#) netPIX
EYEVIS CONTROLLER

NPX-4800-G3.0

HIGH-END GRAPHICS CONTROLLER
FOR VISUAL DISPLAY SYSTEMS

) PRODUCT DESCRIPTION

NPX-4800-G3.0 – INNOVATIVE AND CONVINCING

The 3rd generation of the netPIX 4800 is a network based graphic controller for the management of video wall systems, single displays or projectors. Through its MultiScreen-ability any display surfaces can be realized. The controller creates a big joined desktop for network-applications, video and graphic sources. At the heart of the NPX-4800 works the powerful SBC in combination with the backplane with Switch Fabric The new NPX-4800 Controller offers an ultra high performance bus, cost-effective Intel® XEON® CPUs, 64Bit technology and high bandwidth trough a Switch Fabric BUS with 192GB/s. These new technologies guarantee the revolutionary and powerful performance of the next generation of the netPIX family in any control room application.
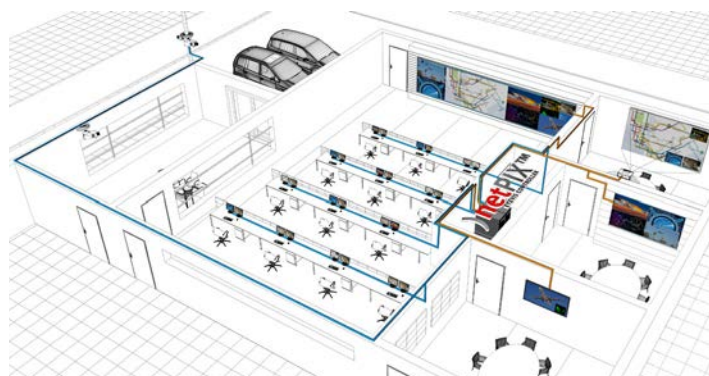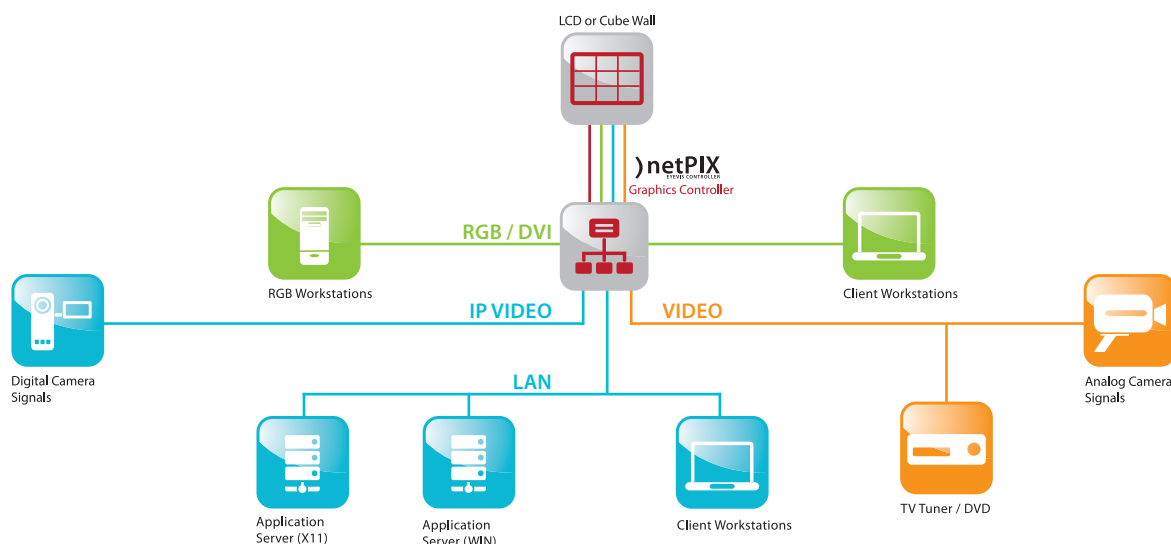
The NPX-4800 provides multiple analog and digital video and graphic connectivity with input cards. Through the new Switch Fabric architecture, video and graphic sources can be displayed simultaneously on the display wall in full frame rates. All analog and digital Video-/RGB-/DVI- and IP Streaming data is transmitted with up to 192GByte/s without any dependencies on the system.

