AZ740
Indoor L-band block Upconverter
Azimuth Product Family

AZIMUTH SERIES

Description

The AZ740 is a High Performance frequency upconverter designed for a wide range of Broadcast, Telco and IP satellite applications. The AZ740 converts a standard L-band (950-1750 MHz) signal to a wide range of RF frequencies such as C-band, Ku-band or DBS-band
The AZ740 guarantees the best signal quality thanks to a very high frequency stability and very low spurious characteristics.

The AZ740 is the ideal solution when the block upconverter can not be included in the modulator or when the L-band signal has to be converted to more than one frequency range simultaneously (e.g. Ku-band and DBS-band)

The AZ740 has 2 L-band inputs and on L-band monitoring output. The signals on the two L-band inputs can be combined inside the unit before being up-converted.

The high output frequency stability is provided by an internal 10 MHz reference clock. For applications requiring a very high frequency stability (such as for very low data rate carriers), an optional very high stability reference clock can be ordered.

The AZ740 is easy to operate and monitor. All control and monitoring parameters are available locally on the front panel and remotely through a web interface. It is also possible to control or monitor the AZ740 via RMCP or SNMP.

Key features

- Wide choice of RF frequency ranges covering C, Ku and DBS-bands
- Very high frequency stability
- Very low spurious characteristics
- 2 L-band inputs and one L-band output
- Integrated signal combiner
- Very high linearity
- Very good gain flatness over the entire bandwidth

Main advantages

- Highest signal quality
- Extensive coverage of all transponder frequencies
- High flexibility

Applications

- Earth Stations
- DTH
- Telco and trunking satellite infrastructures
- VSAT hubs
- Generic satcom applications

Related products

AZ710 Up Converter
AZ720 Down Converter
AZ730 Up & Down Converter
AZ750 L-band Combiner

AZ270 1+1 Frequency Converter Redundancy Switch
AZ200 Universal Switching System

Related documents

Care Pack Brochure

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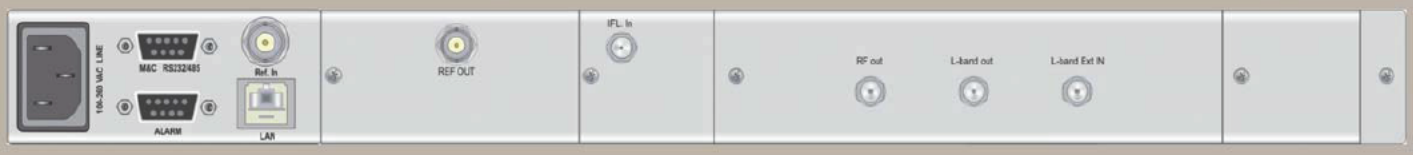
Specifications – AZ740(R6)



Interfaces

Input Interface upconverter (IF):

• Connector	SMA (F), 50 ohms
• Return loss	>12dB

Output Interface (L-band monitoring):

• Connector	SMA (F), 50 ohms
• Return loss	>12 dB
• Gain	0 dB

Output Interface (RF):

• Connector RF-band out	SMA (F), 50 ohms
• Return loss	>12dB

10 MHz reference Input / output (optional)

• Connector	BNC (F), 50 ohms
• Input level	-3dBm up to 7dBm
• Output level	+7dBm

Channel characteristics (L-band to RF-band)

- Output Frequency ranges

Band	Input freq (MHz)	Output freq (GHz)	LO freq (MHz)
C-band:	950-1750	5.85 – 6.65	7600
Ku-band:	1150-1750	12.75 – 13.25	11600
Ku-band:	950-1700	13.75 – 14.50	12800
DBS-band:	950-1750	17.30 – 18.10	16350
DBS-band:	950-1750	17.60 – 18.40	16650

- Gain (over temperature and frequency)
  - C-band 0dB±5dB
  - Ku-band 12.75-13.25 GHz 0dB±5dB
  - Ku-band 13.75-14.50 GHz 0dB±3dB
  - DBS-band 0dB±2dB
- Output 1dB compression C & Ku-band >0dBm
- Output 1 dB compression DBS-band >10dBm
- Gain flatness C & Ku-band ±0.35dB/36MHz max
- Gain flatness DBS-band ±0.20dB/36MHz max
- In-band spurious
  - Non signal related <-80dBm
  - Signal related for rate >200Kbaud
    - C and Ku-band (up to -10dBm output) <-66dBc/4KHz
    - DBS-band (up to 0dBm output) <-66dBc/4KHz
- RF output mute >60dBc
- Phase noise
  - @ 10 Hz <-30 dBc/Hz
  - @ 100 Hz <-60 dBc/Hz
  - @ 1 KHz <-75 dBc/Hz
  - @ 10 KHz <-85 dBc/Hz
  - @ 100 KHz <-95dBc/Hz
- Residual group delay 1 ns peak-to-peak

Internal Reference frequency

High Stability	Stability	$\pm 5 \times 10^{-8}$ over 0°C to 70°C
	Ageing	± 15 ppb/day
		± 300 ppb/year
Very High Stability (optional)		
	Stability	$\pm 2 \times 10^{-9}$ over 0°C to 65°C
	Ageing	± 0.5 ppb/day
		± 500 ppb/10 year

Generic

Monitor and control Interfaces
- Web based GUI
- Diagnostics report, alarm log
- RMCP over TCP-IP/UDP and RS232/RS485
- SNMP v2c

Alarm Interface
- Electrical dual contact closure alarm contacts
- Connector 9-pin sub-D (F)
- Logical interface and general device alarm

Available Alarms
- 10 MHz alarm
- Power supply alarm
- Temperature alarm
- Synthesizer out-of-lock

Physical

- 1RU, width: 19", depth 51 cm, <6 kg
- Power supply: 90-130 & 180-260 Vac, 105 VA, 47-63 Hz
- Temperature
  - Operational: 0°C to 40°C
  - Storage: -40 to +70°C
- Humidity: 5% to 85% non-condensing
- CE label

Ordering information

AZ740 Indoor L-band Block Upconverter		Order n°
Default Configuration		
L-band to RF, SNMP 10 MHz reference In/Out: High stability		AZ740
Configuration options Category	Max. 1 option per category	
Output frequency	C-band (5,85 GHz - 6,65 GHz)	FA-04
	Ku-band (12,75 GHz - 13,25 GHz)	FA-05
	Ku-band (13,75 GHz - 14,50 GHz)	FA-06
	DBS-band (17,30-18,10 GHz)	FA-07
	DBS-band (17,60-18,40 GHz)	FA-08
10MHz reference In/ Out	High stability	Default
	Very high stability	GR-02
Services Category		
Assistance	Care Pack Basic	GA-06
	Care Pack Extended	GA-07

- Other configurations and options, such RF-band amplifiers, are available on request.
- Contact your sales representative for details (sales@newtec.eu)