TMX Series Matrix Switchers

TMX Series Matrix Switchers

TMX-M16   16×16 Mixed Card Matrix Switcher Frame

■ **LCD to display real-time operation**

■ **Front panel button control , easy to switch manually**

■ **Redundant power supply**

Technical Specifications

Control

COM (RS-232)	3-Pin Phoenix, RS-232 protocol with baud rate 115200 bps
RJ45	TCP/IP
RS422	2 × 5-Pin Phoenix For connecting to dome camera
Signal cards	4 input signal cards, 4 output signal cards
Resolution	Max. 1920x1200 @60Hz (2K cards) Max. 3840x2160 @60Hz (4K cards)

General specs

Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	177×483×366 (3U high, full rack width)
Weight (w/o signal cards)	10.5 kg
Color	Gray (PANTONE- 465, RAL - 7022)
Mean time between failures	30,000 hours

Features

■ **High performance video signal matrix , support seamless switching, after change source, new video comes out in a few milliseconds, high-fidelity output**

■ **Widely used in the place of radio & television engineering, multimedia conference hall, large screen display engineering, TV teaching and leadership office**

■ **Gen-lock based Video Wall: based on Gen-Lock technology, the video delay between any output channels is less than 0.1 ms, the video will not distorted. Available in up to 16 × 16 output channels. It's especially matched with LCD/LED Video Wall**

■ **Supports manifold signal input/output cards, such as HDMI, SDI, VGA, 4KHDMI, etc.**

■ **Combined with different signal cards to resolve integrative audiovisual resolution**

■ **Can be configured up to 8 input boards,8 output boards, each board supports 2 ports, a total of 16 inputs and 16 outputs**

■ **Compatible with manifold signal formats of input/output signal cards for cross switching**

■ **Support various format of signals input, and the output resolution is default as 1080P60, can be setup by Matrix Control Tool**

■ **Independent resolution selection for each output without affecting each other**

■ **Maximum resolution of 2K cards :1920 x 1200@60Hz   and 4K cards : 3840x2160 444@60Hz**

■ **With 1 RJ45 interface, supports TCP / IP , can communicate with the TAIDEN conference system, can realize video tracking function**

■ **With 1 RS232 interface ,for connecting to PC, central control system or HCS-3316CK Camera Control Keypad**

■ **With 2 RS422 interface, for connecting to dome camera with built-in a variety of professional camera control protocol, can control TAIDEN HCS-3316HDN, TAIDEN HCS-3316HDN,, HCS-9316HDN, HUAWEI, SONY, PELCO, Panasonic and other professional cameras**

■ **With Matrix Control Tool, can realize remote control, including Matrix Switch, Signal Setting, etc.**

■ **Power-off protection for work status**

Ordering Information

TMX-M16	16 × 16 Mixed Card Matrix Switcher Frame

TMX-M16 Mixed Card Matrix Switcher System Connection

TMX-M8   8×8 Mixed Card Matrix Switcher Frame

Features

- **High performance video signal matrix , support seamless switching, after change source, new video comes out in a few milliseconds, high-fidelity output**

- **Widely used in the place of radio & television engineering, multimedia conference hall, large screen display engineering, TV teaching and leadership office**

- **Gen-lock based Video Wall: based on Gen-Lock technology, the video delay between any output channels is less than 0.1 ms, the video will not distorted. Available in up to 8 ×8 output channels. It's especially matched with LCD/LED Video Wall**

- **Supports manifold signal input/output cards, such as HDMI, SDI, VGA, 4KHDMI, etc.**

- **Combined with different signal cards to resolve integrative audiovisual resolution**

- **Can be configured up to 4 input boards, 4 output boards, each board supports 2 ports, a total of 8 inputs and 8 outputs**

- **Compatible with manifold signal formats of input/output signal cards for cross switching**

- **Support various format of signals input, and the output resolution is default as 1080P60, can be setup by Matrix Control Tool**

- **Independent resolution selection for each output without affecting each other**

- **Maximum resolution of 2K cards :1920 x 1200@60Hz   and 4K cards : 3840x2160@60Hz**

- **With 1 RJ45 interface, supports TCP / IP , can communicate with the TAIDEN conference system, can realize video tracking function**

- **With 1 RS232 interface ,for connecting to PC, central control system or HCS-3316CK Camera Control Keypad**

- **With 1 RS422 interface, for connecting to dome camera with built-in a variety of professional camera control protocol, can control TAIDEN HCS-3316HDN, HUAWEI, SONY, PELCO, Panasonic and other professional cameras**

- **With Matrix Control Tool, can realize remote control, including Matrix Switch, Signal Setting, etc.**

