Jupiter

FOR MORE INFORMATION

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PixelNet®

Powerful, Modular

PixelNet DVI Input Node • *DVI and Analog RGB Input Node for PixelNet®*

- Captures signals up to 1920x1200 resolution and up to165 MHz pixel rate
- Captures analog or digital progressive scan RGB signals
- Provides analog-to-analog and digital-to-digital loop-through
- Choice of external (loop-through) or internal EDID
- Automatic format detect for Plug-and-Play simplicity
- Dual Gigabit PixelNet ports
- Optional fiber optic PixelNet ports

DVI-I INPUT NODE

PixelNet Analog HD Input Node • *Analog High Definition Video Capture for PixelNet®*

- Analog component inputs (YPrPb)
- Handles all standard and high definition video formats, 480i to 1080p
- Analog component inputs (YPrPb)
- Automatic format detection
- 10-bit color processing
- State-of-the-art video de-interlacing, scaling, and noise reduction
- Dual Gigabit PixelNet ports
- Optional dual fiber optic PixelNet ports

ANALOG HD INPUT

PixelNet SDI Input Node • *Serial Digital Video Input Node for PixelNet®*

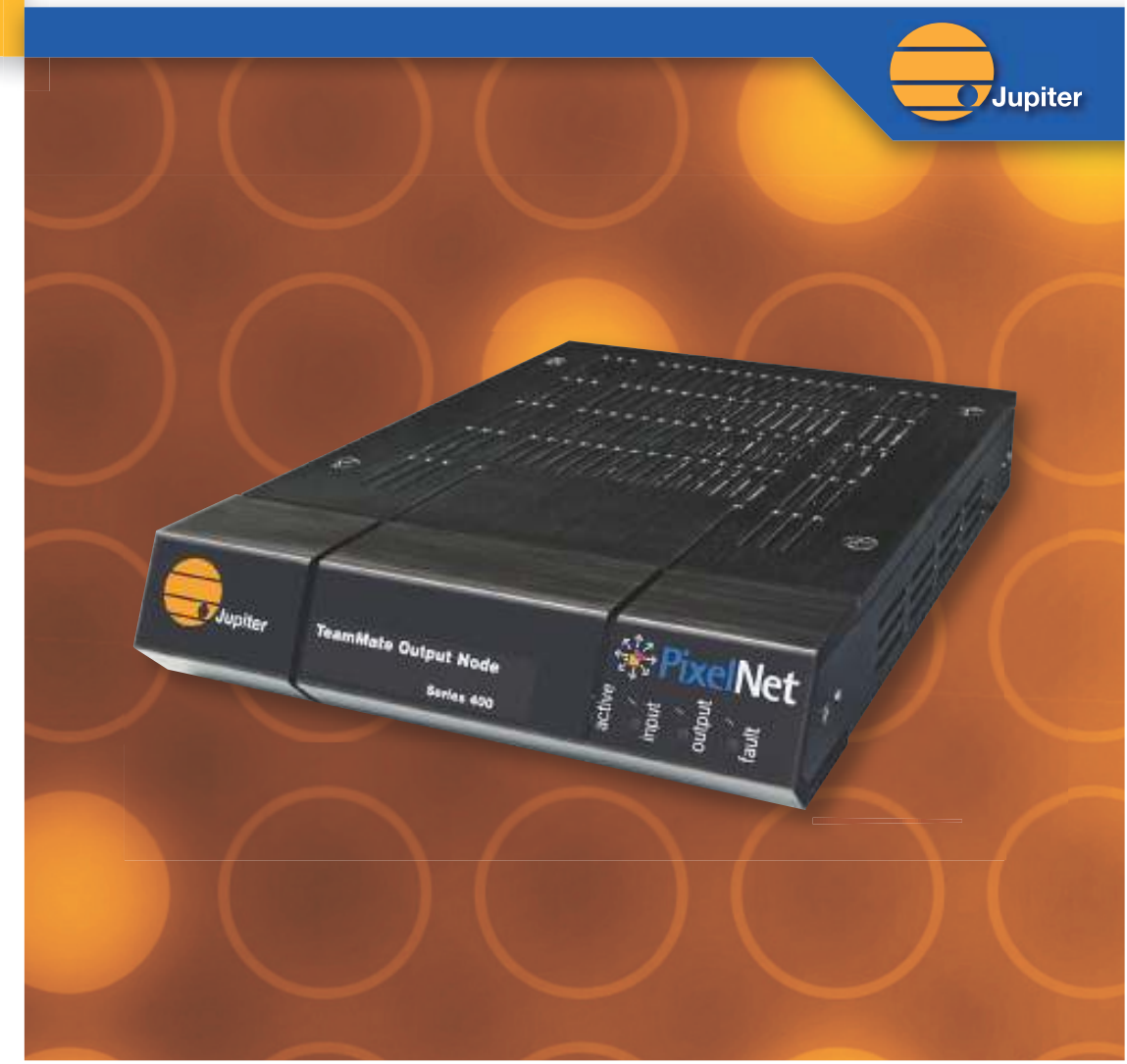
- Handles ANSI/SMPTE 259MNTSC/PAL, ANSI/SMPTE 292M, and ANSI/SMPTE 424M signals
- Automatic format detection
- 10-bit color processing
- Reclocked loop-through output
- Dual Gigabit PixelNet ports
- Optional dual fiber optic PixelNet ports

