

# AZ750 Combiner

## Azimuth Product Family

# AZIMUTH SERIES

### Description

The AZ750 is an active L-band combiner designed primarily to bring together several L-band carriers in a single satellite channel.

To equalize the level of the incoming signals, each input has its own amplifier/ attenuator.

The AZ750 can also be used as an active switching device for signal routing purposes or redundancy switching operations.

In its default configuration, the AZ750 combines up to 4 different L-band signals into one L-band signal. As an option it is possible to combine up to 8 different L-band signals within the same unit.

A DC power supply and a reference frequency are also available on the L-band output, providing a compact and cost effective solution when the AZ750 is used in combination with an outdoor RF upconverter and/or amplifier.

The AZ750 can be delivered with an integrated block upconverter as option. In this configuration, the AZ750 converts the L-band output signal of the combiner to C, Ku or DBS-band.

The AZ750 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 AZ750 via Newtec's proprietary RMCP protocol or via SNMP.

### Key features

- Up to 8 L-band inputs
- Each input is switchable and gain adjustable
- Optional upconversion to C, Ku or DBS-band
- Optional 10 MHz +DC power for BUC
- Optional 10 MHz reference input/output
- Advanced monitoring and control

### Main advantages

- Highly compact
- High versatility and flexibility
- Cost effective
- Highest standard proven reliability

### Applications

- DTH
- Primary distribution
- Contribution

### Related products

AZ110 Broadcast Satellite Modulator  
EL170 IP Satellite Modulator  
AZ710 Upconverter  
AZ720 Downconverter  
AZ730 Up-Down converter  
AZ740 Indoor L-band Block Upconverter

AZ200 Universal Switching System

### Related documents

Care Pack Brochure



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R4/09.2011

# Specifications – AZ750(R8)



## Interfaces

### Input / output interface: L-band

- Connector SMA (F), 50 ohms
- Return loss (50 ohms) >14dB
- Frequency range 950 to 1750 MHz
- Max input power -10 dBm

### Output interface: RF, (optional)

- Connector RF-band out SMA (F), 50 ohms
- Return loss >12dB
- Frequency range RF-band
  - C-band :5.85 – 6.65 GHz
  - Ku-band :12.75 – 13.25 GHz
  - Ku-band :13.75 – 14.50 GHz
  - DBS band :17.30 – 18.10 GHz
  - DBS band :17.60 – 18.4 GHz

### Output L-band monitoring (with Upconverter option)

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

### 10 MHz reference input / output (optional)

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

### BUC power and reference frequency (optional)

- max. current 4 A
- voltage 24V, 48V
- frequency 10MHz
- stability see Internal Reference Frequency

### L-band channel characteristics

- Connector N(F) - 50 ohms
- Gain -30 to 10dB
- Output 1dB compression +10dBm
- Gain flatness over 36MHz <± 0.25 dB
- Gain flatness over L-band <± 1dB
- Spurious(@-10dBm output power) <-65dBc/4KHz
- L-band output mute >60 dBc
- Crosstalk >60 dBc

### L-band to RF-band channel characteristics

- Gain (over temperature and frequency)
  - C-band -20 to 20 dB
  - Ku-band 12.75-13.25 GHz -30 to 10 dB
  - Ku-band 13.75-14.50 GHz -30 to 10 dB
  - DBS-band -20 to 20 dB
- Output 1dB compression Ku-band >0dBm
- Output 1 dB compression C and DBS >10dBm
- Gain flatness Ku-band ±0.60dB/36MHz max
- Gain flatness C and DBS ±0.45dB/36MHz max
- In-band spurious Non signal related <-80dBm
- Signal related for rate >200kbaud Ku-band (up to -10dBm output) <-66dBc/4kHz
- C and DBS-band (up to 0dBm output) <-66dBc/4kHz
- RF output mute >60dBc
- Phase noise
 

	Ku and DBS band	C-band
@ 10 Hz	<-30 dBc/Hz	<-50 dBc/Hz
@ 100 Hz	<-60 dBc/Hz	<-70 dBc/Hz
@ 1 KHz	<-75 dBc/Hz	<-80 dBc/Hz
@ 10 KHz	<-85 dBc/Hz	<-90dBc/Hz
@ 100 KHz	<-95dBc/Hz	<-100 dBc/Hz

## Internal Reference frequency

High Stability 1ppm

- Residual group delay 1 ns peak-to-peak
- Stability ±5x10-8 over 0°C to 70°C
- Ageing ± 15 ppb/day
- ± 300 ppb/year

Very High Stability 0.01ppm (optional)

- Stability ±2x10-9 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

## 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 750 L-band combiner		Order n°
<b>Default Configuration</b>		
4-Input L-band combiner, SNMP Output interface: 950 - 1750MHz		AZ750
<b>Configuration options</b>		
Category	Max. 1 option per category	
Input interface	4-Input L-band	Default
	8-Input L-band	FE-02
Output Interface	L-band (950 - 1750MHz)	Default
	L-band + 10MHz for BUC	FA-02
	L-band + 10MHz + 24Vdc for BUC	FA-09
	L-band + 10MHz + 48Vdc for BUC	FA-10
	L+C-band (5,85 - 6,65 GHz)*	FA-11
	L+Ku-band ( 12,75 - 13,25 GHz )*	FA-05
	L+Ku-band ( 13,75 - 14,50 GHz )*	FA-06
	L+DBS-band (17,30-18,10 GHz)*	FA-07
L+DBS-band (17,60-18,40 GHz)*	FA-08	
<b>Additional options</b>		
Category	Max. 1 option per category	
10MHz reference In/Out	High stability	GR-01
	Very high stability	GR-02
<b>Services</b>		
Category		
Assistance	Care Pack Basic	GA-06
	Care Pack Extended	GA-07

(\*) Not available with 8-Input L-band option

- Other configurations and options, such as RF-band amplifiers, L-band splitters or a L-band Upconverter on an additional IF input are available on request.
- Contact your sales representative for details (sales@newtec.eu)

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