

VM6809H

8 x 9 4K HDMI Matrix Switch with Scale



4K is the next generation of image quality for high definition video, which delivers eight million pixels that is four times as much detail as 1080p Full HD resolutions. ATEN's VM6809H 4K HDMI Matrix Switch with Scaler is compatible with the two latest 4K video resolution standards: 3840 x 2160 and 4096 x 2160. The VM6809H offers powerful HD processing to produce 4K resolutions across nine displays with crystal-clear images.

4K

The VM6809H supports 4K @ 60 Hz, HDMI* and HDCP 2.2 and features seamless switching that employs an FPGA matrix architecture that ensures continuous video streams, real-time control, and stable signal transmissions. With a built-in high-performance scaler, the VM6809H easily converts various input resolutions into various output display resolutions, giving viewers the best video and picture quality across all displays. The switch integrates video wall functionality with an easy-to-use web GUI that lets you create 17 connection profiles that can be customized into different video wall layouts.

The VM6809H is an ideal solution for applications that require multiple HDMI displays with multiple HDMI sources to be conveniently setup - such as for stage presentations, digital classroom, video conference rooms and any installation that requires real-time synchronization.

*Note

HDMI supports 3840 x 2160 @ 30 Hz (4:4:4), 3840 x 2160 @ 60 Hz (4:2:0), 4096 x 2160 @ 30 Hz (4:4:4), 4096 x 2160 @ 60 Hz (4:2:0) resolutions.



Features

- 8 x 9 HDMI input/output connections
- Multiple means for system configuration including front-panel pushbuttons, RS-232 control, and Ethernet connections for web GUI or Telnet
- View and control via ATEN Video Matrix Control App in a swift and agile way .
- features a 4K video scaling function to convert input resolutions to the display's native resolutions
- Seamless SwitchTM features close-to-zero second switching for continuous video streams, real-time switching, and stable signal transmissions* Video Wall allows you to create custom video wall layouts via intuitive web GUI* Seamless Swith
- EDID Expert - selects optimum EDID settings for smooth power-up, high-quality display, and use of the best resolutions across different screens
- 4K Video Wall using Lower-Resolution Displays split a 4K signal to four 1080p displays or nine 720p displays to form a 2x2 or 3x3 4K video wall FrameSync prevents image tearing by synchronizing the scaler output frame rate to the input signal frame rate
- HDMI (3D, Deep color, 4K); HDCP 2.2 compatible
- Consumer Electronics Control (CEC) supported* Audio-enabled, HDMI audio can be extracted to stereo audio
- D protection for HDMI Rack-mountable (1U design)
- *Note:
- 1. When Seamless SwitchTM is enabled, 3D, Deep Color, or interlace (i.e., 1080i) formats will not be supported. To use these formats, make sure to disable Seamless SwitchTM. 2. Videos may not display within range when Seamless Switch™ or Video Wall is enabled, in which case please adjust the display settings on your device.

Specification

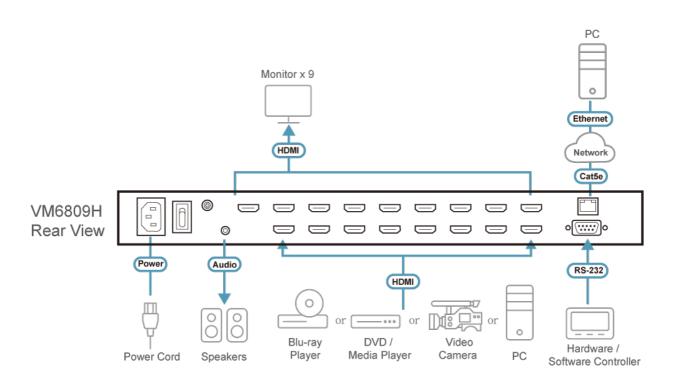
| Video Input | |
|---------------|--------------------------------|
| Interfaces | 8 x HDMI Type A Female (Black) |
| Impedance | 100 Ω |
| Max. Distance | 3.0 m |
| Video Output | |