- **Power-off protection for work status**

- **LCD to display real-time operation**

- **Front panel button control , easy to switch manually**

- **Redundant power supply**

Technical Specifications

Control

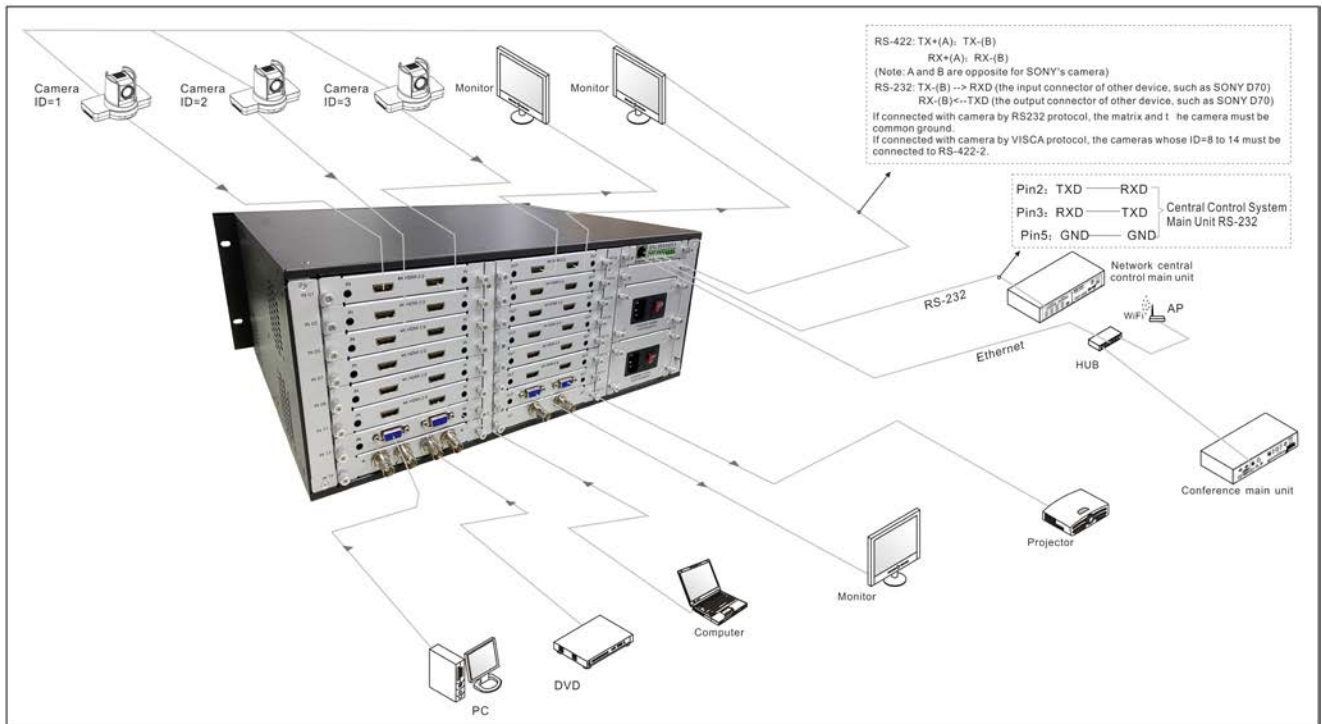|	
COM (RS-232)	3-Pin Phoenix, RS-232 protocol with baud rate 115200 bps
RJ45	TCP/IP
RS422	5-Pin Phoenix For connecting to dome camera
Signal cards	4 input signal cards, 4 output signal cards
Resolution	Max. 1920x1200 @60Hz (2K cards) Max. 3840x2160 @60Hz (4K cards)

General specs

Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	89×483×365 (2U high, full rack width)
Weight (w/o signal cards)	6.4 kg
Color	Gray (PANTONE- 465, RAL - 7022)
Mean time between failures	30,000 hours

Ordering Information

TMX-M8	8 × 8 Mixed Card Matrix Switcher Frame

TMX-M8 Mixed Card Matrix Switcher System Connection
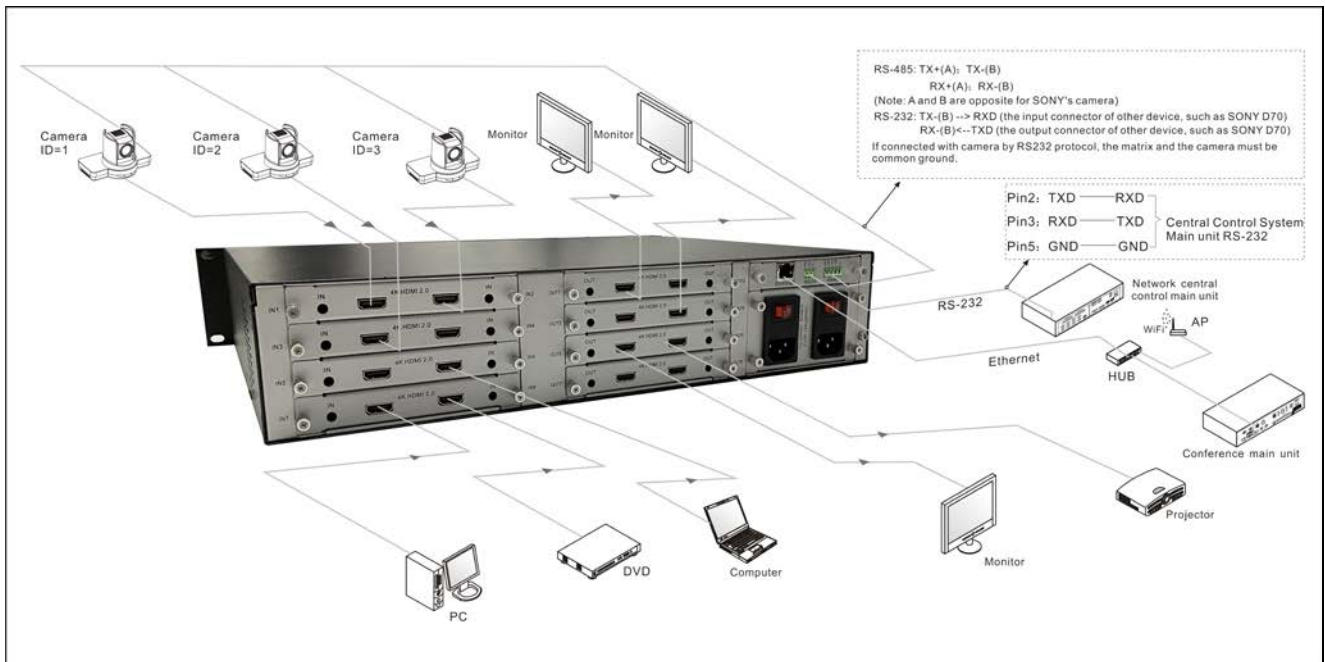
TMX-VGA-2IN 2 Channels VGA Seamless Input Card

Features

■ Seamless input signal card;

■ Dual VGA input channels with 2 Ø3.5mm earphone jack for analog audio input

■ Enable to select embedded audio in VGA or external Ø 3.5mm earphone input.

■ Input resolution supports 800 x 600, 1024 x 768, 1280 x 768, 1280 x 800, 1280 x 1024, 1360 x 768, 1400 x 1050, 1600 x 1200, 1920 x 1080

■ Support EDID learning function.

