

# *Cougar*<sub>3</sub>

*digital video router*



## **Compact 32X32 Router for SD/HD/3G**

### **Features**

- Small Frame Size – 32X32 or 16X16 in 1RU
- SD/HD/3G Multi-rate from 143Mbps to 3.0Gbps
- Auto-equalization on all inputs
- Auto-reclocking or by-pass mode on all outputs
- Digital video signals for SMPTE 259M, 292M, 372M, 424M
- Front loading, hot-swappable matrix, power, control for 24/7 operations
- Redundant power and control cards available
- Wide range of rack-mount and desktop control panels
- Supports PESA router control and many 3rd party control systems
- Lower power consumption

# 32X32



Cougar-3 - 32X32 Video Frame with local front panel installed

### PESA's Cougar-3 32X32

matrix switcher routes all SMPTE and ITU standard serial digital video signals; plus it supports embedded audio and other ancillary data required for HD-SDI and DVI/ASI broadcast sources. For Digital Cinema high definition video distribution requirements, the Cougar-3 can be configured to switch SMPTE 372M dual-link HD-SDI in configurations up to 16X16. Cougar-3 is perfect for SD-SDI, HD-SDI, and 3G-SDI switching applications in digital cinema, telemedicine, O&P, high end presentation rooms, satellite imaging, military command centers, and simulation/visualization environments.

Although small in size – it occupies only 1RU of rack space, Cougar-3 is big on performance - supporting standard data rates from 143Mbps up to 3Gbps, and video transports up to 1080p/60. All inputs are auto-equalized; and with standard SMPTE formatted outputs, each signal is auto-sensed and re-clocked to the appropriate transport stream. Signals can be re-clocked up to 80m for 1080p/60. For non-standard formats, re-clocking circuitry can be set to by-pass mode.

Two independent reference inputs allow easy selection of gen-lock from a black burst or tri-level sync source. The compact frame design features front load / hot swappable card sets and includes space for an optional redundant power supply and controller module. Cougar-3 provides a control port that allows configuring the frame for a variety of control interfaces; including RS-232/422, PERC2000, 3500PRO and PESA's CATTRAX and SSC network based control systems. A wide range of remote control panel options are available for RS485 connectivity and with the SSC or CATTRAX controller option, the Cougar-3 can support PESA's PNET Ethernet-based control panels.

### Optional local or remote panels

The PNET series of network enabled remote control panels are designed specifically to operate with the Small Scale System Controller. Each panel is only 2 inches deep and fits in any standard rack system. The panels are connected using standard RJ-45 jacks and include a looping CATx connector for adding additional panels in series. Individual pushbutton switches provide selections for source, destination, level and other control functions.



Pushbutton Panel - PNET1604  
 1RU, 16 input, 4 output, button-per-source and destination panel with power supply.



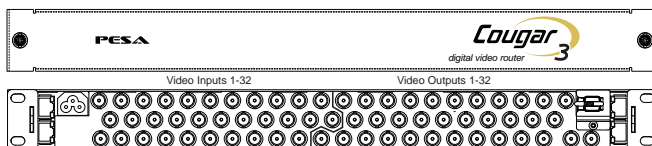
Pushbutton Panel - PNET1616  
 1RU, 16 input, 16 output, button-per-source and destination panel with power supply.



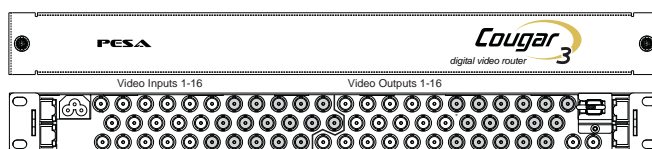
Pushbutton Panel - PNET3232  
 1RU, 32 shared input and output pushbutton panel with power supply.



Pushbutton Panel - PNET3232XY  
 1RU, 32 input, 32 output, button-per-source and destination panel with power supply.



Cougar-3 - 32X32 Video Frame for SD/HD/3G and DVB/ASI



Cougar-3 -16X16 Video Frame for SD/HD/3G and DVB/ASI

NOTE: BNC Connections for 17-32 are not active

## Digital Specifications

### Digital Video Specifications

#### INPUTS/OUTPUTS

Number	16 or 32
Type	Standard 75 Ohm, self-terminating, unbalanced BNCs with auto-EQ. conforming to SMPTE259M, SMPTE292M and SMPTE424M.
Return Loss	≥15dB 1MHz to 1.5GHz; ≥10dB, 1.5GHz to 3GHz.
Equalization	300m auto-equalization Belden 1694A or equivalent at 270Mbps.; 100m auto-equalization Belden 1694A or equivalent at 1.5Gbps; 80m auto-equalization Belden 1694A or equivalent at 3Gbps
Level	800mVpp, ±10%