THE ADVANTAGES OF NPX-4800-G3.0 CONTROLLERS
- Expandable for future system upgrades
- Powerful system components
- Higher performance

) SYSTEM OVERVIEW

LCD or Cube Wall

) netPIX
Graphics Controller

RGB / DVI

RGB Workstations

Client Workstations

IP VIDEO   VIDEO

Digital Camera
Signals

LAN

Analog Camera
Signals

Application
Server (X11)

Application
Server (WIN)

Client Workstations

TV Tuner / DVD

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) SYSTEM ARCHITECTURE

The NPX-4800-G3.0 controller relies on a CPU unit and up to four expansion chassis. This technology is based on the Intel® XEON® Quad Core® Technology. This new CPU generation provides better performance for the display of high-end visualisation applications compared to other systems

- Intel® XEON® Quad Core processor up to 3.3 GHz (optionally 12 Cores)
- High-end server components for highest availability
- PCI-Express bus
- 8GB DDR3 ECC RAM (expandable up to 64GB)
- DUAL Gigabit Ethernet

) SYSTEM AVAILABILITY

- Redundant power supply units, hot swappable
- Redundant SATA Solid State Disk with RAID1, hot swappable
- Paragon Backup & Recovery, in the event of a system or disk crash, security attack or other fatal failure you can restore your entire controller within minutes - no reinstallation is required.
- The controllers from the netPIX 4800 series are built in compliance with eyevis ISO 9001 certificated production processes to meet the specific requirements of each customer and is the best controller for standard control rooms with high availability.

##) DESKTOP MANAGEMENT & OPERATING SYSTEM

- Because of its MultiScreen-ability, any data and application can be displayed simultaneously; they can also be positioned and resized freely. The operator has a big desktop with a very high resolution at his disposal, which will be multiplied by the size of the wall.
- Windows 7 32/64Bit and Windows Server 2008/R2 are supported.
- Up to 64GB RAM inside the systems reserved for RAM intensive applications
- Huge Windows desktop with up to 32000x32000 pixel depending on the size of the system
- Standard Windows® & X11 applications (optional) and SCADA software can be displayed on the wall with no restriction.
- Windows®-based applications can be displayed simultaneously with any other input signals like video, IP-video and RGB/DVI.

) BUS SYSTEM

The core of the system is the ultra-fast PCIe Switch Fabric with PCIe x4 slots and a total bandwidth of 192GB/s for transmitting Windows® information, network data, video, digital streams and graphic signals to each output card. This guarantees a very high bandwidth without decreasing frame rates when numerous inputs are displayed simultaneously

Graphic display of bus system:

192 GB/s

2 GB/s

PCI-X OR PCIE X8   EYEVIS SWITCH FABRIC

STANDARD BUS BANDWIDTH

) netPIX
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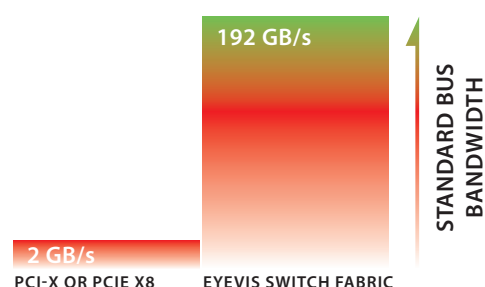
NPX-4800-G3.0
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) INPUT SIGNAL PROCESSING

The NPX-4800-G3.0 controller can be equipped with various input cards for video, RGB/DVI-HDS-DI and IP signals. All input signals windows can be moved, scaled and placed freely on the display wall.

