

# AZ810

## Stream Aggregator

### Azimuth Product Family

# AZIMUTH

SERIES

## Description

The cost of the space segment is unmistakably a major issue when considering Primary Distribution of Terrestrial and Mobile TV via satellite. Newtec optimizes the efficiency of satellite bandwidth usage by providing solutions to transmit several television transport streams on a single satellite carrier. The AZ810 is a device that allows aggregating several transport streams before the satellite modulation stage. The AZ810 is designed to be used together with the AZ110 or M6100 Broadcast Satellite Modulators.

The AZ810 Stream Aggregator enables DVB-S2 or S2 Extensions transmissions in Multistream, CCM or VCM modes with a virtually unlimited number of ASI transport stream inputs .

Multistream is a main advantage of the DVB-S2 standard and of S2 Extensions and allows users to aggregate a number of transport streams or IP streams into one satellite carrier in a fully transparent manner, maintaining the integrity of the original content. VCM (Variable Coding and Modulation) enables each of these streams to be modulated with its own parameters.

The Stream Aggregator supports 6 ASI inputs. In case of large numbers of ASI transport streams, other aggregators can be placed in parallel in order to feed the modulator. This yields to the creation of subgroups that can be routed to different modulators.

The AZ810 easily combines multiple services (Terrestrial TV, Radio, Mobile TV) on one satellite carrier. The combination facilitates the saturation of a transponder and thus achieves a more efficient use of the satellite bandwidth.

Moreover, one Newtec Multistream demodulator HZ914 or MDM6100 is sufficient to receive and to output several streams simultaneously (max. 4/HZ914 or 6/MDM6100), hereby reducing the infrastructure costs for the satellite signal reception. Combined with the Newtec Multistream/VCM DVB-S2 or S2 Extensions modulators and demodulators, the AZ810 fully exploits the benefits of Multistream transmissions in DVB-S2 or S2 Extensions.

## Key features

- Aggregation of up to 6 transport streams on ASI
- Each ASI input is independently configurable
- DVB-S2 or S2 Extensions CCM and VCM mode
- Multiple AZ810 units can be combined to feed one modulator with more than 6 transport streams
- Fully DVB-S2 compliant
- Fully SFN compliant
- One AZ810 unit can feed multiple modulators
- Null packet deletion
- Remote M&C
- SNMP and alarms.
- High reliability

## Main advantages

- Ability to saturate a transponder even if multiple multiplexes are sent
- Provides virtually unlimited number of ASI inputs to modulator
- SFN-compliant transmission
- No interferences between the multiplexes
- Fully transparent DVB-S2 transmission
- Possible to use one Multistream demodulator in order to receive several streams
- No transmission overheads compared to DVB-S2 standard
- Supports S2 Extensions modulations which are up to 20 % more efficient than DVB-S2

## Applications

The Stream Aggregator fits all applications where multiple services have to be sent over satellite:

- Primary distribution of multiple terrestrial TV multiplexes towards broadcast towers
- Simultaneous distribution of DVB-H and DVB-T services to broadcast towers
- Distribution of several services (DVB-T + other DVB-S2 carriers) towards one set or different sets of receivers.

## Related products

M6100 Broadcast Satellite Modulator  
MDM6100 Broadcast Satellite Modem  
AZ110 Broadcast Satellite Modulator  
HZ914 Multistream Satellite Receiver

## Related Documents

White paper and application note on  
"The Advantages of DVB-S 2 Multistream"  
Care Pack Brochure



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# Specifications – AZ810(R9)



## Transmission

- DVB-S2 compliant
- S2 Extensions compliant
- Short frames and normal frames
- Pilot insertion
- Supports CCM and VCM transmissions
- Possibility to choose different modulation and coding parameters for each stream
- Creation of several groups to multiple modulators (routing feature)

## Data Interfaces

### Data interface input

- 6x ASI inputs, switchable
- Connectors BNC (F) - 75 ohms (coax)
- DVB Transport streams
- Total aggregated input rate: 150 Mb/s
- Max. data rate/input: 100 Mb/s

### Data interface output

- Auto-switching 10/100/1000 Base-T Ethernet Interface
  - Connector: UTP (RJ45)
- To be fed to a Newtec modulator AZ110.

## Generic Unit Features

- Current configuration automatically stored in non-volatile memory
- Dynamic forced cooling
- CE label
- Redundant firmware for recovery in case of failure during software upgrade procedure

## Monitor and Control Interfaces

- Web based graphical user interface
- Management via IP interface over Ethernet (UDP and TCP supported)
- Key monitor parameters available locally on front panel
- Device setup available through the front panel
- Real time clock
- Persistent memory for configuration storage

## Physical

- Very compact: 1RU, width: 19", depth: 15,3", 6kg
- Power supply: 90-130 & 180-260 Vac, 60VA
- Temperature:
  - Operational: 5 to 35°C
  - Storage: -40 to +70°C
- Humidity: 5% to 85% non-condensing
- CE label

## Ordering Information

AZ810 - STREAM AGGREGATOR		Order n°
<b>Default configuration</b>		
Stream Aggregator with 6 ASI inputs, Multistream, CCM, VCM, SNMP		AZ810
<b>Configuration options</b>		
Category Max. 1 option per category		
Rack mount assembly Sliding rails		GM-01
<b>Services</b>		
Category		
Assistance	Care Pack Basic	GA-06
	Care Pack Extended	GA-07

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