AZ720
Downconverter
Azimuth Product Family

AZIMUTH SERIES

Description

The AZ720 is a high performance L-band to IF frequency downconverter designed for a wide range of broadcast, telco and IP satellite applications. The AZ720 offers some advanced and unique features such as a calibrated high linearity over the entire bandwidth combined with a very high frequency stability. The AZ720 has a very wide gain range and a low noise figure which makes it suitable for the conversion of narrow and broadband L-band signals to IF.

The L-band input frequency is adjustable over the range of 950 MHz up to 2150 MHz. The IF output frequency is switchable between 70 MHz and 140 MHz.

The high output frequency stability is provided by an internal 10 MHz reference clock. For applications requiring a very high frequency stability such as very low data rate carriers, an optional reference clock of 0,01ppm can be ordered separately.

Optionally, an LNB power supply, a frequency band selection signal and a 10MHz reference frequency can be delivered to an LNB via the L-band input providing a compact and cost effective solution.

The AZ720 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 AZ710 via RMCP or SNMP.

Key features

- Agile L-band to IF-band downconverter
- High Gain
- IF output frequency switchable between 70 and 140 MHz
- Ultra fine L-band frequency resolution (48Hz)
- Very high frequency stability
- High linearity over the entire bandwidth
- Low noise figure
- Spectrum inversion
- Optional LNB power supply
- Optional 10 MHz reference input/output

Main advantages

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

Applications

- Earth Stations
- Telco and trunking infrastructure
- Generic satcom applications

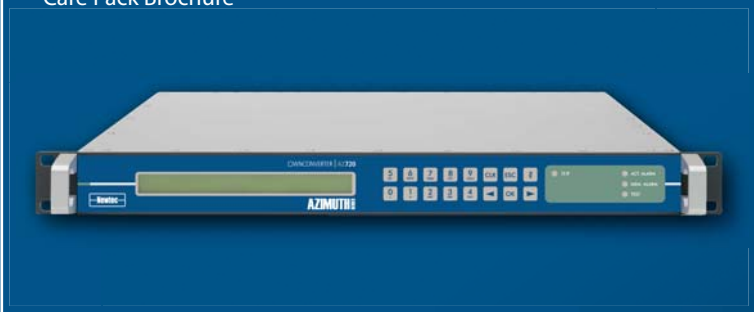
Related products

AZ710 Upconverter
AZ730 Up & Down Converter
AZ740 Indoor L-band Block Upconverter
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 – AZ720(R6)

Interfaces

Input interface (IF):

- Connector SMA (F), 50 ohms
- Return loss >15dB
- Frequency range 950 to 2150 MHz
- Input level Max composite -20dBm

Output interface (IF):

- Connector BNC (F), 50 ohms
- Return loss >15dB
- Frequency range 70 ± 20MHz, 140 ± 40MHz
- Output level <=0 dBm typical

10 MHz reference input / output

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

LNB power and control (optional)

- max. current 350 mA (on L-band input)
- voltage 11,5 -14 V (Vertical polarization) 16 -19 V (Horizontal polarization) & additional 22 kHz +/- 4KHz (band selection according to universal LNB)
- 10 MHz reference

Transfer characteristics

Gain

- Programmable Gain 0 to 50 dB
- Gain step size 0.1 dB
- Gain variation over 36/72 MHz BW 1.2 dB peak-to-peak
- Gain variation over T°(+20 to +40°C) ± 0.5 dB

Linearity

- Output 1dB compression IF +10dBm
- AM/PM conversion 0.1°/dB max@0dBm output

Switching

- Spectrum inversion Selectable
- Output switching suppression >80 dB

Noise

- In band spurious (signal related) <-60 dBc (@ -25 dBm input and 0 dBm output)
- Non signal related spurious <-70dBm
- Image rejection -60dBc
- Noise figure <15 dB at max gain
- Phase noise

@ 10 Hz	<-50 dBc/Hz
@ 100 Hz	<-70 dBc/Hz :
@ 1KHz	<-80 dBc/Hz
@ 10 KHz	<-85 dBc/Hz
@ 100 KHz	<-95 dBc/Hz

- Group delay:

	@ 72 MHz BW	@ 36 MHz BW
Linear group delay	0.05 ns/MHz	0.03 ns/MHz
Parabolic group delay	0.0035 ns/MHz²	0.01 ns/MHz²
Residual group delay	1 ns peak-to-peak	1 ns peak-to-peak

10 MHz Internal Reference frequency

High Stability
Stability: ±5x10^{-8} over 0°C to 70°C
Ageing: ± 15 ppb/day
± 300 ppb/year
Very High Stability (optional)
Stability: ±2x10-9 over 0°C to 65°C
Ageing: ± 0.5 ppb/day
± 500 ppb/10 year

Available Alarms

- 10 MHz alarm
- Power supply alarm
- Temp. alarm
- Synthesizer out-of-lock
- Input Overload warning (no Rx switch-off) (adjustable & selectable threshold)
- Input underload alarm (adjustable & selectable threshold)

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

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

AZ 720 Downconverter		Order n°
Default Configuration		
L-band (950 - 2150MHz) to IF downconverter, SNMP 10MHz reference In/Out High stability		AZ720
Configuration options Category	Max. 1 option per category	
10MHz reference In/ Out	High stability	Default
	Very high stability	GR-02
Additional Options Category	Max. 1 option per category	
Input interface	LNB power supply	FC-01
	LNB power supply + 10 MHz	FC-02
Services Category		
Assistance	Care Pack Basic	GA-06
	Care Pack Extended	GA-07

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

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