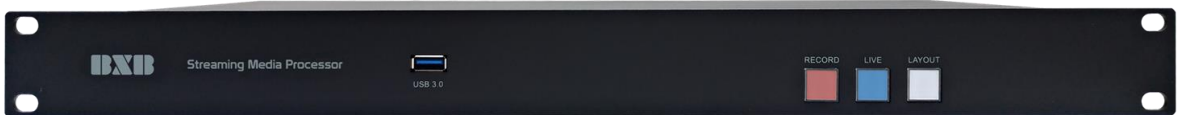


HDR-731

RS-232 / 485 Command Reference Manual

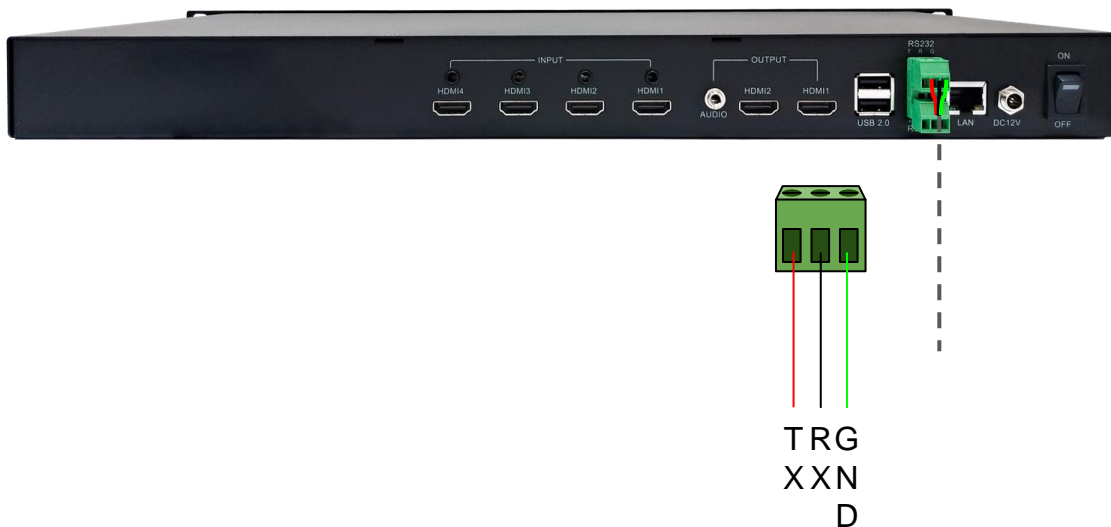


Firmware version: V2.0.2
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Interface

The pin definition of the RS-232 port:



The pin definition of the RS-485 port:



Configuration

Control protocol	RS-232 / RS-485
Baud rate	9600
Data length	8
Parity	None
Stop bit	1
Flow control	None

HEX Command Set

Description	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
Restore to default settings	0xb9703838	0x51	0x3	0x1	0x1	\$1 (1)		
Switch PGM layout	0xb9703838	0x51	0x3	0x3	0x1	\$1 (2)		
Get PGM state	0xb9703838	0x51	0x2	0x3	0x0			
Set recording	0xb9703838	0x51	0x3	0x5	0x1	\$1 (3)		
Set streaming	0xb9703838	0x51	0x3	0x6	0x1	\$1 (4)		
Set snapshot	0xb9703838	0x51	0x3	0x7	0x1	\$1 (5)		
Set display mode	0xb9703838	0x51	0x3	0x9	0x1	\$1 (6)		
Set audio volume output	0xb9703838	0x51	0x5	0xA	0x1	\$1 (7)	\$2 (8)	\$3 (9)
Set audio type	0xb9703838	0x51	0x5	0xB	0x1	\$1 (10)	\$2 (11)	\$3 (12)
Set audio volume input	0xb9703838	0x51	0x5	0xC	0x1	\$1 (13)	\$2 (14)	\$3 (15)

- 1) **Restore the network:** 0x0 = No; 0x1 = Yes
- 2) **Layout switch:** 0x1~0x9 = layout 1~9
- 3) **Set recording:** 0x0 = stop recording; 0x1 = start recording
- 4) **Set streaming:** 0x0 = stop streaming; 0x1 = start streaming
- 5) **Snapshot:** 0x0 = PGM snapshot; 0x1~0x4 = video source snapshot (source 1~4)
- 6) **Display mode:** 0x0 = Mouse mode; 0x1 = Touch mode; 0x2 = Quad-view; 0x3 = PGM; 0x4 = Source 1; 0x5 = Source 2; 0x6 = Source 3; 0x7 = Source 4
- 7) **Audio output:** 0x1 = audio channel 1 · 0x2 = audio channel 2
- 8) **Set audio volume output:** 0x0~0x64 = 0~100 (audio volume)
- 9) **Set audio mute output:** 0x1= mute; 0x0 = unmute
- 10) **Audio mix:** 0x0 = follow PGM; 0x1 = mix all
- 11) **All mute:** 0x1 = ON; 0x0 = OFF
- 12) **Volume sensor:** 0x1 = ON; 0x0 = OFF
- 13) **Audio source:** 0x1~0x4 = HDMI 1~HDMI 4; 0x5~0x8 = Line 1~Line 4
- 14) **Set audio volume input:** 0x0~0x64 = 0~100 (audio volume)
- 15) **Set audio mute input:** 0x1 = mute; 0x0 = unmute

HEX Command Chart

System Ready

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
EVT (1)	0xb9703838	0x45	0x2	0x0	\$1			

\$1: system start-up 0x1=activating ; 0x0 = getting ready

After activation, the special command code can be sent.

