

Overview

The DT4016 Splicing Server, developed by Aaztec, is a professional video processing and control solution designed for large-scale, small-pitch LED screens. It features a robust hardware FPGA architecture, and its modular design allows for extensive customization with a wide array of input and output interfaces tailored to specific needs.







Key features of the DT4016 include support for 8K UHD video input and output, output rotation, multi-screen and multi-layer management, HDCP 2.3 compliance & EDID management for input and output, input echo and output preview, 3D output capabilities, and Genlock synchronous phase locking. These features collectively address a wide range of complex project requirements.


Features



- **Single Board Capabilities:**
 - Supports 8 channels of 2K@60Hz input.
 - Handles 2 channels of 4K@60Hz input and can splice inputs up to 8K×2K@60Hz.
 - Provides 8 network port outputs, accommodating up to 5.2 million pixels.
- **System Capabilities:**
 - Supports 24 channels of 2K@60Hz input and 24 channels of network port output simultaneously.
 - The entire system can manage up to 15.6 million pixels.
- **Channel Input and Layer Support:**
 - Single channel supports HDMI 2.0 or DP 1.4 input, with a maximum resolution of 8K×4K@30Hz.
 - Single board supports up to 162K layers at 60Hz, 84K layers at 30Hz, or 44K layers at 60Hz.
 - The entire machine supports up to 162K layers.
- **User Interface and Management:**
 - No software installation required; controlled via a web interface, independent of operating systems and platforms.
 - Offers a simple, fast operation with real-time response and easy configuration for complex scenarios.
 - Real-time input echo and output monitoring available through the web terminal, without needing an additional monitoring board.
- **Flexible Display Modes**
 - Supports **quad view, side-by-side, single, and picture-in-picture (PIP)** configurations.
 - **Output/source rotation, image freeze, and window mute control** for enhanced customization.
- **Scene and Group Management:**
 - **Scene Management:** Save and recall different preset parameters as scenes; easily switch between multi-screen and single-screen scenes with one click.
 - **Group Screen Management:** Manage up to 8 groups of screens with individually set output resolutions, facilitating control of special-shaped screens and complex displays.
- **Audio & Video Enhancements:**
 - **Stereo audio de-embedding** for integrated audio control.
 - **Annotation capability** over presentations using a touch screen with tools like freehand, arrows, rectangles, and colors.


Product Specifications

Input Cards	
<p>DT4016_4×DVI Inputcard</p>	 <p>DVI Input Interface</p> <ul style="list-style-type: none"> • Number of Input Interfaces: 4 channels of DVI • Maximum Input Resolution: 1920×1200@60Hz <ul style="list-style-type: none"> ◦ Custom Resolution Limits: <ul style="list-style-type: none"> ▪ Width up to 2048 (e.g., 2048×1152@60Hz) ▪ Height up to 2048 (e.g., 1152×2048@60Hz) • Video Input Formats: RGB444, YCbCr444, YCbCr422 <p>Input Card Specifications</p> <ul style="list-style-type: none"> • Input Signal Level: TMDS/CML • Impedance: Differential 100 ohms • Power Consumption: 5W <p>Indicator Light Status</p> <ul style="list-style-type: none"> • Steady On: Input signal is connected normally • Off: Input is either not connected or has an issue
<p>DT4016_4×HDMI1.3 Inputcard</p>	 <p>HDMI 1.3 Input Interface</p> <ul style="list-style-type: none"> • Number of Input Interfaces: 4 HDMI 1.3 • Maximum Input Resolution: 1920×1200@60Hz <ul style="list-style-type: none"> ◦ Custom Resolution Limits: <ul style="list-style-type: none"> ▪ Width up to 2048 (e.g., 2048×1152@60Hz) ▪ Height up to 2048 (e.g., 1152×2048@60Hz) • Video Input Formats: RGB444, YCbCr444, YCbCr422 • Audio Support: Yes <p>Input Card Specifications</p> <ul style="list-style-type: none"> • Input Signal Level: TMDS/CML • Impedance: Differential 100 ohms • Power Consumption: 5W <p>Indicator Light Status</p>