- The input cards provide state-of-the-art video processing resulting in superb quality
- Huge number of cards per system possible
- Easy to upgrade for future system expansion

Analog Video Input Board

- Up to 128 video signals in one system
- Up to 32 video windows can be displayed with every display output
- Composite BNC or S-Video (Y/C)

IP Decoder Board

- Up to 512 video signals in one system
- Simultaneous decoding of up to 32 channels in D1 resolution per IP-decoder board
- Simultaneous decoding of up to 16 channels in Full HD resolution per IP-decoder board
- Supports MPEG2, MPEG4, H264, MJPEG

RGB / DVI Eingänge

- Display of the source output in freely moveable, scalable and placeable windows on the display wall
- Up to 40 RGB/DVI input sources
- Input Signals: - DVI Single Link up to 1920x1200
  - DVI Dual Link up to 2560x1600
  - Analog up to 2048x1536

SDI Inputs

- Display of the source output in freely moveable, scalable and placeable windows on the display wall
- Up to 20 SDI inputs
- Video Modes: SD-SDI (480i/576i), HD-SDI (up to 1080i), 3G-SDI (up to 1080p) & 2k digital cinema modes

) OUTPUT GRAPHICS PROCESSING

The new GPU with 128MB GDDR5 per output channel achieves a never seen graphic performance.

- Digital outputs up to 1920x1200 pixels and HD format
- Configurations up to 36 output channels
- Multiple resolution modes for different output resolutions at the same time, for rectangle or none-rectangle display configurations*
- Live preview support for each source connected with the eyeCON wall management software
- Underlapping mode for narrow bezel displays*
- Overlapping mode for edge overlapping projections*
- Pivot mode for landscape and portrait display*

*) non-standard modes, available on request

) WALL MANAGEMENT SOFTWARE

) eyeCON®
EYEVIS SOFTWARE

For an easy management of large screen displays, we recommend to combine the eyeCON wall management software with the netPIX controller. With this software, especially developed for large screen displays, the user has nearly unlimited possibilities for the management and operation of his display wall.

NPX-4800-CONTROLLER UNIT-G3.0 (ART. NO. 19199)

Processor:	Up to two Intel® 64-bit XEON® processors Quad Core Intel® Xeon® processor E5620 with 2.4 GHz (optional up two 12 cores with 3.3 GHz)
Chipset:	Dual Intel® 5520 (Tylersburg) Chipsets
RAM:	8GB DDR3 ECC RAM (expandable up to 64GB)
Expansion Slots:	7× PCI Express x8 (6 reserved for I/O boards)
Hard Disk:	SATA 3.0Gbps, HotSwap 180GB, SSD (optional: 180 GB, RAID1 HotSwap, optional expandable up to 1 TB)
DVD-RW Drive:	Read: DVD: 16× / CD: 48× max Write: DVD-R: 24× / DVD+R: 24× / DVD-RW: 6× / DVD+RW: 8× / DVD-R DL: 12× / DVD+R9: 12× / CD-R: 48× / CD-RW: 32×
Ethernet:	2 × 10/100/1000 Mbps RJ45 standard ports integrated
Dimensions (W×H×D):	42.35 cm × 17.7 cm × 67.0 cm
Weight:	26.5 kg
Oerating Conditions:	Temperature: 0°C - 40°C (32°F - 104°F) / Humidity: 10 - 90% not condensing / Altitude: up to 3,048 m (10,000 ft)
Power Supply:	100-240 V, 50-60Hz, 800 Watt, optional: Redundant, HotSwap
Operating System:	Windows 7 32/64Bit, Windows Server 2008/R2
Accessories (optional):	104-key keyboard, 2-key-wheel/button-mouse, optionally with extension cable up to 50m, DVI cable for eyevis Cubes (fibre optics) up to 100m

