

QS100HD Quad™ Card

Multiformat HD Quad Monitoring Card
For Sony® LMD/LUMA Displays



The QS100HD Quad™ card is a unique, first-to-market monitoring solution designed for integration with the Sony® LMD/LUMA display range. It offers outstanding performance and image quality for HDTV monitoring environments — ideal for outside broadcast/mobile production, master control room and production studio quality monitoring.

Configurable as a quad-split or in any four-window arrangement, the QS100HD Quad card will drive high-resolution LMD/LUMA displays, allowing the display of up to four auto-sensing analog, SDI and HD-SDI inputs. It is a fully integrated monitoring solution that fits into the expansion slot of the LMD/LUMA display range. With an extensive standard feature set, the QS100HD Quad cards have numerous control options including the intuitive Z-Configurator™ layout editing software, which enables easy setup and operation, support for embedded audio and on-screen alarm display for video and audio. The high-performance QS100HD Quad card also features an HD-SDI output for distribution of the multi-image display output, or for cascading units.

Auto-detects up to four analog, SDI (525, 625) or HD (720p, 1080i) inputs

Native HD and SD input processing to ensure excellence in picture quality

DVI-D output up to (1920x1080/1200*) simultaneous DVI and HD/SDI output
* 1920x1200 resolution results in additional frame delay and rate conversion on LMD/LUMA series

Full screen selection from LMD/LUMA front panel

Lowest minimum frame delays (< 1 frame) – critical in production environments

Embedded audio ballistic meters and alarms

Full-screen, quad-split and any four-window display configuration



4:3 and 16:9 aspect ratio management with aspect ratio markers

NTP timecode support and digital clock display

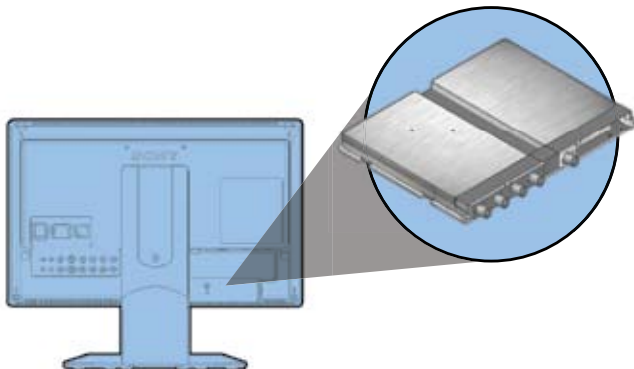
Instant display reconfigurability: all four inputs are scalable and resizeable

Numerous options for flexible operator control – Z-Configurator software, LMD/LUMA front panel, GPI and LAN

Dynamic and static UMD protocol support

User-configurable preset layouts

Configurable tally lamps with up to four tally lamps per video window



QS100HD Quad card fits into the expansion slot of the Sony LMD/LUMA series

Fully integrated quad module with LCD display provides excellent cost savings on rack space, DVI extension and cooling

Robust (non PC-based) architecture reduces impact of failures and downtime and provides greater redundancy

Excellence In Image Quality And Display

The QS100HD Quad card auto-senses up to four 10-bit digital HD/SDI signals or analog signals. The module can route any of the four sources internally to the display, with no multi-image processing for full-screen display. Alternatively, users can select a DVI input for multi-image display processing. The result is an outstanding, high-resolution quad display with minimal input-to-output frame delay. A simultaneous HD-SDI output is available as standard to distribute the four-channel (quad) output to additional displays and routers within the production system.

Control/Ease Of Use

The QS100HD Quad card module features the powerful Z-Configurator layout editing software to make system setup and operation effortless. The creation of layouts is

simplified with the option to edit pre-loaded basic templates or use the drag-and-drop functionality to quickly create and save new layout styles. The intuitive GUI allows the operator to easily configure, resize and position any source in the layout in order to set up tally/UMD parameters, alarm thresholds and audio ballistics. LAN and GPI control are standard interfaces. Users can choose between any of the four inputs viewed full screen with no processing of the multi-image display directly from the LMD/LUMA front panel.

Exceptional Performance

The superior processing technology of the QS100HD Quad card results in performance that is second to none. The integrated module boasts minimum frame delays (< 1 frame) from source to output making it a reliable choice in critical production environments.

Specifications

Specifications are subject to change without notice.

Video Inputs

Input Type	Auto-detects 1080i 50/59.94/60, 720p 50/59.94/60, SD 525/625, PAL, NTSC HD-SDI (SMPTE 292M 1.485 Gb/s) and/or SDI (SMPTE 259M 270 Mb/s)
Number of Inputs	4
Connector	BNC
Distance	250 m cable equalization for SD, 100 m for HD Return loss > 15 dB

Graphics Overlay

- 16 text and border colors
- 4 tally lamps — red, green, yellow, blue
- Audio ballistics bar graphs — red, green, yellow
- Multiple digital and analog clocks synchronized to NTP over LAN
- Multiple countdown and countup timers

Display Outputs

Output Type	Multi-image output on DVI-D is display selectable using the front panel DVI source select DVI-D output Front panel source select A1, A2, B1, B2 select one source to the display HD-SDI O/P to 1080i when the DVI output is set to 1920x1080p
Connector	DVI-D BNC

Control/ Operation

System	Front panel LCD menu, on-screen display (for multiviewer display select)
UMD/Tally control	Dynamic UMD and tally via TSL protocol over TCP/IP and UDP
Software	Z-Configurator layout configuration software (for multiviewer operation)
Ethernet	100 base-T Ethernet control TCP/IP, via RJ-45
GPI	4 inputs

Physical

Dimensions W x D x H	7.8 x 5.8 x 0.7 in. (200 x 147.5 x 20 mm)
Power	10 W
Environmental	Operating ambient temperature 32° to 95° F (0° to 35° C) Recommended operation 68° to 86° F (20° to 30° C) Storage temperature 32° to 122° F (0° to 50° C), Humidity 70% max (QS100HD)

Front Panel

LMD/QS100HD Control. Source select A1, A2, B1, B2 and DVI for multi-image display

Integrated Rear Panel

LMD/QS. 4 BNC video inputs, 1 GPI RJ-45, 1 BNC HD-SDI output, 1 DVI-D output, 1 Ethernet RJ-45



Rear Panel View

Compliance	CE product emission standard EN 55 022:1994 CE generic immunity standard 50082-1:1992 (as per the EMC directive 89/336/EEC) FCC Class A digital device, pursuant to part 15 of the FCC rules; RoHS-compliant
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System

Order Code	Z-QS100HD
Description	High-resolution four-channel integrated quad card supporting HD (720p/1080i), SDI (525/625), PAL and NTSC inputs (auto-detected)
Sony® LMD/LUMA Models Supported	
LMD-2450W	.S/N 3003387, ex-factory Dec 19, 2007
LMD-2050W	.S/N 3003370 and later, ex-factory Dec 18, 2007
LMD-4250W	.S/N 3000007, ex-factory Jan 7, 2008

UMD Protocol Support

- Zandar
- Thomson
- TSL
- Image Video

For more information, please visit www.broadcast.harris.com/multiviewers.

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