NEPTUNE
Matrix Switcher

- Ultra-Flat Response
- Choice of front panel control or blank front panel
- Virtual matrix levels
- RS-232 control port
- Breakaway
- Groupings
- Global and local presets
- Programmable macro functions
- Volume control (standard audio)
- Optional redundant power supply
- Linkable enclosures
- Rack mounting ears included
- Audio connections support balanced or unbalanced

The NEPTUNE matrix switcher is designed with a platform base on which more than 15 signal types can be stacked. It can easily handle the signal diversity of an entire installation, replacing multiple small routers. Ideal for any mid range routing application including sports bars, meeting rooms, education and government facilities.

ULTRA-FLAT RESPONSE
The video frequency response in the Neptune is a tight +/- 3 dB, unlike other manufacturers who specify only –3 dB to allow for the use of excessive peaking, damaging the signal, to record a wider bandwidth.

CUSTOMIZABLE
The Neptune is easy to customize. Simply mix and match available boards in the same enclosure (as space allows), or in multiple linked enclosures. This allows for multiple signal types in various I/O ranges that can be viewed under one point of control.

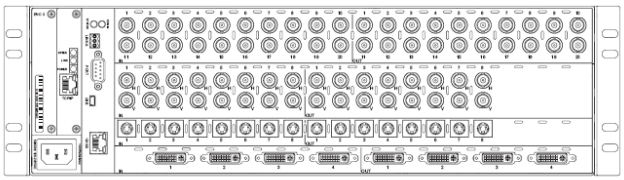
VIRTUAL MATRIX
For even more flexibility, virtual matrix programming levels allow multiple enclosures (switchers) to be treated as a single router, or single enclosures to be treated as multiple independent systems.

MULTIPLE CONTROL OPTIONS
Choose from local control panel or blank front panel. All models come with standard RS-232 control port.

RGB SPECTRUM®
a visual communications company™

GENERAL

AC Power:	100-240 VAC single phase, 47-63 Hz
Power Consumption (max):	150 Watts per loaded enclosure
Humidity:	0 to 90% non-condensing
Operational Temperature:	32° to 100° F (0 to 43° C)
Enclosure Dimensions:	17" (43.18 cm) depth 17.4" (44.2 cm) width without mounting ears 18.77" (47.68 cm) width with mounting ears
Height:	5.25" (13.34 cm) height 3 RU
Weight:	Appx. 22-24 lbs (9.98 – 10.88 kg) per loaded enclosure



20x20 composite + 8x8 Y/c + 8x8 S-video + 4x4 DVI
1 of thousands of available configurations

STANDARD AUDIO

Input Level (max):	+22 dBu, balanced
Input Impedance:	18 kΩ
Output Level (max):	+22 dBu, balanced
Output Impedance:	50 Ω
Frequency Response:	<+/- 0.2dB 20 Hz to 20 kHz
THD + Noise:	<0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu), <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
Signal to Noise Ratio:	>120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
Crosstalk:	<-110 dB (1 kHz, Vin = +20 dBu)
Output Volume Control Adjustment Range:	+10 dB to –70 dB (mute)
Connectors:	5T

DIGITAL AUDIO (S/PDIF & TosLink)

Resolution:	16 to 24 bit
Sample Rate:	32 kHz, 44.1 kHz, 48 kHz, 96 kHz
Rise & Fall Time:	<20 nS
Jitter:	<5 nS
Input Signal Amplitude:	0.2 Vpp to 2.5 Vpp terminated (S/PDIF)
Output Signal Amplitude: (S/PDIF)	0.4 Vpp to 1.0 Vpp terminated into 75 Ω
CDR (Reclocking):	Yes
Connectors:	S/PDIF (RCA) & TosLink (optical)

STANDARD VIDEO

Input Level (max):	+/- 5 Volts
Input Impedance:	75 Ω
Output Level (max):	+/- 5 Volts
Output Impedance:	75 Ω
Frequency Response:	50 MHz or better (+/- 3dB) 15 MHz or better (+/- 1 dB)
Crosstalk:	<-60 dB (f = 5 MHz)
Differential Gain:	<0.15% or better (f = 3.58 MHz)
Differential Phase:	<0.15° or better (f = 3.58 MHz)
Signal to Noise Ratio:	> 65 dB (Vin = 0.7 V, 100% IRE)
Connectors Options:	BNC, S-video

WIDEBAND VIDEO

Input Level (max):	+/- 1 Volts
Input Impedance:	75 Ω
Output Level (max):	+/- 1 Volts
Output Impedance:	75 Ω
Frequency Response:	300 MHz or better (+/- 3 dB) 100 MHz or better (+/- 1.5 dB)
Crosstalk:	<-60 dB (f = 5 MHz) <-35 dB (f = 150 MHz)
Signal to Noise Ratio:	> 65 dB (Vin = 0.7 V, 100% IRE)
Connector Options:	BNC, HD-15

DIGITAL VIDEO (SD-SDI)

Standard:	Conforms to SMPTE 259M
Input Impedance:	75 Ω
Output Impedance:	75 Ω
Output Level:	0.8 Vpp +/- 10%
Timing Jitter:	<0.1 UI @ 360 Mbps
Alignment Jitter:	<0.1 UI @ 360 Mbps
Rise and fall time:	600 ps, +/- 100 ps
Rise and fall overshoot:	<0.1%
Bit Rates:	143 Mbps, 177 Mbps, 270 Mbps, 360 Mbps, 540 Mbps*
Data Type:	8 bit or 10 bit
Auto Cable Equalization:	Up to 350m of Belden 8281 or equivalent at 270 Mbps
CDR (Reclocking):	Yes
Connectors:	BNC

DIGITAL VIDEO (DVI)

Pixel Bandwidth (Bit Rate):	1.65 Gbps
Resolution Support (CRTs and Flat Panels):	Up to 1600x1200 @ 60 Hz refresh rate
Specification Compliant:	DVI 1.0, DVI-D
Skew Tolerance:	Up to one pixel clock cycle (high clock and data jitter tolerance)
DDC Support:	Provided by the Neptune
Connectors:	DVI-I

I/O RANGE

4x4, 4x8
8x4, 8x8
16x16
20x4, 20x20
24x4, 24x16
36x4

SIGNAL TYPES

Composite, S-video, Y/c
HDTV, Y/Pb/Pr, YUV
RGB, RGsB, RGBS, RGBHV
SD-SDI, DVI
Mono audio, Stereo audio
S/PDIF, TosLink,
AES 75 Ω

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