Technical Specifications

Input signal ....VGA signal
....Analog audio signal
Interface ....2 ×15-pin female D connector
....2 × Ø 3.5mm earphone
Power consumption ....<5W
Bandwidth ....>300 MHz

General specs

Temperature ....Operating: 0 °C to + 50 °C;
storage: -20 °C to + 70 °C
Humidity ....Storage and operating: 10% to 90%
Weight ....125 g

Ordering Information

TMX-VGA-2IN ....Dual-channel VGA Seamless Input Card(for TMX-M8 and TMX-M16, 2 VGA inputs, 2 stereo audio inputs, support VGA, input signal with automatic line doubling function, automatic recognition of input resolution, support for EDID management learning function)

TMX-VGA-2OUT 2 Channels VGA Seamless Output Card

Features

■ Seamless Output signal card;

■ Dual VGA input channels with 2 Ø3.5mm earphone jack for analog audio input

■ Enable to select embedded audio in VGA or external Ø 3.5mm earphone input.

■ Output resolution supports 800 x 600, 1024 x 768, 1280 x 768, 1280 x 800, 1280 x 1024, 1360 x 768, 1400 x 1050, 1600 x 1200, 1920 x 1080

■ Support EDID learning function.

Technical Specifications

Output signal ....VGA signal
....Analog audio signal
Interface ....2 ×15-pin female D connector
....2 × Ø 3.5mm earphone
Power consumption ....<5W
Bandwidth ....>300 MHz

General specs

Temperature ....Operating: 0 °C to + 50 °C;
storage: -20 °C to + 70 °C
Humidity ....Storage and operating: 10% to 90%
Weight ....125 g

Ordering Information

TMX-VGA-2OUT ....Dual-channel VGA Seamless Output Card(for TMX-M8 and TMX-M16, 2 VGA outputs, 2 stereo audio outputst, support EDID management learning function)

TMX-SDI-2IN
2 Channels SDI Input Card

Features

■   Seamless input signal card;

■   Each channel of input signal card with a SDI loop-output;

■   Dual Input ports: BNC Female

■   Supporting input formats: SDI, HD-SDI, 3G-SDI;

■   Built-in upscaling function

■   The resolution can be adjusted, supporting up to 1080p60

Technical Specifications

Input signal	2 ×SDI signal with 2 SDI looping out
Interface	BNC connector
Power consumption	<5 W
Signal types	SDI, HD-SDI, 3G-SDI
Resolution	Supports input formats up to 1080P@60Hz

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Weight	125 g

Ordering Information

TMX-SDI-2IN   Dual-channel SDI Seamless Input Card(for TMX-M8 and TMX-M16, 2 SDI inputs, 2 SDI loop out,support SDI, HD-SDI, 3G – SDI, input signal with automatic line doubling function, automatic recognition of input resolution)

TMX-SDI-2OUT
2 Channels SDI Output Card

Features

■   Seamless Output signal card;

■   Dual Output ports: BNC Female

■   Supporting input formats: SDI, HD-SDI, 3G-SDI;

■   Built-in upscaling function

■   The resolution can be adjusted, supporting up to 1080p60

Technical Specifications

Output signal	2 ×SDI signal with 2 SDI looping out
Interface	BNC connector
Power consumption	<5 W
Signal types	SDI, HD-SDI, 3G-SDI
Resolution	Supports input formats up to 1080P@60Hz

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Weight	125 g

Ordering Information

TMX-SDI-2OUT   Dual-channel SDI Seamless Output Card(for TMX-M8 and TMX-M16, 2 SDI outputs, support SDI, HD-SDI, 3G – SDI)

TMX-HDMI-2IN
2 Channels HDMI Input Card

TMX-HDMI-2OUT
2 Channels HDMI Output Card
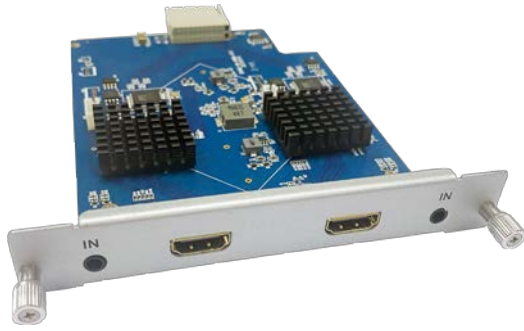
Features

■ 2K Seamless HDMI Input Module

■ Dual Ø 3.5mm earphone jack for analog audio input

■ Dual HDMI Type A 19P Female input ports, supports HDMI1.3/DVI1.0

■ Supports input formats: 800×600, 1024×768, 1280×768, 1280×800, 1280×1024, 1360×768, 1400×1050, 1600×1200, 1920×1080

■ Signal bandwidth: 6.75Gpbs

■ Audio format: PCM

■ Enable to select embedded audio in HDMI or external Ø3.5mm earphone input.

Features

■ 2K Seamless HDMI Output Module

■ Dual Ø 3.5mm earphone jack for analog audio output

■ Dual HDMI Type A 19P Female input ports, supports HDMI1.3/DVI1.0

■ Supports output formats: 800×600, 1024×768, 1280×768, 1280×800, 1280×1024, 1360×768, 1400×1050, 1600×1200, 1920×1080

■ Signal bandwidth: 18Gpbs

■ Audio format: PCM

Technical Specifications

Input signal	2 ×HDMI input signal (compatible with DVI), 2 ×Ø 3.5mm earphone analog audio signal
Interface	Type A 19P female
Power consumption	5 W
Signal types	DVI，HDMI
Bandwidth	6.75Gpbs
Color depth	8 & 10 & 12 bit
Audio format	PCM
Standard	Supports HDMI1.3 / DVI1.0
Resolution	Supports input formats: up to 1920×1080

