



***Rocket Science
Technologies***

TN25-6P

Video Wall Controller

Product Specifications

Data Sheet - v1.0 - 2025

The **TN25-6P** is a new all-in-one controller that integrates video processing & video control into one box. It features 10 Ethernet ports and supports video controller, fiber converter and Bypass working modes. A TN25-6P unit can drive up to 6.5 million pixels, with the maximum output width and height up to 10,240 pixels and 8192 pixels respectively, which is ideal for ultra-wide and ultra-high LED screens. The TN25-6P is capable of receiving a variety of video signals and processing high-resolution images. In addition, the device features stepless output scaling, low latency, pixel-level brightness and chroma calibration and more, to present you with an excellent image display experience. Thanks to its powerful video processing and sending capabilities and other outstanding features, the TN25-6P can be widely used in applications such as medium and high-end rental, stage control systems and fine-pitch LED screens.

Input Connectors

- ◆ 1x HDMI 1.4 (IN & LOOP)
- ◆ DVI (HDMI 1.4) IN & LOOP
- ◆ DVI (HDMI 1.4)
- ◆ 1x HDMI 1.4
- ◆ 1x 3G-SDI (IN & LOOP)

Output Connectors

- ◆ 10x Gigabit Ethernet ports
- ◆ 2x Fiber outputs
- ◆ 1x HDMI 1.3

Single device unit drives up to 6.5 million pixels, with a maximum width of 10,240 pixels and a maximum height of 8192 pixels.

OPT 1 Self-adaptive, either for video input or for output OPT 2 copies or backs up the output on 10 Ethernet ports.

Self-Adaptive OPT 1 for Either Video Input or Sending Card Output

Thanks to the self-adaptive design, OPT 1 can be used as either an input or output connector, depending on its connected device

Audio Input and Output

- ◆ Audio input accompanied with HDMI input source
- ◆ Output volume adjustment
- ◆ Audio output via a multifunction card

Low Latency

Reduce the delay from the input to receiving card to 20 lines when the low latency function and Bypass mode are both enabled.

3X Layers

- ◆ Adjustable layer size and position
- ◆ Adjustable layer priority

Output Synchronization

An internal input source can be used as the sync source to ensure the output images of all cascaded units in sync.

All-Round Color Adjustment

Input source and LED screen color adjustment supported, including brightness, contrast, saturation, hue and Gamma.

Powerful Video Processing

- ◆ Based on SuperView III image quality processing technologies to provide stepless output scaling
- ◆ One-click full screen display
- ◆ Free input cropping

Pixel Level Brightness and Chroma Calibration

Work with Calibration software to support brightness and chroma calibration on each LED, effectively removing color discrepancies and greatly improving LED display brightness and chroma consistency, allowing for better image quality.

Easy Preset Saving and Loading

- ◆ Up to 10 user-defined presets supported

Multiple Kinds of Hot Backup

- ◆ Backup between devices
- ◆ Output volume adjustment
- ◆ Audio output via a multifunction card

Automatic Screen Brightness Adjustment

Adjust the screen brightness automatically based on the ambient brightness collected by the external light sensor.

Mosaic Input Supported

- ◆ The mosaic source is composed of two sources
- ◆ Up to 4 units cascaded for image mosaic

Three Working Modes

- ◆ Video Controller
- ◆ Fiber Converter
- ◆ Bypass

Input Connectors

Connector	Qty	Description
3G-SDI	1	<ul style="list-style-type: none">• ST-424 (3G), ST-292 (HD) and ST-259 (SD) standard video inputs supported• Max. input resolution: 1920×1080@60Hz• Deinterlacing processing supported• 3G-SDI loop output supported• <i>DOES NOT support input resolution and bit depth settings</i>
HDMI 1.4	2	<ul style="list-style-type: none">• Max. input resolution: 3840×1080@60Hz or 3840×2160@30Hz• HDCP 1.4 compliant• <i>DOES NOT support interlaced signal inputs</i>• Custom resolutions supported<ul style="list-style-type: none">○ Max. width: 4092 pixels (4092×1136@60Hz)○ Max. height: 3981 pixels (1060×3981@60Hz)• Loop output supported on HDMI 1.4 1
DVI	1	<ul style="list-style-type: none">• Max. input resolution: 3840×1080@60Hz or 3840×2160@30Hz• HDCP 1.4 compliant• <i>DOES NOT support interlaced signal inputs</i>• Custom resolutions supported<ul style="list-style-type: none">○ Max. width: 4092 pixels (4092×1136@60Hz)○ Max. height: 3981 pixels (1060×3981@60Hz)• Loop output supported on DVI.