| intenion9 x1000 Type A Formate (Bask)Impedience100 GNac. Diamo10 GNac. Diamo10 GMax. Diamo10 DMax. Diamo10 D< | | | | |
|---|----------------------------|---|--|--|
| Max. Dialania 16 m Vide Vide Max. Dala Bale 10.2 Cape (d.40 Cape per lane) Max. Dala Bale 20.4 Matz Gorpliance 360 Matz Corpliance 10.0 Kig D. Deg (d.40 Cape per lane) Max. Resolution Up to 400 Kig D. Deg (d.40 (d.10) Max. Resolution Up to 400 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Up to 400 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Up to 400 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Up to 400 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Up to 400 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Up to 400 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Up to 10 Kig D. 200 (d.90 Kig (d.20) Max. Diatance Connector: 1 x Die 9 Fernale (Gleen) Control I x Bir 45 Forale Ethornet Ethornet Ethornet EDD D. Mode: Control (No Control No Control | Interfaces | 9 x HDMI Type A Female (Black) | | |
| Veteo Veteo Mex. Data Rata 10.2 Gbps (3.40 Gbps per lane) Mex. Pool Cook 340 Mix Compilance HDM (3D, Dep Olor, 44); HDM (3D, Dep Olor, 44); HDM (3D, Dep 2.2 Compatible: Consume Resolution School (CEO) Mex. Resolution Up to 3 m School (CEO) Mex. Resolution Up to 3 m School (CEO) Adub Up to 3 m School (CEO) Output 1 x Mix1 Stereo Jack Female (Green) School (CEO) Control School (CEO) School (CEO) Post Partice (DEO) School (CEO) School (CEO) Control I x Mix1 Stereo Jack Female (Green) School (CEO) Control School (CEO) School (CEO) School (CEO) Control: N DEO Female (Block): Base S, Stoop Biss 1, Parity No, Flow Control: No School (CEO) School (CEO) Connector: N S Prong AC Socket School (CEO) School (CEO) Power 1 x S Prong AC Socket / 1 / Remox / Customized (EDD Wizer S Signor Time School (CEO) School (CEO) School (CEO) Power 1 x Sprog AC Socket / 1 / Remox / Customized (EDD Wizer Sthol (CEO) School (CEO) School (| Impedance | 100 Ω | | |
| Max. Data Ratio 10.2 Geps (3.40 Géps per lam) Max. Pixel Cook 340 M42 Compliance MMR (20, Deep Cale, 4%); HDR (20, Deep Cale, | Max. Distance | 15 m | | |
| Max. Pixel Clock 340 Metz Compliance HDM [0] bage Color, 40; HDM [0] bage X180 / X80 / X180 / | Video | Video | | |
| Compliance HDM (3D, Deep-Color, 4(Y); HDC P 22 ComputIble; Commune Electronics Control (CEC) Max. Resolution Up to 400 x 2100 (2000) | Max. Data Rate | 10.2 Gbps (3.40 Gbps per lane) | | |
| HOCP 22 CompatibilityMax: ResolutionUp to 4086 x 2160 / 3840 x 2160 @ 60Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4086 x 2160 / 3840 x 2100 @ 50Hz (42.0); 4080 x 2100 @ 50Hz (51.0); Few Control: NoR5232Concetor: 1 x DF-9 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, Few Control: NoEthernet1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, Few Control: NoEthernet1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, Few Control: NoConcetors1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, Few Control: NoPower1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, Few Control: NoPower1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, (EDD Matcard Support)Power1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, (EDD Matcard Support)Power0 1 x R-4 5 Female (8tack): Base Rate: 1500 x Data Bits: 5.050 Bits: 1, Parity: No, (EDD Matcard Support)Power0 0-240 VAC.50-6Hz: 10.04 ConcerserPower0 0-240 VAC.50-6Hz: 10.04 Concerser <t< td=""><td>Max. Pixel Clock</td><td>340 MHz</td></t<> | Max. Pixel Clock | 340 MHz | | |
| 406 x 2160 / 3940 x 2160 @ 30Hz (4.4.4) Max. Distance Up to 15 m Audio Ix Mini Stereo Jack Female (Green) Control Control B x 320 Connector: 1 x DB 9 Female (Black); Baud Fate: 19200. Data Bits: 0.5 top Bits: 1, Parity: No, Bew Control: No Ethernet 1 x RJ 45 Female Connector: 1 x DB 9 Female (Black); Baud Fate: 19200. Data Bits: 0.5 top Bits: 1, Parity: No, Bew Control: No Ethernet 1 x RJ 45 Female Connector: 1 x DB 9 Female (Black); Bew Control: No Ethernet 1 x RJ 45 Female Connector: 1 x DB 9 Female (Black); Bew Control: No Connector: 1 x RJ 45 Female Connector: 1 x DB 9 Female (Black); Bew Consumption 1 x RJ 45 Female Power 1 x RJ 45 Female Connector: 1 x DB 9 Female (Black); Bew Consumption 1 x RJ 45 Female Power 1 x RJ 45 Female Connector: 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Bew Female X = 1 x RJ 45 Female (Black); Be | Compliance | HDCP 2.2 Compatible; | | |