Technical Specifications

Output signal	2 ×HDMI output signal (compatible with DVI), 2 ×Ø 3.5mm earphone analog audio signal
Interface	Type A 19P female
Power consumption	<5 W
Signal types	DVI，HDMI
Bandwidth	6.75 Gpbs
Color depth	8 & 10 & 12 bit
Audio format	PCM
Standard	Supports HDMI1.3 / DVI1.0
Resolution	Supports output formats: up to 1920 ×1080

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Weight	125 g

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Weight	125 g

Ordering Information

TMX-HDMI-2IN .... Dual-channel HDMI Input Card(for TMX-M8 and TMX-M16, 2 HDMI inputs, 2 stereo audio inputs, supports HDMI1.3/DVI1.0, compatible with DVI, support the highest resolution1920×1080)

Ordering Information

TMX-HDMI-2OUT .... Dual-channel HDMI Output Card(for TMX-M8 and TMX-M16, 2 HDMI outputs, 2 stereo audio outputs, supports HDMI1.3/DVI1.0, compatible with DVI, support the highest resolution 1920×1080)

TMX-4KHDMI-2IN
2 Channels 4K HDMI Input Card

Features

■ 4K Seamless HDMI Input Module

■ Dual Ø 3.5mm earphone jack for analog audio input

■ Dual HDMI Type A 19P Female input ports, supports HDMI2.0/DVI1.0

■ The maximum resolution is 4K 444@60Hz

■ Signal bandwidth: 18 Gpbs

■ Audio format: PCM

■ Enable to select embedded audio in HDMI or external Ø3.5mm earphone input.

Technical Specifications

Input signal	2 ×HDMI input signal (compatible with DVI), 2 ×Ø 3.5mm earphone analog audio signal
Interface	Type A 19P female
Power consumption	<5 W
Signal types	DVI，HDMI
Bandwidth	18 Gpbs
Audio format	PCM
Standard	Supports HDMI2.0 / DVI1.0
Resolution	Supports input formats: up to 4K 444@60Hz

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Weight	125 g

Ordering Information

TMX-4KHDMI-2IN	Dual-channel 4K HDMI Input Card(for TMX-M8 and TMX-M16,2 HDMI inputs, 2 stereo audio inputs, support HDMI2.0 and DVI1.0, compatible with DVI signals, support the highest resolution HDMI 2.0 4K 444@60Hz)

TMX-4KHDMI-2OUT
2 Channels 4K HDMI Output Card

Features

■ 4K Seamless HDMI Output Module

■ Dual Ø 3.5mm earphone jack for analog audio output

■ Dual HDMI Type A 19P Female input ports, supports HDMI2.0/DVI1.0

■ The maximum resolution is 4K 444@60Hz

■ Signal bandwidth: 18Gpbs

■ Audio format: PCM

Technical Specifications

Output signal	2 ×HDMI output signal (compatible with DVI), 2 ×Ø 3.5mm earphone analog audio signal
Interface	Type A 19P female
Power consumption	<5 W
Signal types	DVI，HDMI
Bandwidth	18 Gpbs
Audio format	PCM
Standard	Supports HDMI2.0 / DVI1.0
Resolution	Supports output formats: up to 4K 444@60Hz

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Weight	125 g

Ordering Information

TMX-4KHDMI-2OUT	Dual-channel 4K HDMI Output Card(for TMX-M8 and TMX-M16, 2 HDMI outputs, 2 stereo audio outputs, support HDMI2.0 and DVI1.0, compatible with DVI signals, support the highest resolution HDMI 2.0 4K 444@60Hz)

TMX-1616MX
16×16 Mixed Card Matrix Switcher Frame

Features

- **High-performance AV professional switcher**
- **Compatible with manifold signal formats of input/output signal cards for cross switching**
- **Offers separate audio and video input/output ports**
- **Combined with different signal cards to resolve integrative audiovisual resolution**
- **Seamless switching**
- **Supports manifold signal input/output cards, such as HDMI, DVI, VGA, SDI, etc.**
- **Widely used in the place of radio & television engineering, multimedia conference hall, large screen display engineering, TV teaching and leadership office**
- **Power failure protection function**
- **With RS232 interface which can be expediently connected to PC, remote control system and other remote control devices**
- **Two RS-422 control ports with built-in professional camera control protocols, a variety of professional cameras like TAIDEN HCS-3316HDB, SONY, PELCO and Panasonic can be controlled**
- **Ethernet interface for communicating with PC under TCP/IP protocol to realize remote controlling; furthermore, it enables remote controlling by wireless touch panel through central control system**
- **Power-off protection for scene status**
- **LCD to display real-time operation**
- **Front panel button control , easy to switch manually**
- **Two power cable interfaces, one is back-up for another**
- **3U high, full rack width**

Technical Specifications

Control

COM (RS-232)	RS-232, 9 pin female D connector
RJ45	TCP/IP
RS422/RS485	Invalidation
Signal cards	4 input signal cards, 4 output signal cards
Resolution	Max. 1920×1200@60 Hz, compliant with VESA and HDTV normal standards

General specs

Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	132 × 478 × 310 (3U high, full rack width)
Weight	5.9 kg
Color	Gray (PANTONE 425 C)
Mean time between failures	30,000 hours

Ordering Information

TMX-1616MX	16×16 Mixed Card Matrix Switch Frame

TMX-0808MX
8×8 Mixed Card Matrix Switcher Frame

Technical Specifications

Control

COM (RS-232)	RS-232, 9 pin female D connector
RJ45	TCP/IP
RS422/RS485	Invalidation
Signal cards	4 input signal cards, 4 output signal cards
Resolution	Max. 1920×1200@60 Hz, compliant with VESA and HDTV normal standards

General specs

Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	88 × 478 × 310 (2U high, full rack width)
Weight	5.9 kg
Color	Gray (PANTONE 425 C)
Mean time between failures	30,000 hours

Ordering Information

TMX-0808MX	8×8 Mixed Card Matrix Switch Frame

Features

■ **High-performance AV professional switcher**

■ **Compatible with manifold signal formats of input/output signal cards for cross switching**

