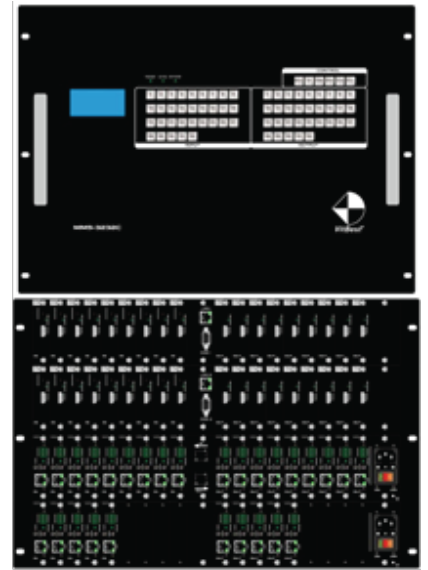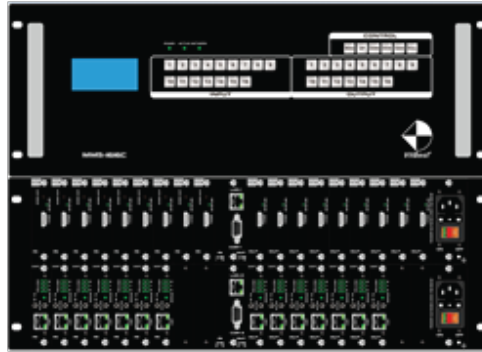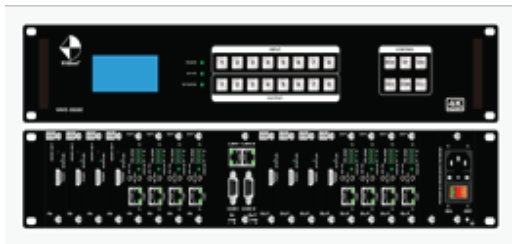# MM5-0808C/1616C/3232C
Modular Matrix Switcher of MM5 Series

VitBest

FEATURES

- Modular designing chassis;

- 1 channel 1 card, supports DVI-I/ HDMI/ 3GSDI/ HDBaseT/ Fiber to mix input and output;

- Support seamless switching between all the signals;

- 4-core 4 links processing chipset provides up t0 32GBPS signal switching processing ability;

- Front buttons with background lights, easier to operate at any time;

- Support EDID automatic recognition and compatible with HDCP;

- Support 3.5mm audio embedded and de-embedded function;

- Support 4K30, 4K60, HDMI2.0 4:4:4 transmission and seamless switching;

- Support 3D image frequency repairing, pixel reread processing function;

- Support scaling up/down function via the DIP switch;

- Support dual LAN ports backup control and centralization network management function;

- Support hot-plug function;

- Support auto saving protection and auto recovery function while power cut.

The VitBest's MM5 series modular matrix switcher has 3 models: MM5-0808C/1616C/3232C. All the signal input and output cards using 1-card 1-port, wide range selections of the input and output cards, it provides users the most flexible configuration ability to meet with the real applications. And the 1080P, 4K30 and 4K60 I/O cards can reach any switching, converting, extension, resolution adjustment. Supports seamless or fast switching function, electromagnetic protection function, it can efficiently shield the electromagnetic interference for the surrounding environment to make sure the equipment running more stable.

The single channel signal switching speed can reach 12.5Gbps, and the main board is using Four core four links processing technology, the switching ability speed can reach 32Gbps. With uncompressed transmission technology for the digital signal to make sure the image High fidelity output. Unique signal links shielding designing technology to make sure the signal completeness, the internal data switch has super strong capacity of resisting disturbance and long continuous and stable working ability. Supports 7*24 continuously working and with dual LAN and RS232 backup control, it's convenient for users to control via PC and the 3rd parties central control by the the RS232 control commands.

With the dual RS232 and LAN control, users also can simply set up and control the surrounding equipment, such as the projector, electric curtain and TVs.

