

QUESTTEL

Broadcast Systems

3G-HD/SD SDI Monitor

User Manual



3G HD-SD





Safety and Notice

The **1B-SDI-PTGM2 3G-HD/SD SDI Monitor** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, 1B-SDI-PTGM2 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter, power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



The **1B-SDI-PTGM2 3G-HD/SD SDI Monitor** offers the highest compatibility among SDI, including 3G/HD/SD formats. This device also supports composite (NTSC/PAL) input through the same input. With the embedded advanced de-interlacer, interlaced video inputs, such as SD-SDI or composite, can be further improved. For SDI, 1B-SDI-PTGM2 can display support up to 8 channel audio bars to indicate the embedded digital audio channel in SDI stream and make 1B-SDI-PTGM2 a perfect mini monitor to watch closely on SDI signal quality.

1B-SDI-PTGM2 is especially designed to ease the SDI security monitoring with affordable cost. With 1B-SDI-PTGM2, SDI will not become a bottleneck in your advanced SDI applications, such as SDI video editing and HD surveillance system. The handy SDI monitoring includes CRC status, SMTPE 352M indicator, audio bars, EDH, video format detection, and Sync status etc. With versatile IR remote control and push buttons, 1B-SDI-PTGM2 offers a very easy way to control the display layout and status demonstration.

