

# Halo — ASI/SDI and HD/SD/ASI Routing Switcher

## Data Sheet

SAM's Halo family is perfect for ASI/SDI and HD/SD/ASI 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.

### Features

- Available in sizes from 8 x 8 to 32 x 32
- HD/SD/ASI or low cost SD/ASI options
- 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
- SAM General Switcher protocol via RS485 or Ethernet
- SNMP
- Various OEM protocols - contact SAM 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 operatin with dual PSU

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

- Single outputs

Full control and compatibility with the parallel control bus used on SAM's Freeway and Sirius routers, and the use of SAM general switcher protocol on the remote control ports, guarantees operation with all SAM 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.



Reverse of Halo frame.

## 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        | 625/525 black + burst  |
| Power monitoring relay | 9 way D  |
| 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  |
| Equalizer              | Automatic for up to 250m cable (Belden 8281, PSF1/2M)  |
| Outputs                |  |
| Type                   | 32 Unbalanced NRZI coded serial data   |
| Standard               | Serial EBU Tech 3267E SMPTE 259M-ABCD  |
| Impedance              | 75 Ω   |
| Data rate              | 3—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   |
| Equalizer              | >100m Belden 1694A @ HD rate   |
| Outputs                |  |
| Number and type        | 32 Unbalanced serial data  |
| Return loss            | >13dB @ HD rates   |
| Amplitude              | 800mV ± 10%  |
| Note:                  | The 8 x 8 family will appear as a 16 x 16 router to any external controller.<br><br>The 32 x 16 will appear as a 32 x 32 to any external controller. |

## Ordering Information

| Code          | 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   |