

# AZ210

## 1+1 Modulator Redundancy Switch

### Azimuth Product Family

# AZIMUTH

SERIES

#### Description

The AZ210 1+1 Modulator Redundancy Switch product provides a versatile 1+1 protection scheme for satellite modulators. The AZ210 is easy to operate and switches simultaneously the input data signals and output IF/RF signals.

The switching between the main modulator and the redundant modulator can be done automatically through alarm contacts, manually through the front panel or the dedicated web interface, or remotely via a monitoring and control system.

When the automatic mode is activated, the AZ210 monitors the alarm contacts of the two modulators through cable connections. When an alarm is detected, the input and output switches are toggled, effectively rerouting the input and output signals to the redundant modulator. The fast switching ensures a minimal service interruption.

In its default configuration, the AZ210 switches an output IF (75 ohms) signal. A wide range of input and output switching options makes the AZ210 compatible with almost any signal used in satellite communications. The range of options includes ASI, optical, G.703, SDH, HSSI input switches, as well as IF, L-band and RF output switches.

The AZ210 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 AZ210 via RMCP or SNMP.

#### Key features

- Dual redundant power supply
- Automatic or manual operational mode
- Suitable for any modulator with alarm contacts
- Switching of ASI, G.703, SDH or HSSI inputs
- Switching of IF, L-band or RF-band outputs
- Stand alone operation or integrated in a network management system

#### Main advantages

- Increases service availability significantly
- Compatible with any modulator that has alarm contacts
- High reliability
- High compactness
- Easy to operate

#### Applications

- Satellite Broadcast
- Contribution and distribution
- DSNG
- Any uplink facility

#### Related products

AZ110 Broadcast Satellite Modulator  
AZ119 ABS-S Satellite Modulator  
AZ120 Telco Satellite Modulator  
AZ128 High Speed Telco Satellite Modulator  
AZ130 WAN Satellite Modulator

AZ200 Universal Switching system  
AZ270 1+1 Frequency redundancy Switch  
AZ290 1+1 Demodulator redundancy Switch

#### Related Documents

Care Pack Brochure

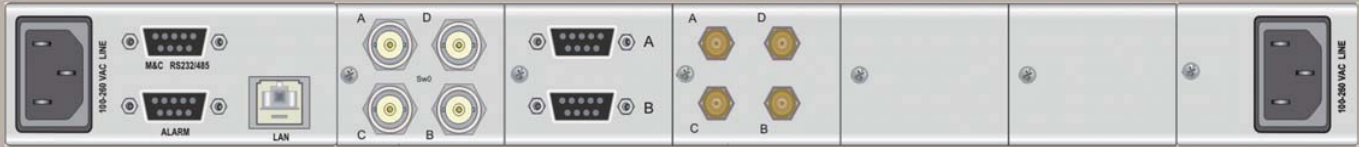


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# Specifications - AZ210(R7)



Backpanel config: ASI input switching, RF output switching

## Input Interface switch

### ASI/G.703

- Connectors: 4 x BNC (F) - 75 ohms
- Frequency: DC - 270 MHz
- Insertion loss: < 2 dB
- Isolation: > 50 dB (300 MHz)

### Optical, SC, single mode

- Connector: 2 x duplex SC receptacles
- Minimum input power: -30dBm
- Minimum output power: -15dBm
- Wavelength: 1300 nm
- Compliance: SONET OC3 & SDH STM1 (S1.1)

### Optical, SC, multi mode

- Connector: 2 duplex SC receptacles
- Minimum input power: -30dBm
- Minimum output power: -23.5dBm
- Wavelength: 1300 nm
- Compliance: ATM Forum UNI SONET OC-3 Multimode Fiber Physical layer specification

### HSSI

- Connectors: 25 pin sub-D (F)
- Frequency: DC - 52 MHz
- Isolation: > 30 dB (balanced)

## Output interface switch

### IF (75 ohms, DC - 270 MHz)

- Connectors: BNC (F) - 75 ohms
- Frequency: DC - 270 MHz
- Insertion loss: < 2 dB
- Isolation: > 50 dB (300 MHz)