| Audo | Max. Resolution | | | |
| Output 1 x Mini Stereo Jack Female (Green) Control Control Bs-232 Connector: 1 x DB-9 Female (Black); Baud Pate: 19200, Data Bis: 8, Stop Bis: 1, Parity: No, Flow Control: No Ethernet 1 x RJ-45 Female Ethernet EDID Mode: Default / Port 1 / Renix / Customized EDID Settings EDID Mode: Default / Port 1 / Renix / Customized Connectors I x Spring AC Socket Power 1 x Spring AC Socket Power 100-240 VAC;50 60Hz:1:0A Power Consumption AC110V/35/SW373BTU/h AC220V/78.1W-36BBTU/h Note: In the measurement in Watts indicates the typical power consumption of the device with ni external loading: In the measurement in Watts indicates the typical power consumption of the device with ni external loading: In the measurement in Watts indicates the typical power consumption of the device with ni external loading: In the measurement in Watts indicates the typical power consumption of the device when it is fully loaded. Environmental Operating Temperature 0-50°C Operating Temperature 0-60°C Operating Temperature 0-60°C Hundity 0 - 60°C Operating Temperature Measurement in STUL indicates the power consumption of the device when it is fully loaded. Physical Properties Unit discates the power consumption of the device wh | Max. Distance | Up to 15 m | | |
| Control RS 232 Connector: 1 x DB 9 Female (Black); Bauf Rate: 19200, Data Bits: 8, Stop Bits: 1, Parity: No, Flow Control: No Ethernet 1 x RJ-45 Female Ethernet 1 x RJ-45 Female EDD Settings EDD Mode: Default / Port 1 / Remix / Customized (EDID Wizard Support) Connectors | Audio | | | |
| BS-32 Connector: 1 x DB-3 Female (Black); Bud Pate: 13200, Data Blis: 8, Stop Blis: 1, Parity: No, Flow Control: No Ethernet 1 x BJ-45 Female EDID Settings EDID Mode: Default / Port 1 / Remix / Customized (EDID Wizard Support) Connectors EDID Getting Power 1 x 3-prong AC Socket Power 1 x 4-5 Female Maximum Input Power Rating 100-240 VAC;50-60Hz;1.0A Power 100-240 VAC;50-60Hz;1.0A Power Note: - The measurement in Watts indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in BTUH indicates the typical power consumption of the device with no external loading. - The measurement in | Output | 1 x Mini Stereo Jack Female (Green) | | |
| Badd Pate: 19200, Data Bits: 1, Parity: No, Flow Control: No Ethernet 1 x RJ-45 Female EDID Settings EDID Out Data Bits: 3, Stop Bits: 1, Parity: No, Flow Control: No Connectors EDID Out Data Bits: 2, Stop Bits: 1, Parity: Customized (EDID Wizard Support) Connectors 1 x 3-prong AC Socket Power 1 x 3-prong AC Socket Power 1 00-240 VAC:50-60Hz;1.0A Power Consumption AC110V:79.5W:373BTU/h AC22W:78.1W:366BTU/h AC22W:78.1W:36BTU/h AC22 | Control | | | |
| EDID Settings EDID Mode: Default / Port 1 / Remix / Customized (EDID Wizard Support) Connectors Enclose Power 1 x 3-prong AC Socket Power 100-240 VAC;50-60Hz;1.0A Maximum Input Power Rating 100-240 VAC;50-60Hz;1.0A Power Consumption Acc220V:78.1W.366BTU/h Acc220V:78.1W.36BTU/h Acc220V:78.1W.37DU/h Acc220V:78.1W.37DU/h Acc220V:78.1W.37DU/h Acc220V:78.1W.37DU/ | RS-232 | Baud Rate: 19200, Data Bits: 8, Stop Bits: 1, Parity: No, | | |
| Connectors Power 1 x 3.prong AC Socket Power 100-240 VAC:50-60Hz;1:0.A Maximum Input Power Rating 100-240 VAC:50-60Hz;1:0.A Power Consumption AC110V:75.5W:378BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h Note: The measurement in BTUh indicates the typical power consumption of the device with no external loading. Environmental 0-50°C Storage Temperature 0-50°C Hunidity 0-80% RH, Non-Condensing Physical Properties -20 - 60°C Husing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x45.03 x4.40 cm (17.02 x17.73 x1.73 in.) | Ethernet | 1 x RJ-45 Female | | |
