

# AZ850

## Rate Adapter

### Azimuth Product Family

# AZIMUTH

SERIES

#### Description

The AZ850 Rate Adapter is a device designed to change or stabilize the data rate of a transport stream. It provides a fix and stable output data rate independently of the rate of the input transport stream. The rate adaption is fully automatic for a maximum ease and convenience of operation.

The AZ850 is the perfect solution when there is an accidental or a voluntary difference between the output rate of an encoder/multiplexer and the transmission rate of a modulator.

When the input data rate is lower than the output data rate, the AZ850 adds stuffing packets to the transport stream to achieve the desired data rate.

When the input data rate is higher than the output data rate, the AZ850 identifies and removes stuffing packets from the transport stream to reduce the transmission rate to desired value.

When the data rate of the input signal is unstable, the AZ850 will automatically add or remove stuffing packets to restore a stable output rate.

The AZ850 performs a very precise restamping of the PCR time references in the transport stream, guaranteeing the quality and stability of the timing recovery mechanism at the end of the transmission chain.

In its default configuration, The AZ850 has 2 ASI inputs which can be selected either manually or automatically. One of the Electrical ASI interface can be optionally replaced by an optical interface.

Optionally, a high stability reference frequency can be added.

The AZ850 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 AZ850 via RMCP or SNMP.

#### Key features

- Fully DVB compliant
- Null Packet insertion / deletion
- PCR (program Clock Reference) re-stamping
- Two selectable ASI inputs (auto or manual)
- ASI or optical input/output

#### Main advantages

- Fixed transmission rate/occupied satellite bandwidth
- Ease of operation
- High flexibility
- Guaranteed interoperability with third party encoders and modulators

#### Applications

- Broadcasting
- DTH
- Primary Distribution
- DSNG, fly-away

#### Related products

AZ110 Broadcast Satellite Modulator  
Care Pack Brochure

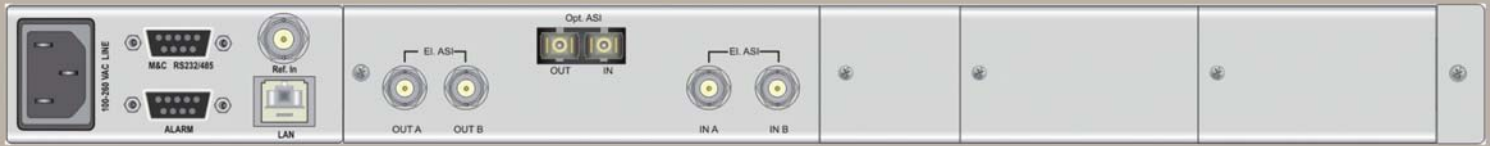


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# Specifications – AZ850(R6)



## Interfaces

### ASI Electrical inputs

- Connector BNC (F), 75 ohms
- Return loss (22-270 MHz) 17 dB
- Coupling transformer
- Sensitivity 200 mVpp
- Max input 880 mVpp
- Interface rate 270 MBaud  $\pm$  100 ppm
- TS packet formats 188 or 204-byte
- Packet timing (burstiness) compliant to DVB burst & byte mode

### ASI Electrical outputs

- Connector BNC (F), 75 ohms
- Coupling transformer
- Level 800 mVpp  $\pm$  10%
- Rise time < 1.2 ns
- Interface rate as per DVB-A010 Rev1.

### ASI Optical input (optional)

- Connector SC
- Fiber 1300 nm multimode  
62.5/125 mm
- Received power -27dBm to -14 dBm

### ASI Optical output (optional)

- Connector SC
- Fiber 1300 nm multimode  
62.5/125 mm
- Transmit power -19dBm to -14 dBm
- Wavelength 1270 nm <  $\lambda$  < 1380 nm

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

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

## Internal Reference frequency (optional)

### High Stability

- Stability  $\pm 5 \times 10^{-8}$  over 0°C to 70°C
- Ageing:  $\pm 15$  ppb/day  
 $\pm 300$  ppb/year

### Very High Stability

- Stability  $\pm 2 \times 10^{-9}$  over 0°C to 65°C
- Ageing:  $\pm 0.5$  ppb/day  
 $\pm 500$  ppb/10 year

## Performance

- Transport rate input  
Range 0-216 Mbit/s
- Packet buffer: 1024 packets max
- Transport rate output  
Resolution 1 Hz  
Accuracy 100 ppm

## 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 850 RATE ADAPTER		Order n°
<b>Default configuration</b>		
Rate Adapter, SNMP ASI interfaces: Electrical		AZ850
<b>Configuration options</b> Category Max. 1 option per category		
ASI interfaces	Electrical	Default
	Electrical + Optical	DG-02
<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

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