This matrix switchers have been widely used in the conferencing, radio & television project, multimedia conferencing hall, large screen display project, television teaching, command control center and so on applications.

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Technical Datasheet

Model	MM5-0808C	MM5-1616C	MM5-3232C
Description	8x8 modular chassis	16x16 modular chassis	32x32 modular chassis
Input Card	One Channel per Card, support HDMI, DVI, 3GSDI, VGA, YPBPR, CVBS, HDBaseT, Fiber Optic		
Output Card	One Channel per Card, support HDMI, DVI, 3GSDI, VGA, YPBPR, CVBS, HDBaseT, Fiber Optic		
Protocol	HDMI1.4a/ HDMI2.0, DVI1.0, compatible with HDCP and EDID function		
Color Space	RGB444, YUV444, YUV422, support x.v.Color extension color gamut standard		
Resolution	640x480---1920x1200@60Hz(VESA), 480i---4K30Hz(HDTV), 4K60Hz		
Data Speed	12.5Gbps		
Transmission distance	70/100m(Cat6,6A,7), 80Km(Single-mode), 20m(Digital cable), 25m(Analog cable)		
Control Methods	Broadcasting switching button, dual RS232+LAN control		
Dimension	482*390*88(2U)mm	482*390*178(4U)mm	482*390*355(8U)mm
Weight	6KG(Without cards)	12.5KG(Without cards)	25KG(Without cards)
Consumption	17W(Without cards) 57W (With MC5-IN-HDMI Input Card x 8pcs & MC5-OUT-HDMI Output Card x 8pcs	21W(Without cards) 101W (With MC5-IN-HDMI Input Card x 16pcs & MC5-OUT-HDMI Output Card x 16pcs	30W(Without cards) 190W (With MC5-IN-HDMI Input Card x 32pcs & MC5-OUT-HDMI Output Card x 32pcs
Capacity of PowerSupply	300W	300W	500W
Power Supply	AC 110V-240V 50/60HZ		
Working Temp	-10℃ - 50℃		
Storage Temp	-25℃ - 55℃		

Input and output cards for MM5-0808C/1616C/3232C

Note: All the above cards can work with MM5-0808C/1616C/3232C, BUT we suggest to use only 1080P, 4K60 or 4K30 pass-through cards on one chassis instead of mixing use 1080P and 4K60 or 4K30 cards together.

Input Cards
4K30 Pass-through Input Cards (Standard)

MC5-IN-HDMI **HDMI Input Card (4K30)**		• Support 1080P; • Support 4K30 4:4:4 and 4K60 4:2:0 HDMI Input • HDCP 1.4 compliant; • With EDID KEY button support EDID handshaking .
MC5-IN-HDBT-70 **HDBT 70m Input Card (4K30)**		• Support HDBaseT input with one HDMI loop out, • HDCP 1.4 compliant; • Distance up to 70m at 1080P@60 and 40m at 4K30 4:4:4 and 4K60 over single Cat6A/7; • Support RS232, bi-directional IR, POC (Power over cable) function; • Work with any of our HDBaseT Transmitter.
MC5-IN-HDBT-100 **HDBT 100m Input Card (4K30)**		• Support HDBaseT input with one HDMI loop out, • HDCP 1.4 compliant; • Distance up to 100m at 1080P@60 and 70m at 4K30 4:4: and 4K60 over single Cat6A/7; • Support RS232, bi-directional IR, POC (Power over cable) function; • Work with any of our HDBaseT Transmitter.

