

## 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
- ▶ Software updates via Ethernet port
- ▶ Backed by a full 2 year manufacturer parts and labor warranty
- ▶ Redundant power supply included
- ▶ 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 SDI Video Routing Matrix offers field expandable zmatrix size configurations in input or output increments of 8 up to 64 x 64.



Front of 64 x 64 chassis



Rear of 64 x 64 chassis

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 FiberNet Router 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 router chassis options.

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 FiberNet Router 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 a built in web page interface, and some common third party protocols. 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 SDI crosspoint provides auto re-clocking 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, re-clocker bypass control, ASI support, and more!

## ORDERING INFORMATION

These modular systems can be factory assembled and configured for a particular size. Consult the ordering information below or call/email your MultiDyne sales contact.

| Part #       | Description  |
|--------------|--|
| FN-16-CHAS   | FiberNet 16 x 16 Modular SDI Video Switcher Chassis; Requires SDI and/or Fiber Optic Input/Output cards & SFPs |
| FN-32-CHAS   | FiberNet 32 x 32 Modular SDI Video Switcher Chassis; Requires SDI and/or Fiber Optic Input/Output cards & SFPs |
| FN-64-CHAS   | FiberNet 64 x 64 Modular SDI Video Switcher Chassis; Requires SDI and/or Fiber Optic Input/Output cards & SFPs |
| FN-8-IN-BNC  | FiberNet SDI Input Card With 8 BNC Ports; Requires chassis   |
| FN-8-OUT-BNC | FiberNet SDI Output Card With 8 BNC Ports; Requires chassis  |
| FN-8-IN-SFP  | FiberNet SDI Input Card with 8 SFP Ports; Requires chassis and up to 8 SFPs for operation                      |
| FN-8-OUT-SFP | FiberNet SDI Output Card with 8 SFP Ports; Requires chassis and up to 8 SFPs for operation                     |
| MDOPT00820   | 3G Video Transmitter SFP, 1310nm, For use with FN-8-IN-SFP Card  |
| MDOPT00840   | 3G Video Receiver SFP, For use with FN-8-OUT-SFP Card  |

## TECHNICAL SPECIFICATIONS

### General

|                 |  |
|-----------------|--|
| # of Inputs     | 8 to 64 (varies depending on chassis size)     |
| # of Outputs    | 8 to 64 (varies depending on chassis size)     |
| Enclosure Type  | 1 RU - 4 RU (varies depending on chassis size) |
| Power           | 12 VDC 10A Adapter                             |
| Power Connector | D9 Male  |
| Panel Type      | Status   |
| Ethernet        | 10/100 Base-T Auto MDIX                        |

### SDI Input Cards

|                    |  |
|--------------------|--|
| Product            | FN-8-IN-BNC (sold separately)                |
| Connector Type     | BNC  |
| Data Rates         | 19 Mbit/s through 3.0 Gbit/s                 |
| Input Return Loss  | > 15dB @ HD, > 12dB @ 3G                     |
| Input Impedance    | 75 Ohms +/- 1%                               |
| Input Level        | 800 mV P-P +/- 20%                           |
| Cable Equalization | 400m @ SD, 140m @ HD, 120m @ 3G (1694A coax) |

### SFP Output Cards

|                        |                                       |
|------------------------|---------------------------------------|
| Product                | FN-8-OUT-BNC (sold separately)        |
| Connector Type         | BNC                                   |
| Data Rates             | 19 Mbit/s through 3.0 Gbit/s          |
| Re-clocking Data Rates | 2.97 Gbit/s, 1.485 Gbit/s, 270 Mbit/s |
| Output Return Loss     | > 15dB @ HD, > 12dB @ 3G              |
| Output Impedance       | 75 Ohms +/- 1%                        |
| Output Level           | 800 mV P-P +/- 5%                     |
| Output Jitter          | < 0.2 UI                              |

### SFP Input Cards

|                |                               |
|----------------|-------------------------------|
| Product        | FN-8-IN-SFP (sold separately) |
| Connector Type | SFP (MSA Standard Compatible) |
| Data Rates     | 19 Mbit/s through 3.0 Gbit/s  |

### SFP Output Cards

|                |                                |
|----------------|--------------------------------|
| Product        | FN-8-OUT-SFP (sold separately) |
| Connector Type | SFP (MSA Standard Compatible)  |
| Data Rates     | 19 Mbit/s through 3.0 Gbit/s   |

### Fiber Optic SFP Output Modules

|                      |  |
|----------------------|--|
| Product:             | MDOPT00840 (sold separately)                   |
| 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                          |
| Standard             | SFP MSA Compliant                              |
| Pathological Signals | Supports Pathological Signals for 3G/HD/SD-SDI |
| SMPTE Standard       | SMPTE 297-2006 Compatible                      |

### Fiber Optic SFP Input Modules

|                      |  |
|----------------------|--|
| Product:             | MDOPT00820 (sold separately)                   |
| Connector Type       | LC   |
| Fiber Type           | Single Mode Fiber (SMF)                        |
| Wavelength           | 1310nm (DFB laser)                             |
| Max Distance         | 10km   |
| Data Rates           | 50 Mbit/s to 3 Gbit/s                          |
| Standard             | SFP MSA Compliant                              |
| Pathological Signals | Supports Pathological Signals for 3G/HD/SD-SDI |
| SMPTE Standard       | SMPTE 297-2006 Compatible                      |

### SDI Standards

|                  |   |
|------------------|---|
| SD Formats       | 625i25 PAL and 525i29.97 NTSC   |
| 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 |
| 3G Formats       | 1080p50, 1080p59.94, 1080p60  |
| 2K Formats       | 2048 x 1556p23.98/24/25   |
| Compliance       | SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 310M, SMPTE 425M-A, SMPTE 425M-B, ITU-R BT.656 and ITU-R BT.601   |
| Video Sampling   | 4:2:2 and 4:4:4   |
| Audio Sampling   | 24 bit @ 48 KHz   |
| Color Precision  | 4:2:2 and 4:4:4 10 bit  |
| Color Space:     | YUV or RGB  |
| Metadata Support | Ancillary data as defined by SMPTE 352M   |

### Reference Sync

|                |   |
|----------------|---|
| Connector Type | Analog BNC with pass-through            |
| Format:        | Tri-Level Sync and NTSC/PAL Black Burst |