■ **Offers separate audio and video input/output ports**

■ **Combined with different signal cards to resolve integrative audiovisual resolution**

■ **Seamless switching**

■ **Supports manifold signal input/output cards, such as HDMI, DVI, VGA, SDI, etc.**

■ **Widely used in the place of radio & television engineering, multimedia conference hall, large screen display engineering, TV teaching and leadership office**

■ **Power failure protection function**

■ **With RS232 interface which can be expediently connected to PC, remote control system and other remote control devices**

■ **RS-422 control ports with built-in professional camera control protocols, a variety of professional cameras like TAIDEN HCS-3316HDB, SONY, PELCO and Panasonic can be controlled**

■ **Ethernet interface for communicating with PC under TCP/IP protocol to realize remote controlling; furthermore, it enables remote controlling by wireless touch panel through central control system**

■ **Power-off protection for scene status**

■ **LCD to display real-time operation**

■ **Front panel button control , easy to switch manually**

■ **2U high, full rack width**

TMX-HDMI-4IN
4 Channels HDMI Input Card

Features

- ■ **Seamless input signal card**
- ■ **Support HDMI1.3 and HDCP1.4, compatible with DVI signal**
- ■ **The maximum resolution is 1080P@60Hz**
- ■ **Audio input mode (built-in HDMI audio or extend analog audio) can be selected via input control code, the default is built-in HDMI audio**

Technical Specifications

Input signal	4 ×HDMI input signal (compatible with DVI), 4 ×analog audio signal
Interface	Type A 19P female
Power consumption	7.1 W
Color depth	8 & 10 & 12 bit
Signal types	DVI, HDMI
Bandwidth	6.75 Gpbs
Audio format	PCM
Standard	Supporting HDMI1.3
EDID manage	Supporting EDID learning function
Weight	0.2 kg

Ordering Information

TMX-HMDI-4IN	4 Channels HDMI Input Card (support HDMI1.3 and HDCP, compatible with DVI signal, build-in upscaling function)

TMX-DVI-4IN
4 Channels DVI Input Card

Features

- ■ **Seamless input signal card (only support HD signal)**
- ■ **Compatible with HDMI1.3 and HDCP1.4**
- ■ **Support manifold signal formats, include DVI、HDMI、VGA、YPbPr and C-VIDEO**
- ■ **Automatic identification input signal format without manual setting**
- ■ **With embedded EDID manage technology, supporting DDC control**

Technical Specifications

Input signal	4 ×DVI input signal
Interface	Female DB24+5
Level	T.M.D.S 2.9V～3.3V
Impedance	75 Ω
Gain	0 dB
Switching speed	Max. 200 ns
Delay	Max. 5 ns (±1 ns)
Video signal	DVI, HDMI, VGA, C-VIDEO, YPbPr
Bandwidth	340MHz(10.2Gbit/s)
Crosstalk	<-50 dB@5 MHz
Data types	8 bit
Audio output format	PCM
Audio sampling rate	32/ 44.1/ 48/ 88.2/ 96/ 176.4/ 192 K
EDID and DDC manage	Supporting EDID and DDC, used DVI and HDMI standard
HDCP manage	Supporting HDCP, used DVIand HDMI1.3 standard
Weight	0.2 kg

Ordering Information

TMX-DVI-4IN	4 Channels DVI-I Input Card (build-in upscaling function)

TMX-SDI-4IN
4 Channels SDI Input Card
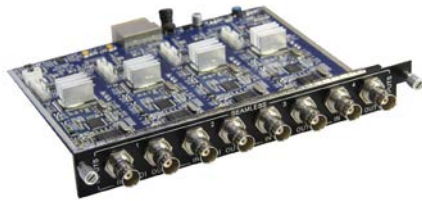
Features

■ **Seamless input signal card**

■ **Every channel of input signal card with a SDI loop-output**

■ **Supporting SDI, HD-SDI, 3G-SDI**

■ **Build-in upscaling function, and can convert low input signal into 1080P output**

Technical Specifications

Input signal	4 ×SDI signal with a SDI looping out
Interface	BNC connector
Level	T.M.D.S 2.9 V - 3.3 V
Impedance	75 Ω
Video signal	SDI, HD-SDI, 3G-SDI
Color depth	8 & 10 & 12 bit
Distance	1080P≤100 m (excellent line)
Bandwidth	6.75 Gpbs
Resolution	Max. 1080P@60Hz
Weight	0.2 kg

Ordering Information

TMX-SDI-4IN	4 Channels SDI Input Card (SDI input/loop-output conpatible with 3G-SDI/HD-SDI, build-in upscaling function)

TMX-VGA-4IN
4 Channels VGA Input Card

Features

■ **Seamless input signal card**

■ **Build-in upscaling function, and can convert into 1080P or 1920x1200 output**

■ **Signal type can be set manually: VGA（RGBHV）, YPbPr, S-VIDEO, C-VIDEO**

■ **The input signal card can extend 4 stereo audio inputs which can be set to be on/off via control code, the default is off**

Technical Specifications

Video

Input signal	4 ×VGA input signal
Coupling input	AC
Interface	15-pin female D connector
Level	0.5 - 2.0 Vp-p s
Impedance	75 Ω

Audio

Input signal	4 × analog audio
Interface	3-pin Phoenix
Frequency respones	20 - 20 kHz
Input impedance	>10 kΩ
Impedance	75 Ω

Normal

Gain	0 dB
Switching speed	Max. 200 ns
Video signal	VGA(RGBHV), YpbPr, S-VIDEO, C-VIDEO
Bandwidth	YPbPr: 170MHz, C-VIDEO: 150MHz, VGA: 170MHz
Crosstalk	<-50 dB@5 MHz
Weight	0.2 kg

Ordering Information

TMX-VGA-4IN	4 Channels VGA Input Card (compatible with VGA, YUV, YC, CVBS via converter cables, phoenix for left & right channel audio input, build-in upscaling function)