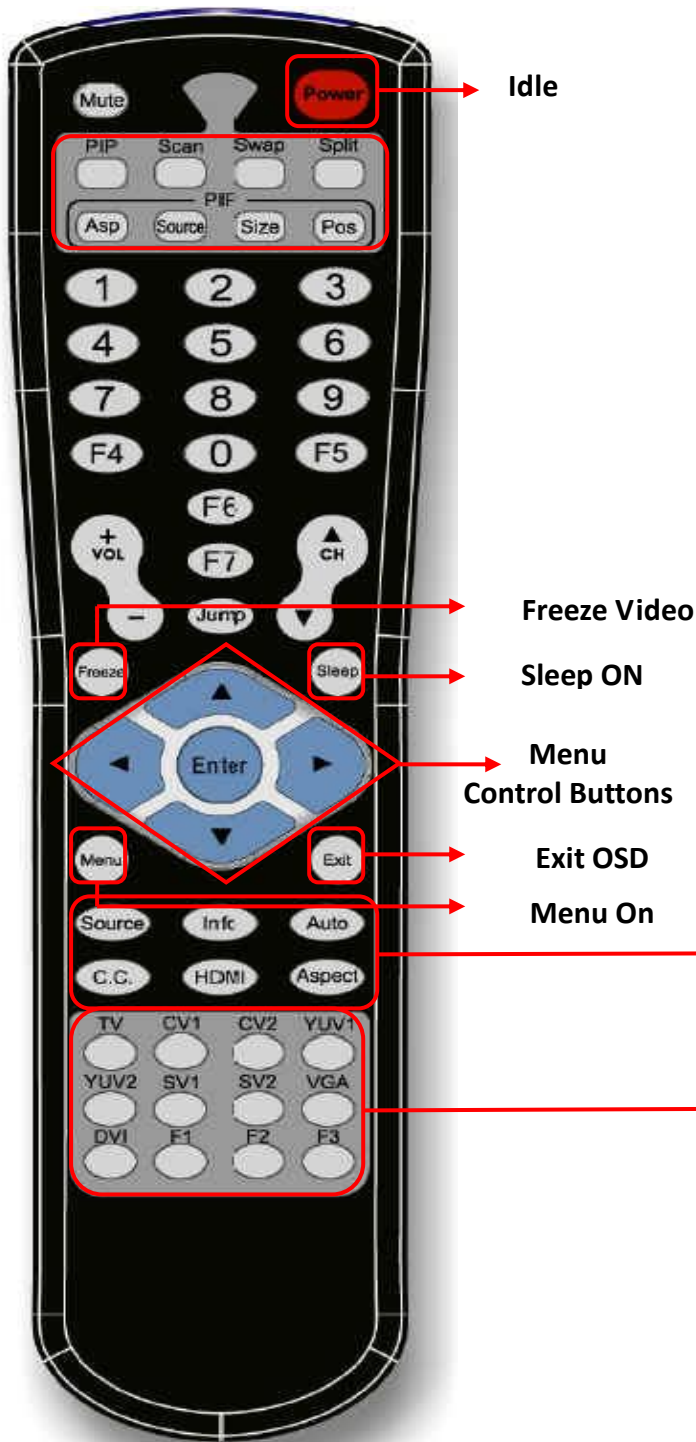
Features

- SD/HD/3G SDI compliant
- Up to 8 SDI channel audio bar display
- Built-in advanced scaler to scale up and down the input to fit on screen
- Advanced video processing supports: noise reduction, color management, fleshtone control, dynamic contrast control, closed caption support for CVBS, 3-D de-interlacing, 3:2/2:2 pull down detection and recovery.
- RS-232 Firmware upgradable to guarantee the functionality revised.
- Supports two up to 3G SDI loop-outs
- Versatile IR control
- Push button control
- Wall-mounting ear for easy installation

Specifications & Package Contents

Model Name		1B-SDI-PTGM2
Technical		
LCD size & resolution		5.7" & 640x480
LCD color depth		18 bit RGB
Composite bandwidth		13.5MHz
Audio support		Up to 8 CH decoding and audio bar display
SDI Support		SD/HD/3G
Input		1 x SDI [CVBS]
Output		2x SDI [Loopout]
Audio FS support		48KHz
ESD protection		[1] Human body model — $\pm 19\text{kV}$ [air-gap discharge] & $\pm 12\text{kV}$ [contact discharge] [2] Core chipset — $\pm 2\text{kV}$
PCB stack-up		6-layer board [impedance control — differential 100Ω ; single 50Ω]
IR remote control		Electro-optical characteristics: $\tau = 25^\circ$ / Carrier frequency: 38kHz
HDMI connector		HDMI type A
RS-232 connector		DE-9 [9-pin D-sub female]
BNC connector		75Ω inter-locked socket
DIP switch		Restore default
Mechanical		
Housing		Metal enclosure
Dimensions [L x W x H]	Model	172 x 148 x 46mm [6.8" x 5.8" x 1.8"]
	Package	200 x 325 x 93 mm [7.9" x 12.8" x 3.7"]
	Carton	495 x 440 x 380mm [1'7" x 1'5" x 1'3"]
Weight	Model	1000g [2.2 lbs]
	Package	1800g [3.9 lbs]
Fixedness		Wall-mounting case with screws
Power supply		Interlocked 5V 4A DC
Power consumption		10 Watts [max]
Operation temperature		0~40°C [32~104°F]
Storage temperature		-20~60°C [-4~140°F]
Relative humidity		20~90% RH [no condensation]
Package Contents		1x 1B-SDI-PTGM2 1x 5V 4A interlocked power adapter 1x User Manual 1x IR Remote Control 2x 75 ohm terminator 1x RCA to BNC connector

IR Remote Control

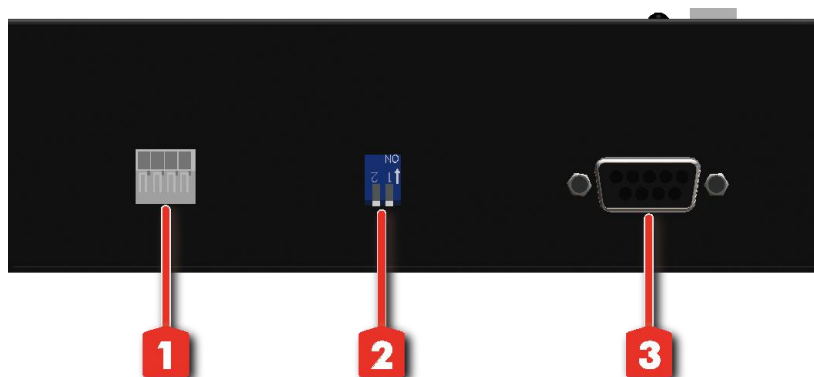


Source: *No use in this model*
Info: Display input type and time
Auto: *No use in this model*
C.C.: *No use in this model*
HDMI: *No use in this model*
Aspect: Aspect ratio change