After system ready, the normal command code can be sent (special command code is invalid)

Note 1: Event response

Firmware Update

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
EVT	0xb9703838	0x45	0x3	0x55	\$1	\$2		

\$1: update progress 0x0; start updating 0x1; update finished 0x2

\$2: update progress 0x0~0x64 (0~100)

Restore Default Settings

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x3	0x1	0x1	\$1		

\$1: restore the network 0x0 = No; 0x1 = Yes

Response

0xb9703838

0x53

0x3

0x1

0x1

\$1

\$1: invalid / false

0x0: valid / true

0x7: running progress

0xC: execution error

HEX Command Chart

Get Version

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0x2	0x0			
Response	0xb9703838	0x53	0x6	0x2	0x0	0x0	\$1	

\$1: version number (e.g., 0x2 0x0 0x2 indicates version 2.0.2)

Switch PGM Layout

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x3	0x3	0x1	\$1		
Response	0xb9703838	0x53	0x3	0x3	0x1	\$1		

\$1: switch to layout 0x1~0x9

\$1: invalid / false

0x0: valid / true

0x2: error code

0x3: nonexistent layout

0x4: switch forbidden while recording

0x7: running progress

0xC: execution error

Get Present PGM Layout

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0x3	0x0			
Response	0xb9703838	0x53	0x4	0x3	0x0	0x0	\$1	

\$1: present layout 0x1~0x9

EVT	0xb9703838	0x45	0x2	0x3	\$1			
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\$1: layout switch 0x1~0x9

HEX Command Chart

Set Recording

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x3	0x5	0x1	\$1		
\$1: 0x0 = Stop; 0x1 = Start recording								
Response	0x9703838	0x53	0x3	0x5	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0x7: running progress 0xC: execution error								

Get the Recording State

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0x5	0x0			
Response	0xb9703838	0x53	0x4	0x5	0x0	0x0	\$1	
\$1: recording state 0x0 = Stop; 0x1 = Recording; 0x2 = File saving								
EVT	0xb9703838	0x45	0x2	0x5	\$1			
\$1: change recording state 0x0 = Stop; 0x1 = Recording; 0x2 = File saving								

HEX Command Chart

Set Streaming

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x3	0x6	0x1	\$1		
\$1: 0x0 = Stop ; 0x1 = Start Streaming								
Response	0xb9703838	0x53	0x3	0x6	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0x4: switch forbidden while recording 0x7: running progress 0xC: execution error								

Get Streaming State

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0x6	0x0			
Response	0xb9703838	0x53	0x4	0x6	0x0	0x0	\$1	
\$1: 0x0 = Stop; 0x1 = Streaming								
EVT	0xb9703838	0x45	0x2	0x6	\$1			
\$1: change the streaming state 0x0 = Stop; 0x1 = Streaming								

HEX Command Chart

Snapshot

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x3	0x7	0x1	\$1		
\$1: snapshot mode 0x0: PGM snapshot 0x1~0x4: source 1~4 snapshot								
Response	0xb9703838	0x53	0x3	0x7	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0xC: execution error								

Get USB Saving Status

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0xE	0x0			
Response	0xb9703838	0x53	0x4	0xE	0x0	0x0	\$1	
\$1: 0x0 = no file saving; 0x1 = file saving is in progress								
EVT	0xb9703838	0x45	0x2	0xE	\$1			
\$1: 0x0 = no file saving; 0x1 = file saving is in progress								

HEX Command Chart

Set Display Mode

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x3	0x9	0x1	\$1		
\$1: display mode (0x0~0x7) 0x0 = Mouse mode 0x1 = Touch mode 0x2 = Quad-view 0x3 = PGM 0x4 = Source 1 0x5 = Source 2 0x6 = Source 3 0x7 = Source 4								
Response	0xb9703838	0x53	0x3	0x9	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0x7: running progress 0xC: execution error								

Get Display Mode

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0x9	0x0			
Response	0xb9703838	0x53	0x4	0x9	0x0	0x0	\$1	
\$1: display mode (0x0~0x7) 0x0 = Mouse mode 0x1 = Touch mode 0x2 = Quad-view 0x3 = PGM 0x4 = Source 1 0x5 = Source 2 0x6 = Source 3 0x7 = Source 4 0x7 = Source 4								
EVT	0xb9703838	0x45	0x2	0x9	\$1			
\$1: display mode (0x0~0x7)								

HEX Command Chart

Set HDMI Out Volume

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x5	0xA	0x1	\$1	\$2	\$3
\$1: HDMI output channel 0x1~0x2 \$2: volume 0x0~0x64 (0~100) \$3: 0x1 = mute; 0x0 = unmute								
Response	0xb9703838	0x53	0x3	0xA	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0xC: execution error								

