-T Ethernet
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SUMMARY ALARM:

Interface	Type-C Contact Closure
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AC POWER SUPPLY INPUT:

Voltage	90 to 260 V _{AC}
Frequency	47 to 63 Hz
Power Consumption	100 W Maximum

CONNECTORS:

IF Input, 3 Bands	Type N Female, 50 Ohm
RF Output	WR-34 Grooved
External Reference	SMA Female
Monitor & Control	Applied Optical Systems P/N: ECRK0103U00

Summary Alarm	ITT Cannon PN: KPT07E8-3P
AC Power Input	ITT Cannon PN: KPT07E12-3P

LED STATUS INDICATOR:

Powered and without Fault	GREEN
Powered and with Fault	RED

PERFORMANCE

TRANSFER CHARACTERISTICS:

Conversion Type	Single Conversion
Frequency Sense	No Inversion
Gain @ Min. Attenuation	+25 ± 1 dB
Gain Control	25 dB in 0.2 dB / step
Gain Setting Accuracy	absolute ±1.0 dB relative ±0.1 dB per step
Gain Stability @ Constant Temperature	≤ ±0.25 dB over 24 hours
Gain Stability vs. Temp.	≤ ±0.05 dB/°C
Gain Flatness	1.0 dB ptp over 250 MHz 1.2 dB ptp over 500 MHz
Image Rejection	80 dB Minimum
NF @ Max. Gain Setting	15 dB Maximum
Output Mute	60 dB Minimum
Group Delay Variation	1.0 ns ptp over 250 MHz 1.5 ns ptp over 500 MHz
Spurious, Signal Related @ up to 0 dBm Output	-65 dBc Maximum
Spurious, Signal Independent	-80 dBm Maximum
Output SSB Phase Noise	-40 dBc/Hz @ 10 Hz, -65 dBc/Hz @ 100 Hz, -80 dBc/Hz @ 1 kHz, -93 dBc/Hz @ 10 kHz, -103 dBc/Hz @ 100 kHz, -115 dBc/Hz @ 1 MHz, -128 dBc/Hz @ 10 MHz, -143 dBc/Hz @ 100 MHz

MECHANICAL

Dimensions	14.4" × 8.5" × 5.03"
Weight	20 lbs
Air Leak Rate	< 10 cm ³ / minute pressurized @ 3 PSI through waveguide port, selected models only
Finish	Electroless Nickel Plating per MIL-C-26074, Class 4

ENVIRONMENTAL

OPERATING:

Temperature	+10 to +40 °C
Humidity	Up to 100% Condensing
Altitude	Up to 10,000 Feet AMSL

NON-OPERATING:

Temperature	-40 to +65 °C
Humidity	Up to 100% Condensing
Altitude	Up to 50,000 Feet AMSL
Shock and Vibration	Normal handling by commercial carriers

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Response, Innovation, Craftsmanship

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