

D-3000 High Definition and Serial Digital Video Router



Features

- 128x128 High Definition Serial Digital Video in only 9RU. Frame only 15"/381mm deep.
- Data Rates from 3 Mb/s to 1.5 Gb/s.
- Two outputs per destination included; reduces need for external distribution amplifiers.
- For HDsdi, automatic source equalizing to 100m, and automatic destination reclocking for data rates from 143 Mb/s to 1.485 Gb/s. Including DVB-ASI.
- For SDI, automatic source equalizing to 300m at 270 Mb/s, and destination reclocking at 143, 177, 270, 360 and 540 Mb/s. Bypass mode for DVB-ASI signals.
- Destination monitor switcher built-in.
- Sources (inputs) in multiples of 16; destinations (outputs) in multiples of 8.
- All modules plug in from front of frame.
- Power Supply and Control System redundancy.
- Ethernet Port Optional
- 48 VDC Power Supplies available.
- Control system completely compatible with D-2800 and D-2600 Routers, with:
 - Tie-Line Management System available
 - RouteMaster PC control and system configuration
 - Virtual Tally System available
 - Under Monitor Displays available
 - Full line of reprogrammable control panels available

Description

The Datatek D-3000 High Definition serial digital video routing switcher accommodates all data rates from 3 Mb/s to 1.5 Gb/s in an unusually compact rack mounting frame. Fully equipped for 128x128 serial digital video, or combinations of HD and SDI, the D-3000 mounts in only 9RU, and with a maximum depth of only 15 inches (381 mm). The depth of the frame in the signal I/O area is only 12 inches (305mm). Two outputs/destination are included, reducing the need for distribution amplifiers.

A wideband crosspoint module is used for all data rates to 1.5Gb/s. Up to two crosspoint modules are used in a frame; each is 64 sources x 128 destinations.



HD and SDI Interchangeable I/O Modules



A choice of input/output module sets is offered: HDsdi or SDI. The HDsdi module set accommodates data rates from 270 Mb/s to 1.5 Gb/s, with automatic source equalizing, and automatic destination reclocking for data rates from 143 Mb/s to 1.485 Gb/s. In DVB-ASI systems, the output module will automatically reclock the signal. The more economic SDI module set accommodates data rates from 3 Mb/s to 540 Mb/s, with automatic source

equalizing to 300m at 270 Mb/s, and destination reclocking at 143, 177, 270, 360 and 540 Mb/s (reclock 'off' for other rates and DVB-ASI). Reclock on/off is selected through the control system; it may be configured with the source. The input/output module sets are interchangeable and can be inter-mixed in the switcher frame. This permits the D-3000 to be used for both HD and SDI, with a smaller initial HD portion expanded as circumstances warrant.

Although the D-3000 9RU frame capacity is 128x128, with two outputs per destination, smaller systems can be configured initially and expanded later. Inputs can be expanded in multiples of 16, and dual outputs in multiples of 8.

A destination monitor switcher is built-in, enabling each destination output to be monitored through a single BNC connector, without disturbing the signal on the destination line. Monitor selection control is accessed through the matrix control system.

for COM, two vertical interval switching references for black burst/tri-level sync,, and external alarm connector. In addition, there are two Ethernet connectors; each control module uses a separate port. The optional Ethernet software provides LAN operation; diagnostics and status are available using SNMP (Simple Network Management Protocol).



D-3015 Control Module

The D-3015 Control Module contains the XY control system for the entire D-3000 matrix frame. A second D-3015 module may be added for control system redundancy. Provision is made for manual or automatic changeover between control modules with active, standby, fault indicators and alarm. A separate control system frame is not needed.

The D-3015 module contains a 40MHz microprocessor, Flash memory, enhanced serial communications controllers for the XY BNC control lines and COM line, RS-232 and RS-422 transmitter-receivers, an Ethernet controller and enhanced sync separators for two vertical interval switch references.

Control connectors at the rear of the frame provide several control ports: four coax XY control BNC connectors, and two 9-pin D-subminiature RS-232/422 connectors. Additionally, there are BNC loops

An alarm system monitors power supply voltages, temperature and fan operation. A failure produces red LED lights, an aural alarm and a contact closure for use with an external alarm system.



D-3016 Power Supply Module

Generally, each D-3000 Matrix Frame is equipped with two D-3016 Power Supply Modules. Provision is made for a third power supply module, which becomes a redundant power supply system, with all three modules sharing the load.



D-3000 128x128 Matrix Frame, 9RU

Specifications

Inputs

Type:	75 ohm BNC, terminating	Signal Level:	800 mV +/- 10%
Signal Level:	800 mV +/- 10%	Return Loss:	<u>HD I/O Modules:</u> 15 dB or better to 1.485 Gb/s <u>SDI I/O Modules:</u> 18 dB or better to 540 Mb/s
Return Loss:	<u>HD I/O Modules:</u> 15 dB or better to 1.485 Gb/s <u>SDI I/O Modules:</u> 15 dB or better to 540 Mb/s	Reclocking:	<u>HD I/O Modules:</u> Automatic for data rates 143 Mb/s to 1.485 Gb/s <u>SDI I/O Modules:</u> Automatic for data rates to 540Mb/s
Equalization:	<u>HD I/O Modules:</u> 100m at 1.485 Gb/s with Belden 1694A coax. <u>SDI I/O Modules:</u> 300m at 270 Mb/s with 1694A or 8281 coax		Complies with SMPTE 292M and 259M standards

Outputs

Number:	Two per destination
Type:	75 ohm BNC

Power

95-250V, 50/60Hz, 800VA max.
48 VDC optional

Dimensions

Height 9RU (15.75"/400mm)
Depth 15"/381mm
Standard 19"/482mm rack

Datatek reserves the right to make specification changes without notice.