HDMI Quad Screen Splitter/Multiviewer
SPLITMUX®

Display real-time 1080p video from four HDMI/DVI sources simultaneously on a single display

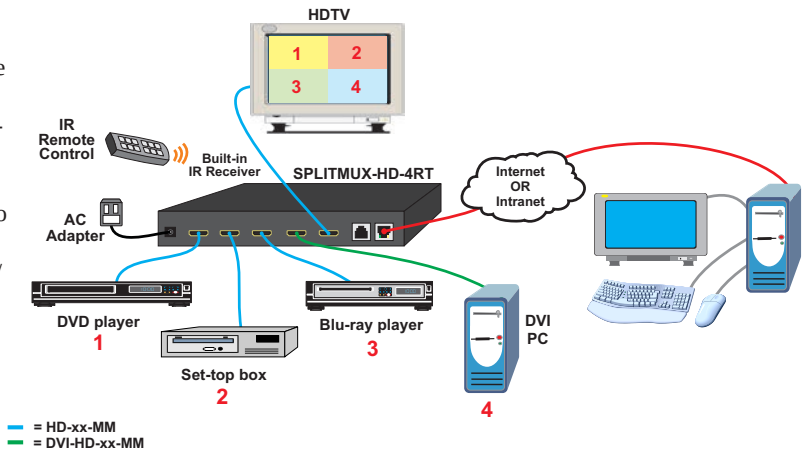
- Quad, Picture in Picture, Full Screen, and Custom display modes.
  - Custom Display Mode: **the size, position and selection of any or all windows are customizable.**
    - 2- and 3-source viewing is possible with this method.
    - Maintain input aspect ratio if desired—no stretching necessary.
    - Layer display windows and adjust transparency of each video source display.
- Independent video in to video out resolution.
  - Supports HDTV resolutions up to 1080p and computer resolutions to 1920x1200.
- Supports 2K resolution 2048x1080, HDTV resolutions to 1080p, and computer resolutions to 1920x1200.
- HDMI features supported:
  - Inputs: 24-, 30-, and 36-bit xvYCC, sRGB, and YCbCr.
  - Outputs: 24- and 30-bit sRGB.
  - Four-channel non-mixing or one channel mixing stereo with 16-, 20-, or 24-bit uncompressed PCM audio.
  - Bandwidth up to 165 MHz.
    - Inputs: 2.25 Gbps
    - Output: 2.0625 Gbps
- HDCP compliant.
- Fluid, real-time video performance with 60 frames per second (fps) in all four quadrants.
- Zoom, pan, and crop the image from any source to focus on key areas.
- Switch audio independently of video from connected HDMI sources (e.g. source 1 and source 2 video are active while only source 3 audio is active).
  - Multiple audio sources can be simultaneously active in any display mode or preset layout.
  - Adjustable audio gain with VU level indicators for each input channel.
- A customized text label can be added for each video window to provide easy input identification (UMD).
- Any DVI source or display can be connected by using the DVI-HD-xx-MM cable (not included).
  - Use DVIA-HD-CNVTR-LC or DVI-HD-CNVTR DVI + Audio to HDMI Converters to pass and independently switch audio signals to the multiviewer.
- Control the multiviewer through Ethernet, RS232 serial port, keyboard/mouse commands, on screen display (OSD), front panel buttons, or IR remote.
- Cascade multiviewers to display video from any number of video sources on one screen.
  - Each video source in the cascade can be controlled directly from the Web Server graphical user interface under Custom Mode Settings.
- Backup and restore multiviewer configurations.
- Supported output resolutions can be selected or set to auto detect optimal resolution from the monitor's EDID.
- Available options: desktop unit, 1RU rackmount unit, dual side-by-side rackmount units in 1RU
  - Rackmount units can be mounted so that the front panel buttons are facing the front or back of the rack.
  - Rackmount units include cable management shelf.
  - All units can be purchased with a medical grade power supply for healthcare industries.

SPLITMUX-HD-4RT (Front & Back)

- **HDMI & DVI**
- **Supports 2K, 1080p & 1920x1200 input/output resolutions.**
- **Quad, Picture in Picture, Full Screen, and Custom Display Modes.**
- **The size, position & selection of any or all windows are customizable.**
- **Zoom, Pan & Crop**

The SPLITMUX® HDMI Quad Screen Multiviewer allows you to simultaneously display HDMI/DVI video from up to four different sources on a single monitor. Each of the quadrants can be adjusted to any size and positioned to any location on the display.