| Power 1 x 3-prong AC Socket Power Imaximum Input Power Rating 100-240 VAC;50-60Hz;1.0A Power Consumption AC110V:79.5W:373BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h Power Consumption of the device with no external loading. • The measurement in Watts indicates the typical power consumption of the device with no external loading. • The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. Environmental -20 - 60°C Storage Temperature -20 - 60°C Hunidity 0 -80% RH, Non-Condensing Physical Properties - Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 3.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | EDID Settings | | | |
| Power Maximum Input Power Rating 100-240 VAC;50-60Hz;1.0A Power Consumption AC110V.79.5W:373BTU/h AC220V:78.1W:366BTU/h Note: • The measurement in Watts indicates the typical power consumption of the device with no external loading. • The measurement in BTU/h indicates the power consumption of the device with no external loading. Environmental 0-50°C Operating Temperature 0-50°C Storage Temperature -20 - 60°C Humidity 0-80% RH, Non-Condensing Physical Properties -20 - 60°C Huusing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (1.02 x 17.73 x 1.73 in.) | Connectors | | | |
| Maximum Input Power Rating 100-240 VAC;50-60Hz;1.0A Power Consumption AC110V:79.5W:373BTU/h AC220V:78.1W:366BTU/h AC220V:78.1W:366BTU/h Note: • The measurement in Watts indicates the typical power consumption of the device with no external loading. • The measurement in BTU/h Indicates the power consumption of the device with no external loading. Environmental 0-50°C Operating Temperature 0-50°C Storage Temperature -20 - 60°C Humidity 0 - 80% RH, Non-Condensing Physical Properties | Power | 1 x 3-prong AC Socket | | |
| Power Consumption AC110V:79.5W:373BTU/h AC220V:78.1W:366BTU/h Note: • The measurement in Watts indicates the typical power consumption of the device with no external loading. • The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. Environmental 0-50°C Storage Temperature 0-50°C Humidity 0 - 80% RH, Non-Condensing Physical Properties 0-80% RH, Non-Condensing Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (1.02 x 17.73 x 1.73 in.) | Power | | | |
| AC220V:78.1W:366BTU/h Note: • The measurement in Watts indicates the typical power consumption of the device with no external loading. • The measurement in BTU/h indicates the power consumption of the device when it is fully loaded. Environmental Operating Temperature 0-50°C Storage Temperature -20 - 60°C Humidity 0 - 80% RH, Non-Condensing Physical Properties - Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.73 x 1.73 in.) | Maximum Input Power Rating | 100-240 VAC;50-60Hz;1.0A | | |
| • The measurement in Watts indicates the typical power consumption of the device when it is fully loaded. Environmental Operating Temperature 0-50°C Storage Temperature -20 - 60°C Humidity 0 -80% RH, Non-Condensing Physical Properties - Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Power Consumption | | | |
| Operating Temperature 0-50°C Storage Temperature -20 - 60°C Humidity 0 - 80% RH, Non-Condensing Physical Properties | | • The measurement in Watts indicates the typical power consumption of the device with no external loading. | | |
| Storage Temperature -20 - 60°C Humidity 0 - 80% RH, Non-Condensing Physical Properties Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Environmental | | | |
| Humidity 0 - 80% RH, Non-Condensing Physical Properties Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Operating Temperature | 0-50°C | | |
| Physical Properties Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Storage Temperature | -20 - 60°C | | |
| Housing Metal Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Humidity | 0 - 80% RH, Non-Condensing | | |
| Weight 7.05 kg (15.53 lb) Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Physical Properties | | | |
| Dimensions (L x W x H) 43.24 x 45.03 x 4.40 cm (17.02 x 17.73 x 1.73 in.) | Housing | Metal | | |
| (17.02 x 17.73 x 1.73 in.) | Weight | 7.05 kg (15.53 lb) | | |
| Note For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format. | Dimensions (L x W x H) | | | |
| | Note | For some of rack mount products, please note that the standard physical dimensions of WxDxH are expressed using a LxWxH format. | | |



Diagram



Note: Connects up to 9 display devices to the HDMI output ports, and up to 8 video source devices to the HDMI input ports.

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