	<ul style="list-style-type: none"> • Steady On: Input signal is connected normally • Off: Input is either not connected or has an issue <p><i>Indicator lights are arranged as follows: In the first column (from left to right), the upper light indicates HDMI-1 and the lower light indicates HDMI-2. In the second column, the upper light indicates HDMI-3 and the lower light indicates HDMI-4</i></p>
DT4016_4x HDMI1.4 inputcard	 <p>HDMI 1.4 Input Interface</p> <ul style="list-style-type: none"> • Number of Input Interfaces: 4 HDMI 1.4 • Maximum Input Resolution: 4096×2160@30Hz <ul style="list-style-type: none"> ◦ Custom Resolution Limits: <ul style="list-style-type: none"> ▪ Width up to 4096 (e.g., 4096×2160@30Hz) ▪ Height up to 4096 (e.g., 2000×4096@30Hz) • Video Input Formats: RGB444, YCbCr444, YCbCr422 • Audio Support: Yes <p>Input Card Specifications</p> <ul style="list-style-type: none"> • Input Signal Level: TMDS/CML • Impedance: Differential 100 ohms • Power Consumption: 5W <p>Indicator Light Status</p> <ul style="list-style-type: none"> • Steady On: Input signal is connected normally • Off: Input is either not connected or has an issue <p><i>Indicator lights are organized as follows: In the first column (from left to right), the upper light represents HDMI 1.4-1 and the lower light represents HDMI 1.4-2. In the second column, the upper light indicates HDMI 1.4-3 and the lower light indicates HDMI 1.4-4.</i></p>
DT4016_2x HDMI 2.0 inputcard	 <p>HDMI 2.0 Input Interface</p> <ul style="list-style-type: none"> • Number of Input Interfaces: 2 HDMI 2.0 • Maximum Input Resolution: 4096×2160@60Hz <ul style="list-style-type: none"> ◦ Custom Resolution Limits: <ul style="list-style-type: none"> ▪ Width up to 8192 (e.g., 8192×1080@60Hz) ▪ Height up to 8192 (e.g., 960×8192@60Hz) • Video Input Formats: RGB444, YCbCr444, YCbCr422 • Audio Support: Yes

	<p>Input Card Specifications</p> <ul style="list-style-type: none"> • Input Signal Level: TMDS/CML • Impedance: Differential 100 ohms • Power Consumption: 5W <p>Indicator Light Status</p> <ul style="list-style-type: none"> • Steady On: Input signal is connected normally • Off: Input is either not connected or has an issue <p><i>Indicator lights are organized as follows: In the first column (from left to right), the upper light represents HDMI 2.0-1 and the lower light represents HDMI 2.0-2.</i></p>
<p>DT4016_4x 3G-SDI inputcard</p>	 <p>3G-SDI Input Interface</p> <ul style="list-style-type: none"> • Number of Input Interfaces: 4 x 3G-SDI • Maximum Input Resolution: 1920×1080@60Hz • Video Source Standards: ST-424 (3G), ST-292 (HD), and SMPTE 259 (SD) • Video Input Formats: RGB444, YCbCr444, YCbCr422 • Audio Support: Yes • Compatibility: Supports HD-SDI and SD-SDI standards • Loop-Out Function: Supports SDI loop-out, with each SDI loop-out interface corresponding one-to-one with the input interfaces • De-interlacing Support: 1080i, 576i, 480i • Input Resolution Setting: Not supported <p>Input Card Specifications</p> <ul style="list-style-type: none"> • Input Signal Level: TMDS/CML • Impedance: 100 ohms • Power Consumption: 5W <p>Indicator Light Status</p> <ul style="list-style-type: none"> • Steady On: Input signal is connected normally • Off: Input is either not connected or has an issue <p><i>Indicator lights are organized as follows: In the first column (left to right), the upper light indicates SDI-1 and the lower light indicates SDI-2. In the second column, the upper light indicates SDI-3 and the lower light indicates SDI-4. In the third column, the upper light represents SDI-5 and the lower light represents SDI-6. In the fourth column, the upper light signifies SDI-7 and the lower light signifies SDI-8.</i></p>