Configuration and Cable Illustration



NETWORK TECHNOLOGIES INCORPORATED
1.800.RGB.TECH (800.742.8324) Toll Free: US & Canada
330.562.7070 International calls
330.562.1999 Worldwide fax
sales@ntigo.com
www.networktechinc.com

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Specifications

Video Input

- Four female HDMI connectors.
- Supported video input resolutions:
  - 2K Cinema (2048x1080 @ 60Hz)
  - HDTV resolutions to 1080p
  - Computer resolutions to 1920x1200
- Supports digital HDMI devices, such as DVD/Blu-ray players, satellite receivers and HDTV tuners.
- Multiplatform support: Windows 2000/XP/Vista/7/8/10, Windows Server 2000/2003/2008/2012, Solaris, Linux, FreeBSD, and MAC OS 9/10.
- A DVI source can be connected by using the DVI-HD-xx-MM cable (not included). The cable does not pass audio to the multiviewer.
  - Use a video + audio to HDMI video converter to pass embedded HDMI audio into the multiviewer (see Compatible NTI Products below).
- Supports HDCP 1.4

Video Output

- One female HDMI connector.
- Supported video output resolutions:
  - 2K Cinema (2048x1080 @ 60Hz)
  - HDTV resolutions to 1080p
  - Computer resolutions to 1920x1200
- HDMI-embedded audio switching (four-channel stereo, non-mixing or one-channel stereo, mixing).
- A DVI display can be connected by using the DVI-HD-xx-MM cable (not included). The cable does not pass audio to the display.
  - Use a video + audio to HDMI video converter to pass embedded HDMI audio into the multiviewer (see Compatible NTI Products below).
- Supports HDCP 1.4
- Latency:
  - 50mS at 60Hz
  - 60mS at 50Hz
  - 100mS at 30Hz
  - 120mS at 25Hz
  - 125mS at 24Hz

Devices

- Two female USB Type A connectors for keyboard and mouse.
- Keyboard and mouse are hot-pluggable.

Protocols

- HTTP, HTTPS
- TCP/IP, DHCP, UDP, ARP
- IPV4

Power

- 110 to 220 VAC at 50 or 60Hz via country-specific AC adapter.
- Power consumption: 10W
- Optional medical grade power supply
  - Accepts 100 to 240VAC
  - Efficiency standards: EISA2007, CEC Efficiency Level V, EU (EC) No 278/2009 Phase II.
  - Safety standards: EN/IEC/CSA/UL60601-1.

Dimensions

- SPLITMUX-HD-4RT (desktop)
  - WxDxH (in): 7.35x4.98x1.09 (187x126x28 mm)
- SPLITMUX-HD-4RT-R (1RU rackmount) and SPLITMUX-HD-4RT-2R (1RU dual side-by-side rackmount)
  - WxDxH (in):
    - Without rackmount kit: 7.35x4.98x1.75 (187x126x45 mm)
    - With rackmount kit: 19x4.98x1.75 (483x126x45 mm) (excludes cable tray)
  - Can be mounted so that the front panel buttons are facing the front or back of the rack.
  - Includes cable management tray.
    - Adds 3.37” to the depth.

Environmental

- Operating temperature: 32 to 122°F (0 to 50°C).
- Storage temperature: -22 to 140°F (-30 to 60°C).
- Operating and storage relative humidity: 17 to 90% non-condensing RH.

Regulatory Approval

- CE, RoHS.

Compatible NTI Products

- Combine NTI’s video converters, splitters, and extenders for complex applications
  - DVI-D to HDMI Single Link Interface Cable (DVI-HD-xx-MM).
    - The cable does not pass audio to the multiviewer.
  - DVI Matrix Switch (SM-nXm-DVI-LCD)
  - DVI + Stereo Audio to HDMI Converter (DVIA-HD-CNVTR-LC)
  - DVI + Digital Audio to HDMI Converter (DVI-HD-CNVTR)
  - Composite Video + Audio to HDMI Converter (CVA-HD-LC)
  - VGA + Audio to HDMI Converter Cable (VGAA-HD-ULC)
  - VGA/Component Video/HDMI Scaler/Converter (PCHD-HDMI-SCALER)
  - HDMI HDBase-T Splitter/Extender (VOPEX-C6HD-8HDBT-230)
  - Low-Cost HDMI Extender via One CAT5e/6 (ST-C6HD-150-LC)
  - Low-Cost HDMI Over Gigabit IP Extender (ST-IPHD-LC)
  - HDMI HDBase-T Extender via One CAT5e/6 (ST-C6HD-HDBT)

Display Modes

Quad Mode

- In quad mode, the screen is split into four fields of equal size each displaying the entire contents of four different video sources.
  - Fluid, real-time video performance with 60 frames per second (fps) in all four quadrants.
- Borders can be set for each image input.
- Aspect ratio can be maintained for all outputs.

