

**FEATURES**

- ▷ Re-clocking of standard SD, HD and 3G SDI data rates
- ▷ Auto bypasses non-standard SDI rates from 20Mbit/s to 3Gbit/s
- ▷ Video mute on every output
- ▷ Passes SDI embedded audio and ancillary data
- ▷ Interactive web page interface (demo)
- ▷ Vertical interval switching
- ▷ Store and recall up to 10 presets (complete or partial matrix state recall)
- ▷ • Compact design - 4RU less than 6 inches deep
- ▷ Software updates via Ethernet port
- ▷ Backed by a full 2 year manufacturer parts and labor warranty
- ▷ Redundant power supply included
- ▷ Can be used with one or more Matrix Switch Corporation TCP/IP Remote Panels
- ▷ Flexible control using the MASCOT text based protocol via TCP/IP, serial port or web page interface
- ▷ Sierra Video Systems protocol support
- ▷ Ask us about other 3rd party control protocol support

MultiDyne FiberNet Modular 4RU SDI Video Routing Matrix offer field expandable matrix size configurations in input or output increments of 8 up to 64x64.



MultiDyne's SDI Routing Switcher offers the ultimate in modular system flexibility. Systems are fully factory assembled and tested to your specifications and can be expanded in the field as needed. System size is determined by modular cards which independently expand the system by 8 input or 8 output ports up to 64 inputs and 64 outputs. MultiDyne offers BNC, SFP, and mixed BNC/SFP modular I/O cards to meet your requirements. The MSC-XDM4000 includes everything needed for a complete system except your choice of I/O cards and SFP modules. These same cards and SFP modules are interchangeable across all routers in the XDM modular product family.

When SFP (Small Form-factor Pluggable) modules are used, they offer additional I/O flexibility. Systems can be configured down to the individual input or output, which can be populated as desired. Choose from MultiDyne's selection of fiber optic and HDMI SFP modules. In addition, since these modular systems are SFP MSA compatible, many other MSA standard modules from other manufacturers may also be used.

The heart of the MSC-XDM4000 is the control system and the rugged 4RU frame it resides

in. The plug in controller offers a high level of connectivity and system integration ease through the included Ethernet, USB, RS-232, and RS-485 control ports, supporting Matrix Switch Corporation's own powerful yet simple to use MASCOT protocol, a built in web page interface, and some common third party protocols. Software updates can be easily performed using the web page interface. The rugged steel enclosure includes quiet redundant forced air cooling for extended service life and reliability. Each system also includes two external DC power supplies (one extra for power supply redundancy).

The included 64x64 SDI crosspoint provides auto reclocking for standard 3G, HD, and SD rates, with bypass for non-standard rates between 20Mbps and 3Gbps. Switch on vertical sync functionality is provided through the included sync interface which accepts tri-sync, black burst, composite sync or analog video signals. Additional features include: embedded SDI audio pass-through, video mute on every output, stored routing presets (salvos), signal presence detection, reclocker bypass control, ASI support, and more!

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## ORDERING OPTIONS

These modular systems can be factory assembled and configured for a particular size. For convenience we offer model numbers for complete systems of various sizes as well as part numbers for the individual components (factory assembly available for both options). Consult the tables below for these two ordering methods.

## ORDERING INFORMATION

### Option 1

Model Number	Description
FiberNet MSC-HDX4000	Frame for 4RU Modular SDI Routing Switcher including control module, dual power supplies, dual fans and crosspoint board.
FiberNet MSC-XD8TB	3G/HD/SD-SDI 8 channel input equalizer module for Matrix Switch Corporation modular I/O systems.
FiberNet MSC-XD8RB	3G/HD/SD-SDI 8 channel output re-clocking module for Matrix Switch Corporation modular I/O systems.

### Option 2

Inputs	Outputs							
	16	24	32	40	48	56	64	
8	4HDX0808	4HDX0816	4HDX0824	4HDX0832	4HDX0840	4HDX0848	4HDX0856	4HDX0864
16	4HDX1608	4HDX1616	4HDX1624	4HDX1632	4HDX1640	4HDX1648	4HDX1656	4HDX1664
24	4HDX2408	4HDX2416	4HDX2424	4HDX2432	4HDX2440	4HDX2448	4HDX2456	4HDX2464
32	4HDX3208	4HDX3216	4HDX3224	4HDX3232	4HDX3240	4HDX3248	4HDX3256	4HDX3264
40	4HDX4008	4HDX4016	4HDX4024	4HDX4032	4HDX4040	4HDX4048	4HDX4056	4HDX4064
48	HDX4808	4HDX4816	4HDX4824	4HDX4832	4HDX4840	4HDX4848	4HDX4856	4HDX4864
56	4HDX5608	4HDX5616	4HDX5624	4HDX5632	4HDX5640	4HDX5648	4HDX5656	4HDX5664
64	HDX6408	4HDX6416	4HDX6424	4HDX6432	4HDX6440	4HDX6448	4HDX6456	4HDX6464

