



# Halo

ASI/SDI Routing Switcher  
HD/SD Routing Switcher

## FEATURES

- HD/SD router available in sizes from 8 x 8 to 32 x 32
- High performance SDI and ASI compatible
- Flexible operating modes - single or dual outputs. One or two routers in a frame
- Removable dual redundant power
- Supports control from management systems and control panels

### Control using:

- BPX or XY control panels
- Pro-Bel General Switcher protocol via RS485 or Ethernet
- SNMP
- Various OEM protocols - contact Pro-Bel for details
- Slave from Sirius, Freeway, other Halo or Axis routers.

### The 32 x 32 unit can be configured for:

- 32 x 32 single outputs
- Dual 16 x 16 single outputs
- 32 x 16 operation with dual outputs

### 32 x 16, 16 x 16 and 8 x 8:

- Single outputs

**HALO - THE KEY TO RELIABLE AND COST EFFECTIVE REDUNDANCY SWITCHING**



Pro-Bel's Halo family is perfect for ASI/SDI and HD/SD switching applications requiring a cost effective but reliable solution. Halo addresses a wide range of digital routing requirements with a special focus on redundancy switching in digital cable and satellite applications.

The Halo range is based on the latest switching technology to fully support HD, SDI and ASI switching. The router can either be supplied with 8 inputs and 8 outputs, 16 inputs and 16 outputs, 32 inputs and 32 outputs or 32 inputs and 16 single outputs.

The flexibility to select different operating modes, including dual outputs, plus removable redundant power supplies mounted on the rear makes this an ideal choice for redundancy switching requirements. As an example, in dual operation one router could switch SDI into MPEG encoders and the second could switch the ASI outputs from the encoders.

Halo is more than just a standalone routing system. The editable database releases the router's full potential, permitting the control ports to be configured as either panel ports, supporting a mixture of up to 32 control panels and under monitor display, or as remote control ports. With the editable database, Halo can be configured to provide control for up to 8 breakaway levels.

Full control and compatibility with the parallel control bus used on Pro-Bel's Freeway and Sirius routers, and the use of Pro-Bel general switcher protocol on the remote control ports, guarantees operation with all Pro-Bel control systems, allowing Halo routers to be seamlessly incorporated with existing and new router installations. The addition of an Ethernet port allows control of the router in remote locations.

# Halo

## ASI/SDI Routing Switcher HD/SD Routing Switcher

### Technical Specification

#### General

Size 3U 19" rack mounting x 60mm deep (exc.PSU, 260mm inc. PSU)

Power supplies Dual, autosensing 110/230Vac. 50/60 Hz  
Power consumption 25W maximum

#### Control

Control 2 x RS485, panel/remote control ports, SNMP on 10Base T port

Configuration 1 x RS232 (option)

Control expansion 1 x parallel port

#### Connections

Power 3 way IEC

Control/configuration 9 way D type socket

Expansion 37 way D type socket

Video reference BNC

Power monitoring relay 9 way D



Reverse of Halo frame

#### Halo SD-SDI

##### Inputs

Number and type 32 Unbalanced NRZI coded serial data

Standard Serial EBU Tech 3267E SMPTE 259M-ABCD

Impedance 75Ω

Data rate 50—622Mbps

Return loss >15dB 10MHz to 360MHz

Amplitude 800mV p-p nominal

DC offset <5V

Equaliser Automatic for up to 250m cable (Belden 8281, PSF 1/2M)

##### Outputs

Type 32 Unbalanced NRZI coded serial data

Standard Serial EBU Tech 3267E SMPTE 259M-ABCD

Impedance 75 Ω

Data rate 50—622Mbps

Return loss >15dB 10MHz to 360MHz

Amplitude 800mV p-p ±10%

DC offset 0V ± 0.5V

#### Halo HD-SDI

##### Inputs

Number and type 32 unbalanced serial data

Standard HD/SDI to SMPTE 292M and SDI to SMPTE 259M

Return loss >13dB @ HD rates

Equaliser >100m Belden 1694A @ HD rate

##### Outputs

Number and type 32 unbalanced serial data

Return loss >13dB @ HD rates

Amplitude 800mV ± 10%

#### Ordering Information

	Type	Master/Slave	Size
HAL-HDVM-3232	HD	Master	32 x 32
HAL-HDVS-3232	HD	Slave	32 x 32
HAL-SDVM-3232	SD	Master	32 x 32
HAL-SDVS-3232	SD	Slave	32 x 32
HAL-HDVM-3216	HD	Master	32 x 16
HAL-HDVS-3216	HD	Slave	32 x 16
HAL-SDVM-3216	SD	Master	32 x 16
HAL-SDVS-3216	SD	Slave	32 x 16
HAL-HDVM-1616	HD	Master	16 x 16
HAL-HDVS-1616	HD	Slave	16 x 16
HAL-SDVM-1616	SD	Master	16 x 16
HAL-SDVS-1616	SD	Slave	16 x 16
HAL-HDVM-0808	HD	Master	8 x 8
HAL-HDVS-0808	HD	Slave	8 x 8
HAL-SDVM-0808	SD	Master	8 x 8
HAL-SDVS-0808	SD	Slave	8 x 8

Specifications subject to change

**Note:** The 8 x 8 family will appear as a 16 x 16 router to any external controller.

The 32 x 16 will appear as 32 x 32 to any external controller.

[WWW.PRO-BEL.COM](http://WWW.PRO-BEL.COM)

UK

+44 (0) 1189 866 123

USA

+1 631 549 5159

France

+33 (0) 1 45 18 39 80