Output Connectors

Connector	Qty	Description
Ethernet	10	<p>Gigabit Ethernet ports</p> <ul style="list-style-type: none"> • Max. loading capacity: 6.5 million pixels • Max. width: 10,240 pixels • Max. height: 8192 pixels <p>Ethernet ports 1 and 2 support audio output. When you use a multifunction card to parse the audio, be sure to connect the card to Ethernet port 1 or 2.</p> <p>Status LEDs</p> <ul style="list-style-type: none"> • The top left one (green) indicates the connection status. <ul style="list-style-type: none"> ○ On: The port is well connected. ○ Flashing: The port is not well connected, such as loose connection. ○ Off: The port is not connected. • The top right one (yellow) indicates the communication status. <ul style="list-style-type: none"> ○ On: The Ethernet cable is short-circuited. ○ Flashing: The communication is good and data is being transmitted. ○ Off: No data transmission
HDMI 1.3	1	<ul style="list-style-type: none"> • Support monitor and video output modes. • The output resolution is adjustable.

Optical Fiber Ports

Connector	Qty	Description
OPT	2	<ul style="list-style-type: none"> • OPT 1: Self-adaptive, either for video input or for output <ul style="list-style-type: none"> ○ When the device is connected with a fiber converter, the port is used as an output connector. ○ When the device is connected with a Pixelhue video processor, the port is used as an input connector. ○ Max. capacity: 1x 4K×1K@60Hz or 2x 2K×1K@60Hz video inputs • OPT 2: For output only, with copy and backup modes OPT 2 copies or backs up the output on 4 Ethernet ports.

Note: Only the main layer can use the mosaic source. When the main layer uses the mosaic source, the PIP layer cannot be opened.

* Product information is subject to change without prior notice.

Control Connectors

Connector	Qty	Description
Ethernet	1	<p>Connect to the control PC or router.</p> <p>Status LEDs:</p> <ul style="list-style-type: none"> • The top left one indicates the connection status. <ul style="list-style-type: none"> ○ On: The port is well connected. ○ Flashing: The port is not well connected, such as loose connection. ○ Off: The port is not connected. • The top right one indicates the communication status. <ul style="list-style-type: none"> ○ On: The Ethernet cable is short-circuited. ○ Flashing: The communication is good and data is being transmitted. ○ Off: No data transmission
Light Sensor	1	Connect to a light sensor to collect the ambient brightness, allowing for automatic screen brightness adjustment
USB	2	<p>USB (Type-B):</p> <ul style="list-style-type: none"> • Connect to the control PC. • Input connector for device cascading <p>USB (Type-A):</p> <ul style="list-style-type: none"> • Output connector for device cascading

Other Specifications

Electrical Parameters	Power Connector	100–240V~, 1.5A, 50/60Hz
	Rated power consumption	35 W
Operating Environment	Temperature	0°C to 45°C
	Humidity	20% RH to 90% RH, non-condensing
Storage Environment	Temperature	-20°C to +70°C
	Humidity	10% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	483.6 mm × 351.2 mm × 50.1 mm
	Net Weight	4 Kg
Package	Accessories	<ul style="list-style-type: none"> • 1x Power cord • 1x HDMI to DVI cable 1x USB cable • 1x Ethernet cable 1x HDMI cable • 1x Quick Start Guide 1x Certificate of Approval 1x Safety Manual
	Dimensions	565.0 mm × 175.0 mm × 450.0 mm
	Gross Weight	6.8 Kg
Noise Level (typical at 25°C/77°F)		45 db (A)

* Product information is subject to change without prior notice.

Video Source Features

Input Connectors	Bit Depth	Max Input Resolution
HDMI 1.4 OPT 1	YCbCr 4:4:4	3840×648@60Hz (Custom)
	8 Bit YCbCr 4:2:2	600×3840@60Hz
	YCbCr 4:2:0	(Forced) Not supported
3G-SDI	<ul style="list-style-type: none"> • Max. input resolution: 1920×1080@60Hz • DOES NOT support input resolution and bit depth settings. • Supports ST-424 (3G), ST-292 (HD) and ST-259 (SD) standard video inputs. 	

* Product information is subject to change without prior notice.