#### SIGNAL SPECIFICATIONS

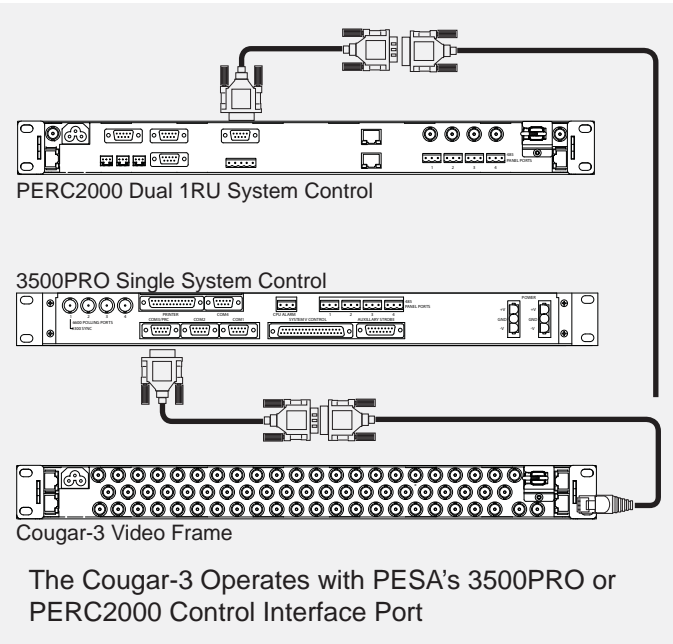
Rise/Fall	≤ 600ps +/-10% SD SMPTE259M; ≤ 270ps HD SMPTE292M; ≤ 135ps 3G SMPTE424M.
Overshoot	≤ 10% of amplitude max.
Alignment Jitter	≤ 0.2 UI from 100kHz to 150MHz SMPTE259M or SMPTE292M; ≤ 0.3 UI from 150MHz to 300MHz SMPTE424M.
Timing Jitter	≤ 1.0 UI from 10Hz to 100kHz SMPTE259M or SMPTE292M; ≤ 2.0 UI from 10Hz to 100kHz SMPTE424M.
Reference Inputs	Two independent 75 ohm BNC connectors, 0.5Vpp to 2.0Vpp; PAL, NTSC or Tri-Level sync.
Data Rates	143Mbps to 3Gbps
Form Factor	1RU
Mechanical	19.00W X 1.75H X 14.75D 482.6mm X 44.45mm X 372.65mm
Weight	12lbs

#### Environmental & Miscellaneous

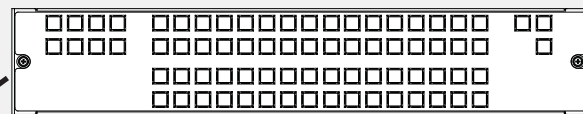
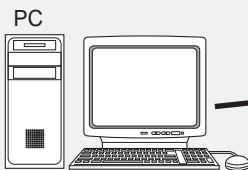
Control	Supports single-bus, multi-bus and XY control panels, using external system controller.
(Serial 422 PRC I/F)	4-wire, full duplex, multi-drop, serial RS422 port capable of accepting PESA PRC control protocol.
AC Input Connections	IEC 320C6 socket (accepts IEC 320 C5 line cord)
Network Control	Supports PESA P-NET series of remote and local control panels NOTE: Used with SSC Controller or CATTRAX software. Network panels will not operate with P2K or 3500PRO
Input Voltage	90-260 VAC, 47-63Hz
Operational Temp	0-40 degrees C
Operational Humidity	90% Non-condensing

## Part Numbers

CG3G-32X32-BNC	32X32 Routing Switcher, 1RU, PS, Supports data rates from 143Mbps to 3Gbps
CG3G-16X16-BNC	SMPTE 259M, 292M, 424M, DVB/ASI 16X16 Routing Switcher, 1RU, PS, Supports data rates from 143Mbps to 3Gbps SMPTE 259M, 292M, 424M, DVB/ASI



PNET Softpanels  
Windows based version  
of PNET panels



Ethernet Control Panel (remote location)



Ethernet Control Panel (remote location)



Ethernet Control Panel (local connection)



Cougar-3 Video Frame

The Cougar-3 Operates with PESA's SSC for network control and Ethernet Control Panels



## ORDERING INFORMATION

### U.S. Corporate Headquarters

PESA

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FAX: +1 256-726-9271

sales@pesa.com

### Warranty:

Products manufactured by PESA are manufactured for performance and reliability. PESA warrants these products against defects and workmanship for a period of three years.

### Services:

Customer support is available 24 hours a day, 7 days a week by calling 1-800-323-7372.

International customers call  
+1 (256) 726-9222.

In addition to our customer service support center, we offer extended warranties and online technical resources via our website at: **www.pesa.com**

On site or factory training is available for control system operations, technical, and maintenance training. Contact our technical support group for additional information.

Spares can be ordered through your area sales representative.

*Specifications subject to change without notice.*

[www.pesa.com](http://www.pesa.com)

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