

# AZ860

## Concentrator – Deconcentrator

### Azimuth Product Family

# AZIMUTH

SERIES

#### Description

The Newtec AZ860 Concentrator-Deconcentrator is the ideal product to realize transparent and efficient transmissions of several MPEG Transport Streams on a single transmission channel, such as a satellite DVB-S or DVB-S2 carrier, or a terrestrial leased line.

The concentrator is installed at the transmit side and is designed to combine up to 8 input Transport Streams into one single stream on an ASI interface. The deconcentrator is installed at the receiving end and restores the original Transport Streams. The concentration/deconcentration process is completely transparent and the combined stream is fully compatible with MPEG/DVB transmission equipment..

The AZ860 makes use of an innovative proprietary concentration technology developed by Newtec. This technology combines Transport Streams into a single MPEG stream without changing anything in their content, their bit rate or their clock reference information (PCR). This feature is essential in networks with strict synchronisation requirements like SFN networks where adjacent towers are transmitting on the same frequency.

The AZ860 is widely used in primary distribution networks for terrestrial and mobile TV.

The AZ860 Concentrator – Deconcentrator also contains a proprietary scrambling feature to protect each stream individually against piracy. The inputs of the concentrator and the outputs of the deconcentrators are standard ASI interfaces.

The concentrator and the deconcentrator are part of the Azimuth family and are available as stand alone units. The deconcentrator functionality can also be integrated in a demodulator allowing deconcentration of up to 4 ASI streams (HZ930)

The AZ860 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 AZ860 via RMCP or SNMP.

#### Key features

- Concentrates and deconcentrates up to 8 DVB or ATSC Transport Streams into a single Transport Stream
- Fully transparent: no PID translation, no PCR restamping, no rate adaptation and no modification of SI/PSI tables
- Compliant to SFN requirements
- Each transport stream can be scrambled and descrambled Independently
- Matrix routing capability between the multiple inputs of the concentrator and the multiple outputs of the deconcentrator

#### Main advantages

- Reduced capital investment on hub and remote sites
- Lower operational cost thanks to efficient use of transmission bandwidth
- Cost effective and easy-to implement technology compared to traditional multiplexer solutions
- Protection of the data content against unauthorized access by other parties

#### Applications

- Primary distribution for Digital Terrestrial TV
- Primary distribution for Mobile TV
- ASI networking and routing

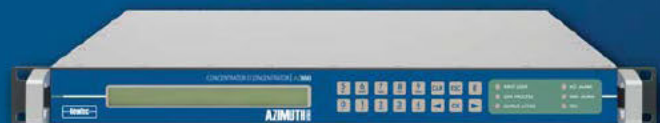
#### Related products

AZ110 Broadcast Satellite Modulator  
AZ910 DSNG and Contribution Demodulator

HZ930 Satellite receiver & deconcentrator

#### Related Documents

Care Pack Brochure



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# Specifications – AZ860(R6)



## Interfaces

### ASI Electrical Inputs

- Connector: BNC female / 75 Ohms
- Sensitivity: 200 mVpp
- Max input: 880 mVpp
- Return loss: > 17 dB (22-270 MHz)

### ASI Electrical outputs

- Connector: BNC female / 75 Ohms
- Level: 800 mVpp ± 10%

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

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

## Performance

- ASI Baud rate IN : 270 Mbaud ± 100 ppm
- ASI Baud rate OUT : 270 Mbaud accuracy (internal ref.) : ± 20 ppm accuracy (external ref.) : same as external ref.
- ASI Transport Rate OUT range : 4 – 160 Mbps resolution : 1 bps accuracy (internal ref.) : ± 20 ppm accuracy (external ref.) : external ref. ± 10-11
- ASI Transport Rate IN total transport rate : 4 – 156 Mbit/s
- Transport packet format input (automatic) : 188, 204-RS, 204-noRS output (selectable) : 188, 204-noRS
- Transport packet timing (“Byte” timing corresponds to DVB “Burst” timing and means bytes are spread) input (automatic) : byte timing, packet timing output (fixed) : byte timing Overhead TranspRate OUT / TranspRate IN < 1.03

## Deconcentrator mode

- ASI Baud rate IN : 270 Mbaud ± 100 ppm
- ASI Baud rate OUT : see Concentrator mode
- ASI Transport Rate OUT range : 0 – 156 Mbps accuracy : follows input
- ASI Transport Rate IN total transport rate : 4 – 160 Mbit/s
- Transport packet format input (automatic) : 188, 204-RS, 204-noRS output (selectable) : 188, 204-noRS
- Transport packet timing (“Byte” timing corresponds to DVB “Burst” timing and means bytes are spread) input (automatic) : byte timing, packet timing output (fixed) : packet timing

## Monitoring and Control

### Control - Concentrator

- Output framing : 188-byte, 204 byte
- Output Rate : 4 – 160 Mbps, step 1 bps
- Mux input : ON/OFF (per input)
- Scrambling mode : ON/OFF (per input)
- Scrambling key : 6 byte (per input)
- Reference clock : internal / external

### Monitoring – Concentrator and Deconcentrator

- Alarms on all inputs
- All control parameters
- Ext. reference alarm
- Approx. Input Rate Margin: Mbps (concentrator only)
- Buffer Overflow alarm (concentrator only)

## Internal Reference frequency (optional)

### High Stability

- Stability: ±5x10<sup>-8</sup> over 0°C to 70°C
- Ageing: ± 15 ppb/day ± 300 ppb/year

### Very High Stability

- Stability: ±2x10<sup>-9</sup> 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

AZ860 Concentrator - Deconcentrator		Order n°
<b>Default configuration</b>		
Concentrator - Deconcentrator, SNMP Function: Deconcentrator 4 Transport Streams		AZ860
<b>Configuration options</b>		
Category		Max. 1 option per category
Function	Deconcentrator 4 Transport Streams	Default
	Deconcentrator 8 Transport Streams	DC-02
	Concentrator 4 Transport Streams	DC-03
	Concentrator 8 Transport Streams	DC-04
<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

Other configurations and options, such as optical interfaces, are available on request. Contact your sales representative for details (sales@newtec.eu)