HD-SDI INPUT NODE

PixelNet TeamMate™ Output Node • *Flexible Display Node for PixelNet®*

- Output either analog (RGB) or digital (DVI) signals
- Supports output resolutions up to 1920x1200 pixels
- Supports all PixelNet input formats
- Displays up to 64 PixelNet sources in freely scalable windows
- Can be a discreet output or part of a display wall
- Frame-sync for perfect visualization in large display walls
- Dual Gigabit PixelNet ports
- Optional fiber optic PixelNet ports

TEAMMATE OUTPUT NODE



PixelNet®

A better way to get visual information where you need it

We've heard you. "My customers want a visual information system that is modular, self configuring, easy to manage, seriously flexible and expandable. It's just not possible."

It's possible now. Meet PixelNet.®

An all digital network

PixelNet is a revolutionary new way to capture, distribute, control and display digital and analog video sources for audio-visual applications. Based on technology previously used for data communication networks, PixelNet adopts Gigabit Ethernet and Ethernet switches for use with high resolution, real-time video. Using packet-switching technology any information source can be shown on any display, as a window on a single display, or as a window spanning multiple display devices in a display wall. Any source can be shown at any size on any display or array of displays.

PixelNet uses sophisticated high-bandwidth networking technology developed for data transfer in the computer world and applies it to video switching. But this is not a traditional video switch. This is PixelNet, switching entirely in the digital domain to preserve signal integrity and switching on a pixel-by-pixel basis with built-in up and down-scaling so any rectangle of pixels from any source can be sent to any destination rectangle on any display device.

A modular system

PixelNet is simplicity itself. A PixelNet network is comprised of input nodes to capture various types of video signals, output nodes to drive display devices, and switches to interconnect them. Add inputs, displays, and standard network cabling. That's about it.

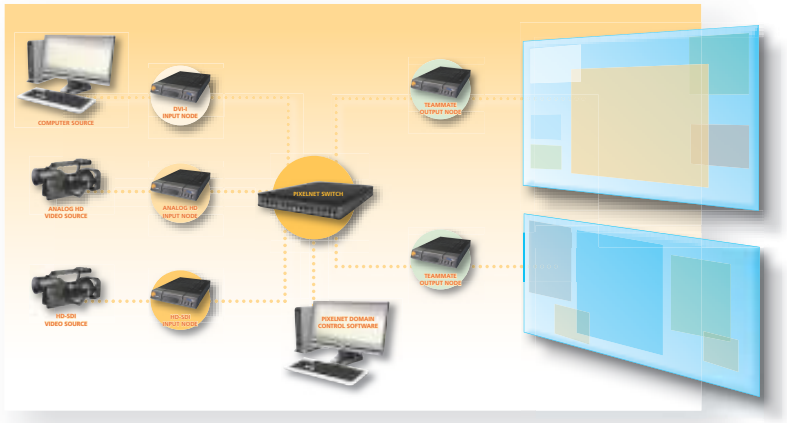
Input and output signals can be either digital or analog, to meet the interface requirements of the attached devices. But remember, inside the PixelNet domain signals are always digital and can be transmitted long distances without degradation. All video processing is done in the digital domain including cropping, scaling, de-interlacing and noise reduction.

