**EVMX Matrices**

**Serial Protocol and Commands**

|  |  |
| --- | --- |
| Baud Rate : | 9600 bps |
| Data Bit : | 8 bits |
| Parity : | None |
| Stop Bit : | 1 bit |

RS232 Protocol

ASCII Command [terminal command]

All command must Carrier Return (0x0d)

>>POFF // Turn off all output and front pannel

Echo. poff

>>PON // Turn on matrix

Echo. pon

>>VR + CR // Version command

VR

Echo

Vanco 88V\_01.02 (show version number 01.02)

VM-DB1.00.01 (show DB board version)

Vanco 44V\_01.02 (show version number 01.02)

VM-DB1.00.01 (show DB board version)

>> P\*\*I\*\* + CR Single Output Set

Example:

P01I02 // input 1 to output2

Echo

p01i02

>> P\*\*I00+ CR //Close Output Set

Example:

P01I00 // close to output1

Echo

p01i00

>> P\*\*L + CR open Output

Example:

P01L // open output1 [orginal set to source 2]

Echo

p01i02

>> P\*\*+ + CR increase source

Example:

P01+ // next source for output1 [orginal set to source 1]

Echo

p01i02 [source change to source 02]

>> P\*\*- + CR deccrease source

Example:

P01- // next source for output1 [orginal set to source 1]

Echo

p01i08 [source change to source 08]

>>MAP+ CR // show 8 output port mapping

p01i02

p02i02

….

p08i02

>> FSET+ CR

FSET

echo

DEFAULT

Software command[Hex mode]

len 0x4d 0x41 0x52 0x88 0x43 0x48 0xff cmd cm1 cm2 cm3 cm4 cm5 cm6 cm7 … cm\* checksum

0x52 0x88 for 8x8 matrix

0x52 0x44 for 4x4 matrix

len is the length from len to checksum

cmd is command index

cm1 to cm\* is setting value

checksum = sum from len to cm\*

example:

set output mapping

0x12 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x02 0x01 0x01 0x01 0x01 0x01 0x01 0x01 0x01 0xe

Cmd = 2 for set port mapping

Port1 1 port 2 1 port3 1 port4 1 port5 1 port6 1 port7 1 port8 1

Check sum 0x0e

Echo 0xaa

4x4 example:

0x0f 0x4d 0x41 0x52 0x44 0x43 0x48 0xff 0x02 0x01 0x01 0x01 0x01 0xc3

Cmd = 2 for set port mapping

Set Port1 1 port 2 1 port3 1 port4 1

Echo: 0xaa

1.>

Cmd =0 power on or idle

0x0b 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x00 cm1 checksum

Cmd1: 0x55 idle 0xaa power on

2.>

Cmd =1 get port mapping

0x0a 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x01 0xfd

Echo :

0xaa 0x13 p1 p2 p3 p4 p5 p6 p7 p8 s1 s2 s3 s4 s5 s6

s7 s8 pwd checksum

0xaa is the echo for receive command

0x13 is the data length [from p1 to checksum]

p1~p8 is the port mapping. 1~8 or 0[port off]

s1~s8 is the source status. 1: source exist 0: source off

pwd is the matrix status. 1: power on. 0: idle

example

0xaa 0x13 0x01 0x02 0x03 0x04 0x05 0x06 0x07 0x08 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0x01 0x38

3.>

Cmd = 2 for set port mapping

0x12 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x02 Port1 1 port 2 1 port3 1 port4 1 port5 1 port6 1 port7 1 port8 + checksum

Port1~port8: source value from 1~8

0x80+source for close output port.

Ex 0x81 port select source 1 but set close.

Echo 0xaa

If the port value is the same, the output port will keep the video.

Add 0x10 to source. The output port will re trigger (including off/on and do hdcp)

For example:

Now port1 select source 1

Port1 = 0x01 : video not change

Port1 = 0x01 : video turn off/on and do hdcp again.

3.>

Cmd = 3 for set port mapping

0x12 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x03 Port\_NUM Port\_Value + checksum

Port\_NUM: port from 1~8

Port\_Value: source from 0 to 8. 0 for close port

4.>

Cmd =5 get firmware version

0x0a 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x05 0x01

5.>

Cmd =10 read edid from output port

0x0b 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x0a cm1 + checksum

Cm1: port number 1~8

Echo:

Read ok :0xaa + 256 byte hex value.

Read fail: 0x55.

6.>

Cmd =11 read edid from input

0x0b 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x0b cm1 + checksum

Cm1: input number 1~8

Echo:

Read ok :0xaa + 256 byte hex value.

Read fail: 0x55.

7.>

Cmd =12 edid learning from cm2 to cm3

0x0c 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x0c cm1 cm2 cm3 checksum

Cm1: input number 1~8

cm1: 0x03: read port edid and write to source

0x06: read default edid and write to source

cm2: input number:

1~8: input 1 to 8

0xf1: all input

Echo: 0xaa: OK 0x55 fail

Ex:

0x0c 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x0c 0x01 0xf1 0xfc

Read port1 edid and write to all input

7.>

Cmd =32 factory reset

0x0a 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x20 0x

8.>

Cmd =49 read IP and network information

0x0a 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x31 0x2d

Echo:

0xaa + 0x16 + ip1 ~ip4 mask1~4 gateway1~4 dns11~dns14 dns21~dns22 sumvalue

9.>

Cmd= 50 wirte ip,maskvalue,gateway,dns1,dns2

0x22 0x4d 0x41 0x52 0x88 0x43 0x48 0xff 0x32 ip1 ~ip4 mask1~4 gateway1~4 dns11~dns14 dns21~dns22 checksum

Ex: ip1~4= 192.168.1.14

ip1=192

ip2=168

ip3=1

ip4=14

mask1~4 = 255.255.255.0

mask 1=255

mask 2=255

mask 3=255

mask 4=0