MC5-IN-OPTIC **Optic Input Card (4K30)**		• Support One SM LC Fiber Input; • Support One MM LC Fiber Input; • Distance up to 2km at 4K30 4:4:4, 4K60 4:2:0; • Work with our one core Fiber Transmitter
4K60 Seamless Switching Input Cards		
MC5-IN-HDMI-4K60 **HDMI 4K60 Input Card**		• Support 1080P, 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0) • HDCP 2.2 compliant; • Support 3.5mm audio embedded; • 8-pin DIP switch resolution adjustment for up/down scaling; • Support Seamless switching effect.
MC5-IN-HDBT-4K60-70 **HDBT 4K60 70m Input Card**		• Support HDBaseT input with one HDMI loop out (HDMI 2.0); • HDCP 2.2 compliant; • Distance up to 70m at 1080P@60 and 40m at 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0) over Cat6A/7; • Support RS232, bi-directional IR, POC (Power over cable) function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling; • Work with our HDBaseT 4K (HDMI 2.0) Transmitter.
MC5-IN-HDBT-4K60-100 **HDBT 4K60 100m Input Card**		• Support HDBaseT input with one HDMI loop out (HDMI 2.0); • HDCP 2.2 compliant; • Distance up to 100m at 1080P@60 and 70m at 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0) over Cat6A/7; • Support RS232, bi-directional IR,POC (Power over cable) function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling; • Work with our HDBaseT 4K (HDMI 2.0) Transmitter.
MC5-IN-OPTIC-4K60 **Optic 4K60 Input Card**		• Support one SM LC Fiber Input; • Support one MM LC Fiber Input; • Distance up to 2km at 4K30 4:2:0 and 4K60 4:4:4 (HDMI 2.0); • Work with our one core Fiber Transmitter.
1080P Seamless Switching Input Cards		
MC5-IN-MAV-1080P **HDMI/DVI/VGA/YPBPR/** **CVBS 1080P Input Card**		• Support Universal (HDMI/DVI/VGA/YPBPR/CVBS) input with adapter; • HDCP 1.4 compliant; • Support 3.5mm audio embedded; • 8-pin DIP switch resolution adjustment for up/down scaling; Max 1080P 60; • Seamless switching effect.
MC5-IN-HDMI-1080P **HDMI 1080P Input Card**		• Support 1080P input; • HDCP 1.4 compliant; • Support 3.5mm audio embedded; • 8-pin DIP switch resolution adjustment for up/down scaling; Max 1080P 60; • Seamless switching effect.
MC5-IN-SDI **SD/HD/3G-SDI Input Card**		• Support SD/HD/3G-SDI input and one loop out; • HDCP 1.4 compliant; • Support 3.5mm audio embedded; • 8-pin DIP switch resolution adjustment for up/down scaling; Max 1080P 60; SDI cable distance can upto 20m/60ft; • Seamless switching effect.

MC5-IN-HDBT-70-1080P **HDBT 1080P 70m Input Card**		• Support HDBaseT input; • HDCP 1.4 compliant; • Distance up to 70m at 1080P@60 over Cat5e/6/6A; • Support RS232, bi-directional IR, POC (Power over cable) function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling; Max 1080P@60; • Work with any of our HDBaseT Transmitter.
MC5-IN-HDBT-100-1080P **HDBT 1080P 100m Input Card**		• Support HDBaseT input; • HDCP 1.4 compliant; • Distance up to 100m at 1080P@60 over Cat5e/6/6A; • Support RS232, bi-directional IR, POC (Power over cable) function; • Support Seamless switching effect, 8-pin DIP switch resolutio adjustment for up/down scaling; Max 1080P@60; • Work with any of our HDBaseT Transmitter.

Output Cards

4K30 Pass-through Output Cards (Standard)

MC5-OUT-HDMI **HDMI Output Card (4K30)**		• Support 1080P, • Support 4K30 4:4:4 and 4K60 4:2:0: • HDCP 1.4 compliant.
MC5-OUT-HDBT-70 **HDBT 70m Output Card (4K30)**		• Support HDBaseT output; • HDCP 1.4 compliant; • Distance up to 70m at 1080P@60 and 40m at 4K30 4:4:4 and 4K60 4:2:0 over single Cat6A/7; • Support RS232, bi-directional IR, POC (Power over cable) function; • Work with any of our HDBaseT Receiver.
MC5-OUT-HDBT-100 **HDBT 100m Output Card (4K30)**		• Support HDBaseT output; • HDCP 1.4 compliant; • Distance up to 100m at 1080P@60 and 70m at 4K30 4:4:4 and 4K60 4:2:0 over single Cat6A/7; • Support RS232, bi-directional IR, POC (Power over cable) function; • Work with any of our HDBaseT Receiver.
MC5-OUT-OPTIC **Optic Output Card (4K30)**		• Support one SM LC Fiber output; • Support one MM LC Fiber output; • Distance up to 2km at 4K30 4:4:4 and 4K60 4:2:0; • Work with our one core Fiber Receiver.