TMX-HDMI-4OUT
4 Channels HDMI Output Card

Features

- **Seamless output signal card**
- **Support HDMI1.3 and HDCP1.4, compatible with DVI signal**
- **The maximum resolution is 1080P@60Hz**
- **Analog audio output can be set to be on/off via control code, the default is off**

Technical Specifications

Input signal	4 ×HDMI signal (compatible with DVI), 4 ×analog audio signal
Interface	Type A 19P female
Power consumption	7.9 W
Color depth	8 bit
Signal types	DVI, HDMI
Bandwidth	6.75 Gpbs
Audio format	PCM
Standard	Supporting HDMI1.3
EDID manage	Supporting EDID learning function
Weight	0.2 kg

Ordering Information

TMX-HMDI-4OUT	4 Channels HDMI Output Card (support HDMI1.3 and HDCP, 4 analog audio output (unbalance stereo), seamless switching)

TMX-DVI-4OUT
4 Channels DVI Output Card

Features

- **Seamless output signal card (only support HD signal)**
- **Compatible with HDMI1.3 and HDCP1.4**
- **Support manifold signal formats, include DVI、HDMI、VGA、YPbPr and C-VIDEO**
- **The output signal format can be set via code**
- **With embedded EDID manage technology, supporting DDC control**

Technical Specifications

Output signal	4 ×DVI output signal
Interface	Female DB24+5
Level	T.M.D.S 2.9V～3.3V
Impedance	75 Ω
Gain	0 dB
Switching speed	Max. 200 ns
Delay	Max. 5 ns (±1 ns)
Video signal	DVI, HDMI, VGA, C-VIDEO, YPbPr
Bandwidth	340MHz(10.2Gbit/s)
Crosstalk	<-50 dB@5 MHz
Data types	8 bit
Audio output format	PCM
Audio sampling rate	32/ 44.1/ 48/ 88.2/ 96/ 176.4/ 192 K
EDID and DDC manage	Supporting EDID and DDC, used DVI and HDMI standard
HDCP manage	Supporting HDCP, used DVIand HDMI1.3 standard
Weight	0.2 kg

Ordering Information

TMX-DVI-4OUT	4 Channels DVI-I Output Card (support HDCP, 4 analog audio output (unbalance stereo), seamless switching)

TMX-SDI-4OUT
4 Channels SDI Output Card

Features

■ **Seamless outnput signal card**

■ **Every channel of output signal card with a SDI loop-output**

■ **Supporting SDI, HD-SDI, 3G-SDI**

■ **The transmission distance of SDI output signal (1080P) can up to 70-100 m via coaxial cable**

Technical Specifications

Input signal	4 ×SDI signal with a SDI looping out
Interface	BNC connector
Level	T.M.D.S 2.9 V - 3.3 V
Impedance	75 Ω
Video signal	SDI, HD-SDI, 3G-SDI
Color depth	8 & 10 & 12 bit
Distance	1080P≤100 m (excellent line)
Bandwidth	6.75 Gpbs
Resolution	Max. 1080P@60Hz
Weight	0.2 kg

Ordering Information

TMX-SDI-4OUT	4 Channels SDI Output Card (SDI input/loop-output conpatible with 3G-SDI/HD-SDI, seamless switching)

TMX-VGA-4OUT
4 Channels VGA Output Card

Features

■ **Seamless outnput signal card**

■ **Signal type can be set manually: VGA（RGBHV）, YPbPr, S-VIDEO, C-VIDEO**

■ **Supports embedded audio which is synchronous of video signal, namely, the embedded audio could not be transmitted without video**

Video

Output signal	4 ×VGA output signal
Switching type	Vertical spacing
Interface	15-pin female D connector
Level	0.5 - 2.0 Vp-p s
Impedance	75 Ω

Audio

Input signal	4 × analog audio
Interface	3-pin Phoenix
Frequency respones	20 - 20 kHz
Impedance	75 Ω

Normal

Gain	0 dB
Switching speed	Max. 200 ns
Video signal	VGA(RGBHV), YpbPr, S-VIDEO, C-VIDEO
Bandwidth	YPbPr: 170MHz, C-VIDEO: 150MHz, VGA: 170MHz
Crosstalk	<-50 dB@5 MHz
Weight	0.2 kg

Ordering Information

TMX-VGA-4OUT	4 Channels VGA Output Card (4 analog audio output (unbalance stereo), seamless switching)

TMX-0808DVI
8×8 DVI Matrix Switcher

Features

- **Routing: 8 × 8 DVI matrix switcher**
- **Video interface: DVI-I connectors (compatible with DVI-D)**
- **Max. data rates: 2.25 Gbps**
- **Supporting all resolutions from 480p to 1080p and WUXGA (1920×1200)**
- **Supporting video and DDC switching**
- **Input equalization adjustment for long cables**
- **Output pre-emphasize adjustment**
- **LCD to display real-time operation**
- **Front panel button control , easy to switch manually**
- **Scene save and recall function**
- **Each output interface can supply up to +5 V DC/200 mA**
- **3U high, full rack width**

Technical Specifications

Video

Max. data rate	2.25 Gbps
Resolution	Up to HDTV (1080p) or 1920×1200 @ 60 Hz

Video input

Signal type	TMDS
Connectors	8 × DVI-I connector
Equalization	Automatic, max. 12 dB

Video output

Signal type	TMDS
Connectors	8 × DVI-I connector
Pre-emphasize	0 dB, 6 dB

Control

COM (RS232)	9-pin female D connectors, 2 = TX, 3 = RX, 5 = GND
COM1	Baudrate: 9600, data: 8 bits, stop: 1 bit, no parity
COM2	Variable baudrate, data: 8 bits, stop: 1 bit, no parity
Ethernet	RJ45 socket, Cat.5 crossover cable
Ethernet protocol	TCP/IP
Ethernet speed	10 M/100 M, full-duplex or half-duplex with autodetect
PC control	Matrix switcher

General specs

Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	132 × 478 × 310 (3U high, full rack width)
Color	Gray (PANTONE 425 C)
Weight	4.5 kg

Ordering Information

TMX-0808DVI	8×8 DVI Matrix Switcher, 2.25 Gbps, DVI-I Connectors

HCS-4112M/29
1×29 Broadcast Quality Audio Distributor

Features

- **Routing: 1×29 Broadcast Quality Audio Distributor**
- **Audio interface: 3 core XLR balanced**
- **1 input channel, 29 adjustable gain output channels**
- **Audio monitoring facility**
- **Each output with a built-in independent earth isolated set (adopt 29 isolated transformers), making it completely isolated from interference between input and output signals, and eliminate the interference from power supply system and earth wire**

HCS-4112M/29 is a professional audio distributor with excellent capability. Each output is equipped with a gain adjust knob and a built-in independent earth isolated set. This broadcast standard audio distributor with earthing isolation feature is mainly used for high quality multi-way audio distribution.