Full Screen Mode

- In full screen mode, one of the four video sources is displayed in full screen size and maximum resolution.
- Scan feature: cycle through four different sources at set intervals.

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Display Modes (continued)

Picture in Picture (PIP) Mode

- In PIP mode, the full screen display of one of the four video sources is accompanied by one, two, or three small images (thumbnails) of the three other video sources on the right hand margin of the screen allowing simultaneous monitoring.
- Size, position and selection of the thumbnails are customizable.
- Scan feature: cycle through two or four different sources at set intervals for the larger image.
- Borders can be set for each image input.
- Aspect ratio can be maintained for all outputs.

Custom Mode

- In Custom mode, each video source is displayed in its own separate, detached window.
- Size, position and selection of the windows are customizable.
- Use web server graphical user interface to configure settings for each window.
- Zoom, pan, and crop the image from any source to focus on key areas.
- 2- and 3-source viewing is possible with this method.
- Presets of the window positioning can be saved.
- Borders can be set for each image input.
- Display optional Left/Right VU level indicators for each corresponding display window.
- Configure up to 10 preset layouts that can be switched live at any time.

Control Methods

Front Panel Interface

- Use front panel buttons to locally change ports or to select a display mode.

Ethernet Control

- Configuration can be done over the Internet/LAN via Web page or Telnet.
- Supports Internet Explorer 6.0 or higher, Firefox 2.0 or higher, Opera 9.0, Google Chrome, Safari 4.0 or higher for MAC and PC.
- Configure and control the settings for the system, network, input, output, and modes.
- Female RJ45 connector.
- 10/100 BaseT Ethernet interface.
  - Use NTI's Discovery Tool on a PC or MAC with Java Runtime Environment (version 6 or higher) installed to detect the IP address of a SPLITMUX unit.
  - **Web Server**
    - Security is ensured by password and user configurable timeout.
    - Up to 16 users can access the web page at one time.
    - The user with administrative privileges can access the following pages:
      - System page: allows configuration of unit, serial port, and OSD settings.
      - Network pages: configure IP and server settings.
      - Inputs page: allows configuration of the four video inputs.
      - Output page: configure the video and audio output parameters.
      - Modes page: allows selection and configuration of the output display mode.
      - Custom page: graphical user interface allows simple configuration of all display windows.
        - Control each video source in a cascade by double clicking on the corresponding video source window.
      - User Config page: add, configure, and view all users.
      - Firmware page: update firmware for the SPLITMUX.
  - **Telnet**
    - Security is ensured by password.
    - Menu commands are similar to RS232 commands.
    - The telnet server listens on port 2000.
      - Port 2000 is for an operator telnet session.

On Screen Display (OSD)

- Select display modes and computers with On Screen Display (OSD).
- Use the front panel buttons or keyboard commands to operate the OSD.
- Use the front panel buttons to operate the OSD.
- OSD controls for configuration and control of the system, network, input, output, and display modes.
- Access to OSD Mode can be limited by an administrator-assigned PIN number.

RS232

- Configuration and control can be done through the serial port.
  - Female RJ45 connector.
- Control the multiviewer using the Text Menu via RS232.
- Selectable baud rate: 1200 to 115,200 bps.
  - Baud rate is set via the front panel interface, serial command, OSD, or web interface.

Infrared Remote Control

- Sold Seperately
- Routes video and audio signals together or independently.
- A single IR remote can control up to 15 units (individual or cascaded).
  - Use the "sys" button on the remote followed by the user-configured address of the unit to switch between the units controlled.
- Transmitter can be up to 30 feet (9.1 meters) away.
- Power: two AAA batteries (included).

Keyboard/Mouse

- Use keyboard or mouse commands to select display mode and to select port.

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NTI Part #	Supported Features
SPLITMUX-HD-4RT	HDMI Quad Screen Multiviewer, Desktop
SPLITMUX-HD-4RT-R	HDMI Quad Screen Multiviewer, 1RU Dual Side-by-Side
SPLITMUX-HD-4RT-2R	HDMI Quad Screen Multiviewer, 1RU Dual Side-by-Side Rackmount

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