Get HDMI Out Volume

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7	Param 8
GET	0xb9703838	0x51	0x3	0xA	0x0	\$1			
\$1: HDMI output channel 0x1~0x2									
Response	0xb9703838	0x53	0x6	0xA	0x0	0x0	\$1	\$2	\$3
\$1: HDMI output channel 0x1~0x2 \$2: volume 0x0~0x64 (0~100) \$3: 0x1 = mute; 0x0 = unmute									
EVT	0xb9703838	0x45	0x4	0xA	\$1	\$2	\$3		
\$1: HDMI output channel 0x1~0x2 \$2: volume 0x0~0x64 (0~100) \$3: 0x1 = mute; 0x0 = unmute									

HEX Command Chart

Control Audio Type

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x5	0xB	0x1	\$1	\$2	\$3
\$1: audio mix mode 0x0 = follow PGM ; 0x1 = mix all \$2: all mute 0x1 = ON ; 0x0 = OFF \$3: volume indicator switch 0x1 = ON ; 0x0 = OFF								
Response	0xb9703838	0x53	0x3	0xB	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0x7: running progress 0xC: execution error								

Get Audio Out Type

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7	Param 8
GET	0xb9703838	0x51	0x2	0xB	0x0				
Response	0xb9703838	0x53	0x6	0xB	0x0	0x0	\$1	\$2	\$3
\$1: audio mixing mode 0x0 = follow PGM; 0x1 = mix all \$2: all mute 0x1 = ON; 0x0 = OFF \$3: volume indicator switch 0x1 = ON; 0x0 = OFF									
EVT	0xb9703838	0x45	0x4	0xB	\$1	\$2	\$3		
\$1: audio mixing mode 0x0 = follow PGM; 0x1 = mix all \$2: all mute 0x1 = ON; 0x0 = OFF \$3: volume indicator switch 0x1 = ON; 0x0 = OFF									

HEX Command Chart

Set Audio Input

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
SET	0xb9703838	0x51	0x5	0xC	0x1	\$1	\$2	\$3
\$1: input channel HDMI 0x1~0x4; LINE 0x5~0x8 \$2: volume 0x0~0x64 (0~100) \$3: 0x1 = mute; 0x0 = unmute								
Response	0xb9703838	0x53	0x3	0xC	0x1	\$1		
\$1: invalid / false 0x0: valid / true 0x2: error code 0x7: running progress 0xC: execution error								

Get Audio Input Volume

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7	Param 8
GET	0xb9703838	0x51	0x3	0xC	0x0	\$1			
\$1: input channel HDMI 0x1~0x4; LINE 0x5~0x8									
Response	0xb9703838	0x53	0x6	0xC	0x0	0x0	\$1	\$2	\$3
\$1: input channel HDMI 0x1~0x4; LINE 0x5~0x8 \$2: volume 0x0~0x64 (0~100) \$3: mute 0x1 = ON; 0x0 = OFF									
EVT	0xb9703838	0x45	0x4	0xC	\$1	\$2	\$3		
\$1: input channel HDMI 0x1~0x4; LINE 0x5~0x8 \$2: volume 0x0~0x64 (0~100) \$3: mute 0x1 = ON; 0x0 = OFF									

HEX Command Chart

Hard Disk Status

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7
GET	0xb9703838	0x51	0x2	0xD	0x0			
Response	0xb9703838	0x53	0x4	0xD	0x0	0x0	\$1	
\$1: hard disk status (0x0-0x3) 0x0: sufficient storage space 0x1: the available storage space is lower than 20% 0x2: insufficient storage space 0x3: unable to detect the device								
EVT	0xb9703838	0x45	0x2	0xD	\$1			
\$1: hard disk status (0x0-0x3) 0x0: sufficient storage space 0x1: the available storage space is lower than 20% 0x2: insufficient storage space 0x3: unable to detect the device								

HEX Command Chart

Sleep Mode Control

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7	Param 8
SET	0xb9703838	0x51	0x3	0x10	0x1	\$1			
\$1: 0x1 = sleep; 0x0 = wake									
Response	0xb9703838	0x53	0x3	0x10	0x1	\$1			
\$1: invalid / false 0x0: valid / true 0x2: error code 0xC: execution error									

Get Sleep Mode

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7	Param 8
GET	0xb9703838	0x51	0x2	0x10	0x0				
Response	0xb9703838	0x53	0x4	0x10	0x0	0x0	\$1		
\$1: sleep state 0x1 = Sleeping; 0x0 = system operating									
EVT	0xb9703838	0x45	0x2	0x10	\$1				
\$1: sleep state 0x1 = Sleeping; 0x0 = system operating									

Reset to Factory Default

Action	CMD	Param 1	Param 2	Param 3	Param 4	Param 5	Param 6	Param 7	Param 8
SET	0xb9703838	0x51	0x2	0x52	0x1				
Response	0xb9703838	0x53	0x3	0x52	0x1	0x0			
Note: RS485 not supported; the command should be sent right away after the system is activated.									



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