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

The QS100HD Quad card fits into the expansion slot of the Sony® LMD/LUMA display range. Configurable as a quad-split or in any four-window arrangement, this fully integrated monitoring solution drives the high-resolution LMD/LUMA displays, allowing up to four auto-sensing analog, SDI and HD-SDI inputs to be shown. 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 onscreen 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.

**FEATURES**

As a full-featured multiviewer within the Sony display, the QS100HD saves space, reduces cabling requirements and provides excellent image quality, making it an ideal solution for mobile production vehicles, as well as desktop studio applications.

- Auto-detection of up to four analog, SDI (525, 625) or HD (720p, 1080i) inputs
- 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
- Lowest minimum frame delays (<1 frame) — critical in production environments
- Full-screen, quad-split and any four-window display configuration
- Native HD and SD input processing to ensure excellent picture quality
- 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 resizable
- Full-screen selection from LMD/LUMA front panel
- Dynamic and static UMD protocol; supports numerous options for flexible operator control; Z-Configurator software, LMD/LUMA front panel, GPI and LAN
- Configurable tally lamps with up to four tally lamps per video window
- User-configurable preset layouts
- Embedded audio ballistic meters

**PRODUCT DETAILS**

**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.

**Superior 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.

**Reliable 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.
QS100HD
Multiformat HD Quad Card for Sony® LMD/LUMA Displays

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**: SD: 820 ft (250 m) cable equalization, HD: 328 ft (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
- **Front panel source select A1, A2, B1, B2**: select 1 source to the display HD-SDI O/P to 1080i when the DVI output is set to 1920x1080p
- **Connector**: DVI-D BNC

Control/Operation
- **SSystem**: Front-panel LCD menu, onscreen 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: 100Base-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° C to 35° C)
- **Recommended operation**: 68° to 86° F (20° to 30° C)
- **Storage temperature**: 32° to 122° F (0° C to 50° C)
- **Humidity**: 70% maximum (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
- **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

System
- Sony® LMD/LUMA Models Supported
  - LMD-1750W
  - LMD-2050W: S/N 3003370 and later, ex-factory December 18, 2007
  - LMD-1751W
  - LMD-2451W

IMAGES/DIAGRAMS

Rear Panel View

ORDERING INFORMATION
- ZQS100HD: High-resolution 4-channel integrated quad card supporting HD (720p/1080i), SDI (525/625), PAL and NTSC inputs (auto-detected)