TV: *No use in this model*
CV1: CVBS
CV2: *No use in this model*
YUV1: *No use in this model*
YUV2: *No use in this model*
SV1: *No use in this model*
SV2: *No use in this model*
VGA: *No use in this model*
DV1: SDI
F1: *No use in this model*
F2: Input timing information
F3: Auto color balance

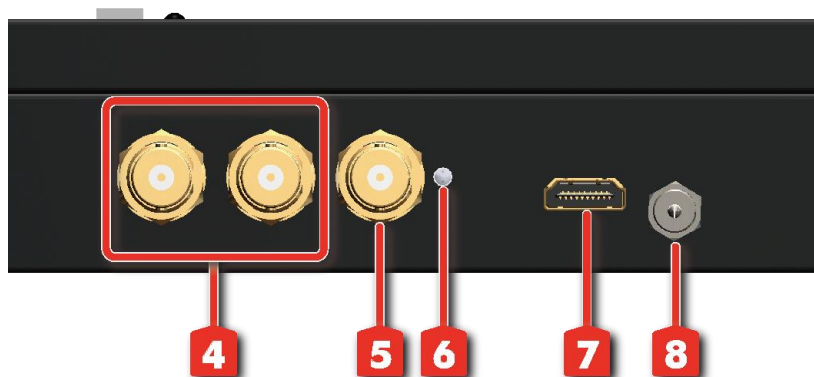
The buttons not listed above are not in use for this model.

Front Panel



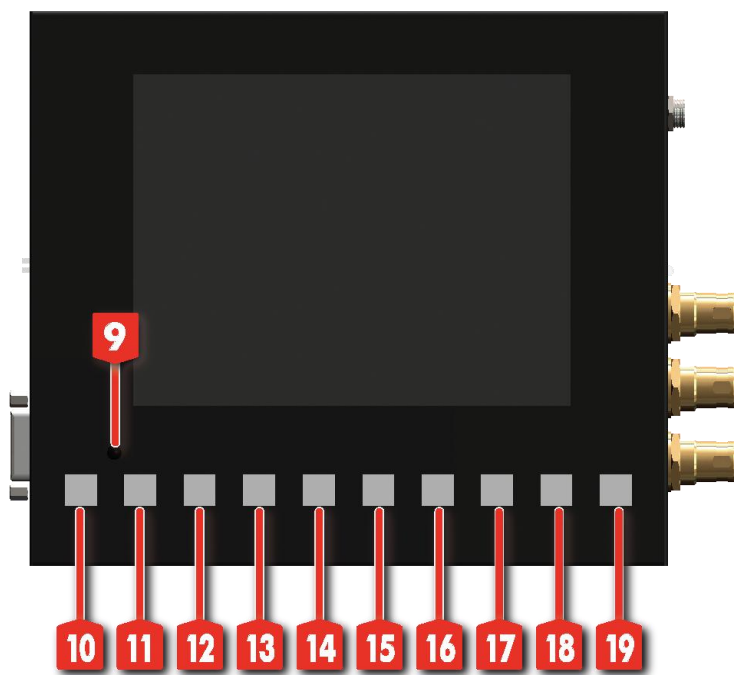
- 1. DIO: Reserved.
- 2. Dip Switch: Mode setting
- 3. RS-232: Serial control

Rear Panel



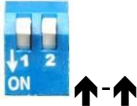

- 4. **SDI BNC loop-out connectors:** SDI loop outs
- 5. **SDI BNC input connector:** Input SDI/CVBS
- 6. **Power LED:** Indicate power up and signal lock
- 7. **HDMI:** HDMI loop out
- 8. **5V DC power jack**