Controls and Indicators

- Power indicator
- 5 signal indicators
- 29 gain control knobs of audio outputs
- Monitor volume control knob

Interconnections

- 1 XLR-F connector for audio input to connect balanced audio signal
- 1 XLR-M connector for connection with the audio input of the next HCS-4112M/29
- 29 XLR-M connectors for distributing the audio signal of the conference proceedings and the interpretation from interpreters to recording devices
- 1 XLR-F connector for monitoring audio input
- Ø 3.5 mm jack for stereo monitor earphone

Technical Specifications

Electrical

Gain	- ∞ ~ +10 dB / adjustable
Frequency response	20 Hz to 20 kHz (+0/-1 dB)
SNR	>106 dB
THD	<0.02%
Power supply	100 V AC to 240 V AC, 50/60 Hz,

Audio Input

Connector	1 XLR-F balanced
Max. input	+6 dBV

Audio output

Connectors	29 XLR-M balanced
Max. output	+16 dBV

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	70 × 483 × 222
Weight	2.8 kg

Ordering Information

HCS-4112M/29 — 1×29 Broadcast Standard Audio Distributor (3-pin XLR input/output connectors, adjustable gain output, built-in earth isolated set)

HCS-4112M/10
1×10 Broadcast Quality Audio Distributor

Features

- **Routing: 1×10 Broadcast Quality Audio Distributor**
- **Audio interface: 3 core XLR balanced**
- **1 input channel, 10 adjustable gain output channels (with audio monitor)**
- **Each output with a built-in independent earth isolated set (10 isolating transformers used), making it completely isolated from interference between input and output signals, and eliminating interference from power supply system and earth wire**

HCS-4112M/10 is a professional audio distributor with excellent capability. Each output is equipped with a gain adjust knob and a built-in independent earth isolated set. This broadcast standard audio distributor with earthing isolation feature is mainly used for high quality multi-way audio distribution.

Controls and Indicators

- Power indicator
- 10 gain control knobs of audio outputs

Interconnections

- 1 XLR-F connector for audio input to connect balanced audio signal
- 1 XLR-M connector for connection with the audio input of the next HCS-4112M/10
- 10 XLR-M connectors for distributing the audio signal of the conference proceedings and the interpretation from interpreters to recording devices
- 1 XLR-F connector for monitoring audio input

Technical Specifications

Electrical

Gain	- ∞ ~ +10 dB / adjustable
Frequency response	20 Hz to 20 kHz (+0/-1 dB)
SNR	>106 dB
THD	<0.02%
Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz

Audio Input

Connector	1 XLR-F balanced
Max. input	+6 dBV

Audio output

Connectors	10 XLR-M balanced
Max. output	+16 dBV

General specs

Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	85 × 483 × 88
Color	White (PANTONE 420 C)
Weight	1.2 kg

Ordering Information

HCS-4112M/10   1×10 Broadcast Standard Audio Distributor (3-pin XLR input/output connectors, adjustable gain output, built-in earth isolated set)

System Connection

TMX-HDSDI2HDMI/30
3G HD-SDI to HDMI Converter

Features

- **Transfers SDI input into HDMI signal as video output, and also into VGA signal at the same time, that is convenient for local monitor**
- **Mainly cooperates with HCS-3316HDB and SDI series matrix**
- **Output resolution is adjustable**

Technical Specifications

Video

Input .... 1 SD/HD-SDI, 3G HD-SDI on a BNC connector

Output .... 1 SD/HD-SDI, 3G HD-SDI loop on a BNC connector;
1 HDMI connector (unsupports CEC and HDCP),
1 VGA 15-pin HDF connector

Input/output data rate .... 1.485 Gb/s and 2.97 Gb/s

Control

COM (RS-232) .... 3-pin Phoenix; baudrate: 9600,
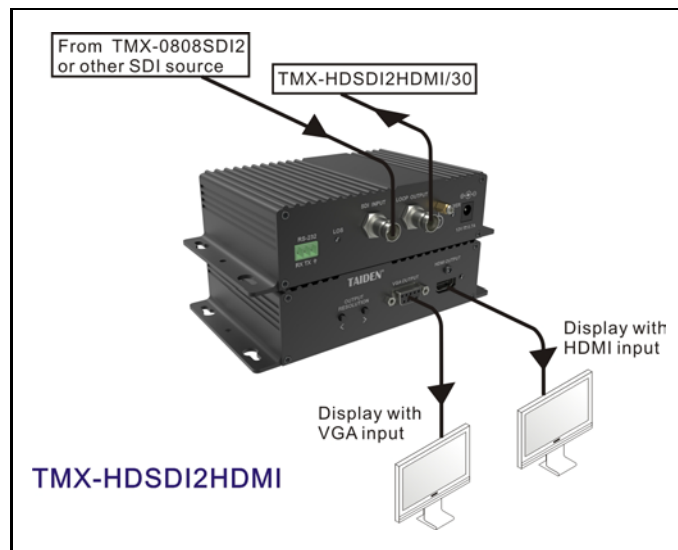data: 8 bits, stop: 1 bit, no parity