Output Cards	
DT4016_8x RJ45 output card	 <p>Network Output Interface</p> <ul style="list-style-type: none"> • Number of Ports: 8 x RJ45 Gigabit network ports • Pixel Support: Each single board supports up to 5.2 million pixels. Each network port has a maximum bandwidth of 4096 pixels and can handle up to 4096 pixels. • Single Network Port Loading: <ul style="list-style-type: none"> ○ At a 60Hz frame rate, 8-bit support accommodates up to 650,000 pixels. ○ At a 120Hz frame rate, 8-bit support accommodates up to 320,000 pixels. • Network Port Backup: Yes • Layout Flexibility: Supports arbitrary placement of network ports within the device's loading range • Output Card Specifications: <ul style="list-style-type: none"> ○ Power Consumption: 5W <p>Network Port Indicator Status</p> <ul style="list-style-type: none"> • Yellow Light Off, Green Light Off: Network cable is not connected or the network port hardware is faulty. • Yellow Light On, Green Light On: Connection is established, but there is no communication. • Yellow Light Flashing, Green Light On: Connection and communication are both normal. <p><i>Each network port has a yellow light on the left and a green light on the right.</i></p>
Control Cards	
DT4016_ control card	 <p>Interface Parameters</p> <ul style="list-style-type: none"> • COM-1: RS232 control port, connects to the central control system • COM-2: RS232 control port, connects to the central control system; can also be used as a loop-out port for COM-1 • USB: USB 3.0 interface, intended solely for system upgrades; cannot be used to power other devices • ETHERNET: Gigabit network port, serves as a communication interface; connects to a control computer, router, or switch for web control and monitoring <p>Indicator Light Status</p> <ul style="list-style-type: none"> • RUN Light: <ul style="list-style-type: none"> ○ Flashing: Device is starting up ○ Steady Flashing (1/2 second intervals): System is operating normally

	<ul style="list-style-type: none"> ○ Off or Not Flashing: System failure (after the device is powered on) • PWR Light: <ul style="list-style-type: none"> ○ Steady On: Device is powered normally ○ Off: Power supply issue
DT4016_ Enhanced control card	 <p>Interface Parameters</p> <ul style="list-style-type: none"> • 3D-SYNC: 3D sync signal output interface • GENLOCK: External sync signal source <ul style="list-style-type: none"> ○ IN: Input for external signal source ○ LOOP: Synchronous output from external signal source • COM-1: RS232 control port, connects to the central control system • COM-2: RS232 control port, connects to the central control system; can also be used as a loop-out port for COM-1 • USB: USB 3.0 interface, used exclusively for system upgrades; cannot power other devices • ETHERNET: Gigabit network port for communication; connects to a control computer, router, or switch for web control and monitoring • Monitor: HDMI preview, with an output resolution of 3840×2160@60Hz, 4:4:4 • Audio Output Interface: Allows for audio output from a specific input source to the LED screen speakers or enables audio monitoring during control <p>Indicator Light Status</p> <ul style="list-style-type: none"> • RUN Light: <ul style="list-style-type: none"> ○ Flashing: Device is starting up ○ Steady Flashing (1/2 second intervals): System is operating normally ○ Off or Not Flashing: System failure (after the device is powered on) • PWR Light: <ul style="list-style-type: none"> ○ Steady On: Device is powered normally ○ Off: Power supply issue

Product Models	DT4016D08	DT4016D16
Maximum number cards	Input – 3 Pc Output -2 Pc	Input – 4 Pc Output -3 Pc
Chassis specifications	1.5U	2U
Power	110-240V~, 47-63Hz, 1A	
Machine power consumption	160W	
Runtime	24 x 7 hrs	
MTBF	50,000 Hrs	
Working environment	0°C~50°C, 0%RH~90%RH, non-condensing	
Storage environment	-20°C~65°C, 0%RH~95%RH, non-condensing	
Dimensions	482.6mm×353mm (L×W)	