Top Panel Buttons



- 9. **IR:** Remote control
- 10. **Menu:** OSD Menu
- 11. **Down/Left:** OSD up or left operations
- 12. **Up/Right:** OSD down or right operations
- 13. **Enter/Mode:** OSD selection or zoom/pan
- 14. **INC+:** Zoom in or move the center of zoomed video to left or up
- 15. **DEC-:** Zoom out or move the center of zoomed video to right or down
- 16. **Display:** Display mode selection
- 17. **Status:** SDI status indicator
- 18. **Source:** SDI/CVBS selection
- 19. **Reset:** Reset error flags of SDI status indicator

Bottom DIP Switch

Switch Position		
Input 1	Normal	Reset
Input 2	Normal	Reset

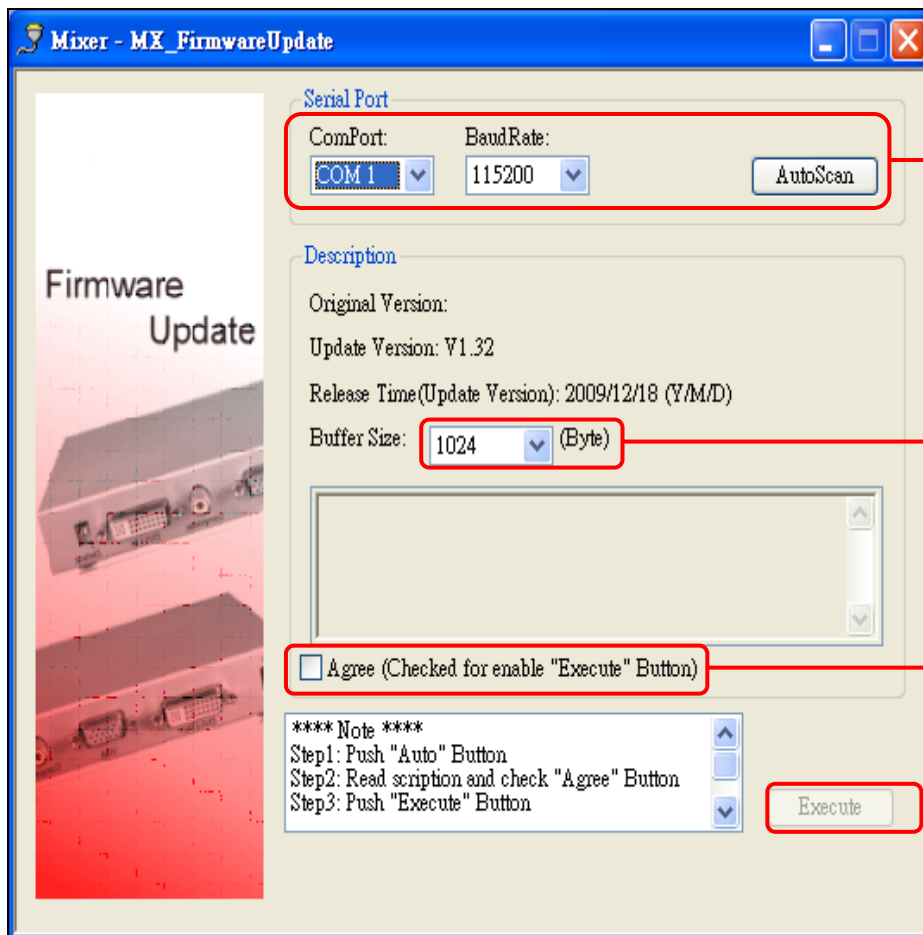
Hardware Installation

- Connect your SDI/CVBS video sources to the input connectors.
1. Connect your HDMI enabled monitors into the device's HDMI output port.
 2. Power up the 1B-SDI-PTGM2.

1. Power up the 1B-SDI-PTGM2.
2. To reset 1B-SDI-PTGM2 back to the factory default values, pull up-and-down the **DIP switch 1&2 from OFF to ON** to complete the process. You **NEED** to pull back the DIP switch back to **OFF** in order to get 1B-SDI-PTGM2 work normally.