### IF (50 ohms, DC - 270 MHz)

- Connectors: BNC (F) - 50 ohms
- Frequency: DC - 270 MHz
- Insertion loss: < 2 dB
- Isolation: > 50 dB (300 MHz)

### L-band (50 ohms, DC-2.5 GHz)

- Connectors: BNC (F) - 50 Ohm
- Frequency: DC - 2.5 GHz
- Return loss: > 18 dB (L band)
- Insertion loss: < 0.5 dB
- Isolation: > 75 dB (L band)

### L-band (50 ohms, DC-1.8 GHz)

- Connectors: SMA - 50 ohms
- Frequency: DC - 1.8 GHz
- Return loss: > 15 dB
- Insertion loss: < 2 dB
- Isolation: > 50 dB

### L-band (50 ohms, DC - 18 GHz)

- Connectors: SMA (F) - 50 Ohm
- Frequency: DC - 18 GHz
- Return loss: > 18 dB (L band) > 13 dB (RF)
- Insertion loss: < 0.5 dB
- Isolation: > 75 dB (L band) > 60 dB (RF)

## Generic

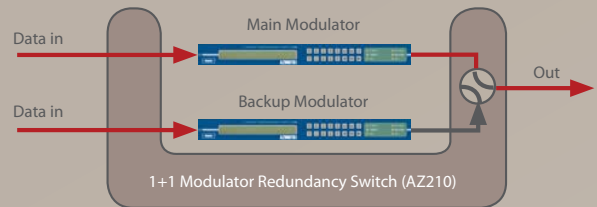
### Monitor and control interfaces

- Web based GUI
- Diagnostics report, alarm log
- RMCP over TCP-IP/UDP and RS232/RS485
- SNMP v2c

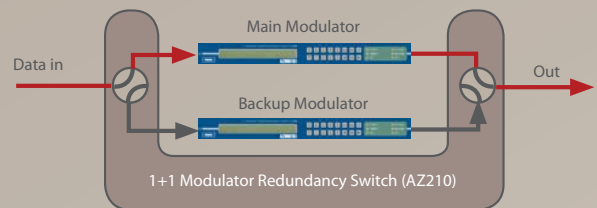
## Physical

- 1RU, width: 19", depth 51 cm, 6 kg
- Dual Power supply: 100-240 VAC, 105 VA, 47-63 Hz
- Temperature
  - Operational: 0°C to 37°C
  - Storage: -40 to +70°C
- Humidity: 5% to 85% non-condensing
- CE label, UL label

## Configurations



No input switching - Cross-over output switching



Cross-over input switching - Cross-over output switching

## Ordering information

AZ210 1+1 Modulator Redundancy Switch		Order n°
1+1 Modulator Redundancy Switch, SNMP Input interface switch : No input switching Output interface switch: IF, BNC, 75 ohms, DC - 270 MHz		AZ210
<b>Configuration options</b> Category Max. 1 option per category		
Input interface switch	No input switching	Default
	ASI / G.703, BNC 75 ohms	DA-01
	Optical, SC, single mode fibre	DA-02
	Optical, SC, multi mode fibre	DA-03
Output interface switch	HSSI, 25-pin sub-D	DA-04
	IF, BNC, 75 ohms, DC - 270 MHz	Default
	IF, BNC, 50 ohms, DC - 270 MHz	DB-01
	L-band, BNC, 50 ohms, DC - 2.5 GHz	DB-03
	L-band, SMA, 50 ohms, DC - 1.8 GHz *	DB-05
	L-band/RF, SMA, 50 ohms, DC - 18 GHz	DB-04
<b>Services</b> Category		
Assistance	Care Pack Basic	GA-06
	Care Pack Extended	GA-07

\* Toggle Switch

Other configurations such as N+1 protection schemes, optical splitters are available with the Newtec AZ200 Universal Switching System.

Contact your sales representative for details (sales@newtec.eu)