HARDWARE EXPANSION NPX-4800-EXP-9S-1 (ART. NO. 19208)

Expansion Slots:	8× PCIexpress X4 1× PCIexpress X8 (up to 33 with further expansion units)
BUS:	Switch Fabric with a maximum bandwidth of192GB/s
Dimensions (W×H×D):	43.0 cm × 17.7 cm × 52.3 cm
Weight:	26.5 kg
Operating Conditions:	Temperature: 0°C – 40°C (32°F – 104°F) / Humidity: 10 – 90% not condensing / Altitide: up to 3,048.0m (10,000 ft)
Power Supply:	100-240 V, 50-60Hz, redundant HotSwap 620Watt

GRAPHIC BOARD NPX-4800-OUT4-DSL-1 (ART. NO. 19330)

Graphic Memory:	512MB per board
Wall Configuration:	Any rectangular or non-rectangular array up to 36 display modules
Resolutions:	640×480 up to 1920×1200 and HDTV 1080p per output
Colour Depth:	32 Bit
Output Signal:	DisplayPort 1.1a

VIDEO INPUT BOARD NPX-4800-IN8-VID-1 (ART. NO. 19205)

Inputs:	8 × Composite or S-Video BNC connectors
Input Format:	NTSC, PAL, SECAM
Decoder:	High-quality video decoder with de-interlacing
Scaling & Display:	Display of multiple video sources in any size, everywhere on the wall. Control of colour, brightness, contrast.

DVI INPUT BOARD NPX-4800-IN2-DVI-1 (ART. NO. 19203) · DUAL DVI INPUT BOARD NPX-4800-IN1-DVI-DL-1(ART. NO. 19204)

	DVI INPUT BOARD NPX-4800-IN2-DVI-1	DUAL DVI INPUT BOARD NPX-4800-IN1-DVI-DL-1
Inputs:	2 × DVI-I / HD15	1× DVI-D Dual Link
Signal Processing:	RGB/DVI with full refresh; integrated scaler	DVI with full refresh; integrated scaler
Format:	RGB with separate H and V syncs, DVI-I	DVI-D
Resolutions:	Up to 1920×1200 pixels	Up to 2560×1600 pixels (330MHz)
Pixel Format:	16Bit/32Bit, YUV422, RGB 8:8:8	16Bit/32Bit, YUV422, RGB 8:8:8
Scaling & Display:	Display of multiple sources of any size, anywhere on the videowall	Display of multiple sources of any size, everywhere on the video wall

VIDEO INPUT BOARD NPX-4800-IN2-SDI-3G-1 (ART. NO. 19206)

Inputs:	2× SDI BNC connectors with loop-through capability
Input Format:	SD-SDI (480i/576i), HD-SDI (up to 1080i), 3G-SDI (up to 1080p), 2k Digital Cinema Mode
Pixel Format:	RGB: 5-5-5, 5-6-5 or 8-8-8 (24bit/32bit) pixel
Maximum SDI Bit Rate:	64MB per channel (total 128MB)
Scaling & Display:	Display of multiple video sources in any size, everywhere on the wall. Control of colour, brightness, contrast.

IP DECODER NPX-4800-IPD32-1 (ART. NO. 18224)

Decoder:	32× D1 decoder or 16× HD 1080p decoder
LAN:	2× integrated standard 10/100/1000 Mbps RJ45 ports
Format:	H264, MPEG2, MPEG4
Resolutions:	QCIF up to Megapixels
Frame Rates:	25/30 frames per channel
Dimensions (W×H×D):	48.4 × 8.9 × 50.0 cm (incl. rack handles)
Weight:	10.5 kg

IP DECODER LINK BOARD NPX-4800-IPL-2 (ART. NO. 19207)

Inputs:	2 × DVI-I / HD15 (input card to connect the netPIX IP Decoder Boards NPX-4800-IPD-32-1 in an netPIX 4800 controller system)