Firmware Update Pr

Software Interface:



ComPort Settings:

Select ComPort of PC connected to the device. Push "auto scan" to start the automatic scan on each ComPort.

Baud Rate is default as **115200**.

1024 bytes as the default.

Please check all the power and serial port connection to avoid any further unexpected damages during firmware update. Check "**Agree**" to enable the firmware update procedure.

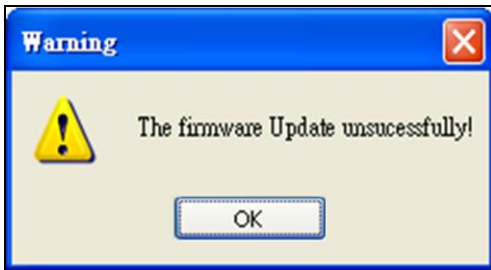
Execute firmware update.

Window Messages



The connection is not correct. Please check:

- Power
- Cable
- Baud Rate



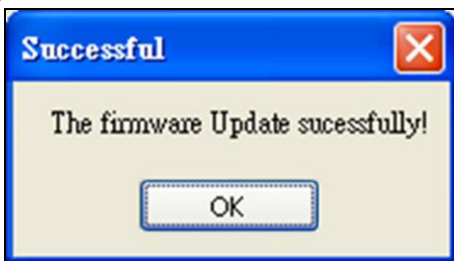
The whole firmware update procedure fails. Please check

- Power
- Cable
- Baud Rate



The firmware update procedure requires a power cycle.

Please turn off the device, wait for a couple of seconds, and power on the device.



Congratulations. The whole process is successfully completed!

[SDI-IN] Socket

Supported Mode	Resolution
(SDTV) 625i	625i @50Hz
(SDTV) 525i	525i @59.94Hz
(HDTV) 720p	1280x720 @50Hz
(HDTV) 720p	1280x720 @59.94Hz
(HDTV) 720p	1280x720 @60Hz
(HDTV) 1080i	1920x540 @50Hz
(HDTV) 1080i	1920x540@59.94Hz
(HDTV) 1080i	1920x540 @60Hz
(HDTV) 1080p	1920x1080 @25Hz
(HDTV) 1080p	1920x1080 @30Hz
(3G) 1080p	1920x1080 @50Hz
(3G) 1080p	1920x1080 @59.94Hz
(3G) 1080p	1920x1080 @60Hz

Appendix – SDI Dialog

Dialog 1 –SDI Information

□□: □□: □□ [System timer]

EDH error number and error rate [SD only]

CRC error number and error rate

SDI input total width and height

SDI input active width and height

SDI input format

Dialog 2 - SDI SYNC information

EDH Status:

Frame CRC error

Active picture CRC error

General error 1

General error 2

SYNC Status:

SAV error

SAV 3G error

EAV error

EAV 3G error

SMTPE 352M Bytes:

Dialog 3 - SDI Video Information

Chroma Status:

1. ANC 3G checksum error.

2. ANC checksum error.

3. 3G CRC error.

4. CRC error.

Luma Status:

5. ANC 3G checksum error.

6. ANC checksum error.

7. 3G CRC error.

8. CRC error.

9. Line number error

Read before operating equipment.

1. Cleaning - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
2. Power Sources - Use supplied or equivalent UL/CSA approved low voltage DC plug-in transformer.
3. Outdoor Antenna Grounding - If you connect an outside antenna or cable system to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
4. Lightning - Avoid installation or reconfiguration of wiring during lightning activity.
5. Power Lines - Do not locate an outside antenna system near overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outside antenna system, refrain from touching such power lines or circuits, as contact with them might be fatal.
6. Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
7. Object and Liquid Entry - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts, resulting in a fire or electric shock. Never spill liquid of any kind on the product.
8. Servicing - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
9. Damage Requiring Service - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged.
 - If liquid spills or objects fall into the product.
 - If the product is exposed to rain or water.
 - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. An improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
 - If the video product is dropped or the cabinet is damaged.
 - When the video product exhibits a distinct change in performance, this indicates a need for service.