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## SPECIFICATIONS

<b>General:</b>	Standard: SFP MSA Compliant
Inputs: 64	Pathological Signals: Supports Pathological Signals for 3G/HD/SD-SDI
Outputs: 64	SMPTE Standard: SMPTE 297-2006 Compatible
Enclosure Type: 4RU	Digital Diagnostics: MSA DDM Compatible Interface
Size: 19 x 7 x 6 inches	<b>Fiber Optic SFP Output Modules</b>
Weight: 20.0 lbs	Product: MSC-SFPTX-F1310-10KM (sold separately)
Power: 12 VDC 10A Adapter	Connector Type: LC
Power Connector: D9 Male	Fiber Type: Single Mode Fiber (SMF)
Panel Type: Status	Wavelength: 1310nm (DFB laser)
Ethernet: 10/100 Base-T Auto MDIX	Max Distance: 10km
<b>SDI Output Cards</b>	Data Rates: 50 Mbit/s to 3 Gbit/s
Product: MSC-CARDRX-BNC8 (sold separately)	Standard: SFP MSA Compliant
Connector Type: BNC	Pathological Signals: Supports Pathological Signals for 3G/HD/SD-SDI
Data Rates: 19 Mbit/s through 3.0 Gbit/s	SMPTE Standard: SMPTE 297-2006 Compatible
Input Return Loss: > 15dB @ HD, > 12dB @ 3G	Digital Diagnostics: MSA DDM Compatible Interface
Input Impedance: 75 Ohms +/- 1%	<b>HDMI SFP Output Modules</b>
Input Level: 800 mV P-P +/- 20%	MSC-SFPTX-HDMI (sold separately)
Cable Equalization: 400m @ SD, 140m @ HD, 120m @ 3G (1694A coax)	HDMI Version: v1.41
<b>SFP Output Cards</b>	DVI Version: v1.0
Product: MSC-CARDTX-BNC8 (sold separately)	Video Format: Up to 1080p
Connector Type: BNC	Color Space: RGB or YCbCr
Data Rates: 19 Mbit/s through 3.0 Gbit/s	Data Rates: 3G-SDI, HD-SDI, and SD-SDI
Re-clocking Data Rates: 2.97 Gbit/s, 1.485 Gbit/s, 270 Mbit/s	Audio Channels: 8
Output Return Loss: > 15dB @ HD, > 12dB @ 3G	<b>SDI Standards</b>
Output Impedance: 75 Ohms +/- 1%	SD Formats: 625i25 PAL and 525i29.97 NTSC
Output Level: 800 mV P-P +/- 5%	HD Formats: 720p23.98, 720p24, 720p25, 720p29.97, 720p30, 720p50, 720p59.94, 720p60, 1080p23.98, 1080PsF23.98, 1080p24, 1080PsF24, 1080p25, 1080PsF25, 1080p29.97, 1080PsF29.97, 1080p30, 1080PsF30, 1080i50, 1080i59.94, 1080i60
Output Jitter: < 0.2 UI	3G Formats: 1080p50, 1080p59.94, 1080p60
<b>SFP Input Cards</b>	2K Formats: 2048 x 1556p23.98/24/25
Product: MSC-CARDRX-SFP8 (sold separately)	Compliance: SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 310M, SMPTE 425M-A, SMPTE 425M-B, ITU-R BT.656 and ITU-R BT.601
Connector Type: SFP (MSA Standard Compatible)	Video Sampling: 4:2:2 and 4:4:4
Data Rates: 19 Mbit/s through 3.0 Gbit/s	Audio Sampling: 24 bit @ 48 KHz
<b>SFP Output Cards</b>	Color Precision: 4:2:2 and 4:4:4 10 bit
Product: MSC-CARDTX-SFP8 (sold separately)	Color Space: YUV or RGB
Connector Type: SFP (MSA Standard Compatible)	Metadata Support: Ancillary data as defined by SMPTE 352M
Data Rates: 19 Mbit/s through 3.0 Gbit/s	<b>Reference Sync</b>
<b>Fiber Optic SFP Input Modules</b>	Connector Type: Analog BNC with pass-through
Product: MSC-SFPRX-F10KM (sold separately)	Format: Tri-Level Sync and NTSC/PAL Black Burst
Connector Type: LC	
Fiber Type: Single Mode Fiber (SMF)	
Wavelength: 1200~1610nm (1310nm nominal)	
Max Distance: 10km	
Data Rates: 50 Mbit/s to 3 Gbit/s	

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