Building the network is straightforward.

STEP ONE: Match the input sources with an appropriate input node. The PixelNet product line serves many common input requirements with the PixelNet DVI-I, PixelNet Analog HD, and PixelNet HD-SDI nodes. More nodes serving other standards are scheduled for delivery over the coming months.

STEP TWO: Attach a PixelNet TeamMate node to each display. Sources can be displayed on DVI/RGB outputs with true flexibility: The PixelNet TeamMate output node can drive a single window on a single screen, multiple windows on a single screen, or an entire display wall.

STEP THREE: Connect the input and output nodes through a PixelNet Switch. These 48-port switches can be stacked for larger installations, augmented by a 10G backbone switch where needed. All connections between nodes and switches are accomplished using common CAT6 cables up to 100 meters in length. This inexpensive cabling can greatly reduce the cost of wiring a large control room compared to traditional multiple-coax cables for analog signals and fiber optic extenders for DVI digital. If long distance distribution of signals is required, optional use of fiber transceivers can extend PixelNet transmission distances to miles.



A self configuring network

PixelNet networks are automatically self-organizing, there is no need for complicated setup. Every node, both input and output, is identified and available for use the moment the node is plugged into a PixelNet installation. All sources can be displayed on any of the output devices. Add an input node, swap for another type of input node, or remove an input node and the system configures the new topology itself.

An easy to manage system

All of this power and flexibility is managed by Jupiter's PixelNet Domain Control™ software, which provides an intuitive, object-oriented, drag-and-drop interface to control and manage multiple inputs, outputs and display walls.

Applications that would traditionally require many separate vendors and a heterogeneous solution can be addressed with a single system of interconnected PixelNet nodes controlled through the PixelNet Domain Control software. Third party applications and control systems are supported with the included API and network control protocol.

A seriously flexible and expandable system

PixelNet is all about scalability. The same component parts can scale from a single input distributed to a single output to literally hundreds of inputs and outputs. Outputs can be defined as a single display or logically grouped together to create one or more display walls. Need to add another input? Add another PixelNet input node. Expanding the display wall? Add PixelNet output nodes for the new displays.

- PixelNet input nodes are small, silent and use very little power.
- Input and output nodes are hot-pluggable and hot-swappable, and since PixelNet is based on Ethernet technology, the entire system is inherently fault-tolerant.
- PixelNet makes creating complex topologies of inputs, outputs and switches simple, cost effective, and future proof.

Outstanding Visual Quality

PixelNet captures video signals at full resolution, frame rate, and color depth assuring exceptional visual performance.

Format conversion, de-interlacing, scaling, noise-reduction and color-space conversion are all performed automatically for the user within PixelNet – resulting in perfect representation regardless of input signal or display device.

PixelNet's output node, TeamMate, can display a single or multiple sources in freely scalable windows, or multiple TeamMate nodes can be combined together to create a display wall of virtually any size with source windows being able to span one or all displays. All TeamMate nodes connected to PixelNet have access to all connected inputs.

The PixelNet Difference

PixelNet is a high-bandwidth, non-blocking switched network. Data transmission from one PixelNet node to another is completely independent of other communicating nodes.

PixelNet networks are automatically self-organizing, and PixelNet nodes exchange visual data in a common, digital format.

PixelNet nodes have very long MTBF, however, a node failure does not disrupt the operation of other nodes in the network, and a failed node can easily be replaced while leaving the rest of the network running — truly hot-swappable.

All connection between nodes and switches is accomplished using common CAT6 cables up to 100 meters in length.

PixelNet is completely digital in nature, and with input sources such as a DVI computer source or SDI video, the network can be digital end-to-end, resulting in the best possible visual performance. Video signals are enhanced through the use of superior video processing technology for de-interlacing, anti-aliasing and inverse telecine, resulting in broadcast-quality display.

Any application will benefit from the simple installation and superb visual performance of a PixelNet network.