4K60 Seamless Switching Output Cards

MC5-OUT-HDMI-4K60 **HDMI 4K60 Output Card**		• Support 1080P, 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0); • HDCP 2.2 compliant; • Support 3.5mm audio de-embedded; • 8-pin DIP switch resolution adjustment for up/down scaling; • Seamless switching effect;
MC5-OUT-HDBT-4K60-70 **HDBT 4K60 70m Output Card**		• Support HDBaseT output (HDMI 2.0); • HDCP 2.2 compliant; • Distance up to 70m at 1080P@60 and 40m at 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0) over Cat6A/7; • Support RS232, bi-directional IR POC (Power over cable) function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling; • Work with our HDBaseT 4K (HDMI 2.0) Receiver.

MC5-OUT-HDBT-4K60-100 **HDBT 4K60 100m Output Card**		• Support HDBaseT output (HDMI 2.0); • HDCP 2.2 compliant; • Distance up to 100m at 1080P@60 and 70m at 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0) over Cat6A/7; • Support RS232, bi-directional IR, POC (Power over cable) function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling; • Work with our HDBaseT 4K (HDMI 2.0) Receiver.
MC5-OUT-OPTIC-4K60 **Optic 4K60 Output Card**		• Support one SM LC Fiber output; • Support one MM LC Fiber output; • Distance up to 2km at 4K30 4:4:4 and 4K60 4:4:4 (HDMI 2.0); • Work with our one core 4K60 Fiber Receiver.

1080P Seamless Switching Output Cards

MC5-OUT-MAV-1080P **HDMI/DVI/VGA/YPBPR/** **CVBS 1080P Output Card**		• Support Universal (HDMI/DVI/VGA/YPBPR /CVBS) output with adapter; • HDCP 1.4 compliant; • Support 3.5mm audio de-embedded; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling, Max 1080P60;
MC5-OUT-HDMI-1080P **HDMI 1080P Output Card**		• Support 1080P output; • HDCP 1.4 compliant; • Support 3.5mm audio de-embedded; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling, Max 1080P60;
MC5-OUT-HDMI- **WALL-1080P** **HDMI 1080P TV Wall Output Card**		• Support 1080P output; • HDCP 1.4 compliant; • Support 3.5mm audio de-embedded; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling, Max 1080P60; • Support TV Wall Function.
MC5-OUT-SDI **SD/HD/3G-SDI Output Card**		• Support SD/HD/3G-SDI output; • HDCP 1.4 compliant; • Support 3.5mm audio de-embedded; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling, Max 1080P60; • SDI cable distance can up to 20m/60ft.
MC5-OUT-70-1080P **HDBT 1080P 70m Output Card**		• Support HDBaseT output; • HDCP 1.4 compliant; • Distance up to 70m/230ft at 1080P@60 over Cat5e/6/6A; • Support RS232, bi-directional IR, POC(Power over cable)function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling, Max 1080P60; • Work with any of our HDBaseT Receiver.
MC5-OUT-100-1080P **HDBT 1080P 100m Output Card**		• Support HDBaseT output; • HDCP 1.4 compliant; • Distance up to 100m/230ft at 1080P@60 over Cat5e/6/6A; • Support RS232, bi-directional IR, POC(Power over cable)function; • Seamless switching effect, 8-pin DIP switch resolution adjustment for up/down scaling, Max 1080P60; • Work with any of our HDBaseT Receiver.