General specs

Power supply .... DC 9 V - 12 V, 0.7 A

Power consumption .... 10 W

Temperature .... Operating: 0 °C to + 50 °C;
storage: -20 °C to + 70 °C

Humidity .... Storage and operating: 10% to 90%

Dimensions h × w ×d (mm) .... 41 × 168 × 116

Weight .... 0.4 kg

Color .... Black (PANTONE 419 C)

Ordering Information

TMX-HDSDI2HDMI/30 .... 3G HD-SDI to HDMI Converter

System Connection

TMX-TP-RD
VGA & Audio over Twisted Pair Receiver

Features

- ■ **Input connector: 1 RJ45 socket**
- ■ **Video output connector: 1 VGA 15-pin HDF connector**
- ■ **Audio output connector: 1 Ø 3.5 mm mini jack**
- ■ **Independent EQ and Gain adjustment**
- ■ **Independent RGB delay adjustment: 0~50 ns**
- ■ **LED indicator for VGA input signal presence**

Technical Specifications

Video

Gain .... 0 dB

Video input

Signal type .... 1 analog RsGsBs/ YPbPr
Connector .... 1 × RJ45 socket

Video output

Signal type .... 1 analog RsGsBs/ YPbPr
Connector .... 1 × VGA 15-pin HDF connector
Nominal level .... RGB: 0.7 Vp-p
Min./max. levels .... 0.7 V - 1.2 Vp-p
Impedance .... 75 Ohm
Return loss .... -30 dB @ 5 MHz
DC offset .... <±20 mV with input at 0 offset

Sync

Output type .... RGBHV
Output level .... 4.5 V - 5.0 Vp-p
Output impedance .... 75 Ohm
Polarity .... Positive or negative (follows input)

Audio

Gain .... 0 dB
Frequency response .... 20 Hz to 20 kHz, ±0.05 dB
THD+Noise .... 0.15% @ 1 kHz at normal level
S/N .... >70 dB at maximum output (unweighted)

Audio input

Signal type .... 1 set of proprietary analog signal
Connector .... 1 × RJ45 socket

Audio output

Signal type .... 1 channel audio (L+R), unbalanced
Connector .... 1 × Ø 3.5 mm mini jack
Impedance .... <10 Ohm (unbalanced)
Gain error .... ± 0.5 dB

General specs

Power supply .... 12 V DC
Temperature .... Operating: 0 °C to + 50 °C;
storage: -20 °C to + 70 °C
Humidity .... Storage and operating: 10% to 90%
Dimensions h × w ×d (mm) .... 40 × 150 × 100
Color .... Gray (PANTONE 425 C)
Weight .... 0.4 kg

Ordering Information

TMX-TP-RD .... VGA & Audio over Twisted Pair Receiver
(independent RGB delay adjustment)

System Connection
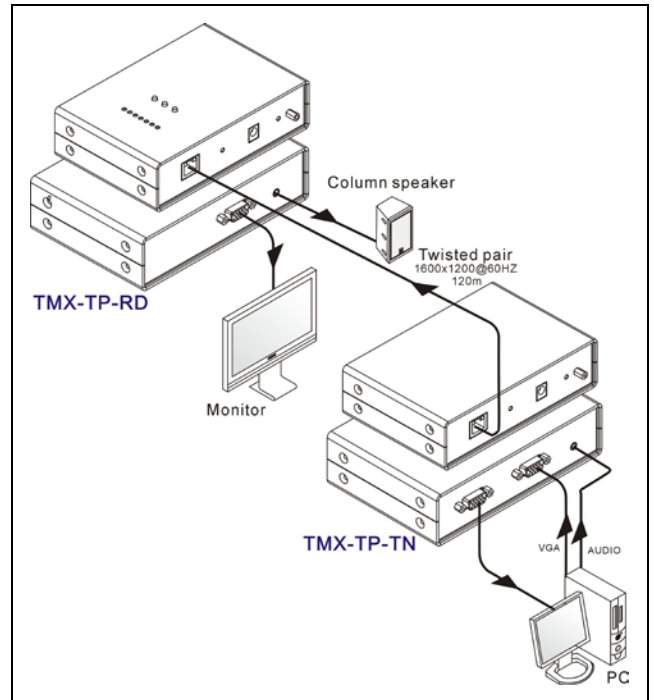
TMX-TP-TN
VGA & Audio over Twisted Pair Transmitter

Features

- **Video input connector: 1 VGA 15-pin HDF connector**
- **Audio input connector: 1 Ø 3.5 mm mini jack**
- **Output connector: 1 RJ45 socket**
- **Buffered VGA 15-pin HDF local monitor output**
- **LED indicator for VGA input signal presence**

Technical Specifications

Video

Gain	6 dB

Video input

Signal type	1 analog RGB / YPbPr
Connector	1 × VGA 15-pin HDF connector
Nominal level	RGB: 0.7 Vp-p
Min./max. level	0.3 V - 1.5 Vp-p
Impedance	75 Ohm
Return loss	-30 dB @ 5 MHz
DC offset	±20 mV

Video output

Signal type	1 analog RsGsBs / YPbPr
Connectors	1 × RJ45 socket
Nominal level	1.4 Vp-p @ input 0.7 Vp-p
Min./max. level	0.7 V - 1.6 Vp-p
Impedance	Difference 100 Ohm
Return loss	-30 dB @ 5 MHz
DC offset	±20 mV with input at 0 offset

Sync

Input type	RGBHV
Output type	RsGsBs
Input level	3.5 V - 5.5 Vp-p
Output level	4.0 V - 5.0 Vp-p
Input impedance	510 Ohm
Output impedance	75 Ohm
Polarity	Positive or negative (follows input)

General specs

Power supply	12 V DC
Temperature	Operating: 0 °C to + 50 °C; storage: -20 °C to + 70 °C
Humidity	Storage and operating: 10% to 90%
Dimensions h × w ×d (mm)	40 × 150 × 100
Color	Gray (PANTONE 425 C)
Weight	0.4 kg

Ordering Information

TMX-TP-TN   VGA & Audio over Twisted Pair Transmitter

System Connection