

QRDP 310-A



Reference Monitor

The HDQLINE **H** series HD monitors and **Q** series 4K/UHD monitors represent our latest generation of multi-standard Broadcast Monitors using the most precise LCD panel technology available today.

Heart of the HDQLINE platform is an advanced high-precision video processing engine supporting resolutions up to 4096x2160 pixels, controlled by a fast embedded processor and cleverly designed software.



In designing these monitors, priority was to satisfy the full performance and capabilities required by broadcast and film professionals. These include:

No compromises in core features like accurate color reproduction and picture quality

Exceptional 4K capabilities to easily manage complex HDR workflows

Future proof platform design which allows adaptation to emerging technologies

Fast and easy setup and operation, even in challenging live TV applications

The HDQLINE series of multi-standard monitors are ideally suited for challenging high-end applications – wherever the brilliance and sharpness of ultra-high resolution images together with state of the art usability and future proof-ness are required.

QRDP 310-A - Product Highlights at a Glance

- Perfect picture quality (high performance LCD panel)
- Outstanding grey scale and color depth
- Wide viewing angle
- Perfect and repeatable color matching between monitors
- Multiple color spaces (BT.709, DCI-P3, BT.2020)
- Excellent picture uniformity and stability
- Multi-format signal support (up to 4096x2160)
- SDR and HDR EOTF tables (SDR, Bt.1886, HLG, PQ, Slog-3), up to 8 ultra fast loadable container, Split EOTF function
- 1:1 pixel mapping
- 3D LUT
- High quality motion adaptive deinterlacer
- Highly configurable quad view mode built-in (4 independent signals)
- Black lift, chroma x2, gain x2, custom white balance functions
- DCS + remote control & management software
- Centralized monitor wall control via Ethernet
- DCS+ automatic color calibration software, supports professional probes (Konica Minolta CS 200/2000, JETI specbos 2111-2 / spectravall 1501/1511, Klein K-10)
- Firmware update over Ethernet or USB
- Waveform Monitor, Vectorscope, CIE Chart, False Color, Clock and Timecode overlays
- Advanced Signal Information VPID, SDI ANC monitor, Event Log
- Audio level meters (8 stereo channels), custom configuration possible
- Built-in diagnostic and test pattern generator
- Dynamic and static IMD/UMD support
- Tally support via GPI and VGPI (network)
- Programmable GPI function control
- Remote control protocol: ember+, VTS-LSB, TSL, RCP-1806, VSM
- Safe area and safe title, markers
- Built-in screensaver to minimize image sticking
- Color component display modes: all, red-, green-, blue-only, mono-chrome
- Real Time Clock (RTC), NTP client
- Rugged, durable aluminium housing, designed for 24/7 operation
- Up to 10 User Presets
- Keyboard Lock
- User Lock (several monitor functions can be locked for Default users, locked functions are available for Admin user only)
- Designed and assembled in Germany

Technical Specifications



General

Model	QRDP 310-A
Panel Type	IPS LCD panel, LED backlight
Screen Size	31" wide format
Aspect Ratio	17:9
Native Resolution	4096x2160 Pixels
Effective Screen Size	697.96 mm (H) x 368.06 mm (V)
Display Colors	1.06 B
Brightness / max. Brightness	100 cd/m ² (conform to EBU) or user selectable / max. 350 cd/m ²
Contrast Ratio	1500:1 max.
Response Time	11 ms (grey to grey)
Viewing Angle	H-178°/V-178°

Color Space / Gamma / Motion Adapt.

Color Space	BT.709, BT.601, BT.2020*, DCI-P3*
Color Temperature	D65, user selectable by DCS+ software
EOTF	SDR Gamma (1.8-2.6 in 0.05 steps), SDR Bt.1886, HLG, PQ, Slog-3
Deinterlacer	High performance motion adaptive deinterlacer
Scaling	Native / 4:3 / 16:9 / full screen / UMD / Quad / Side By Side / Split View / Measure View**

Input / Output Terminals

2x SFP+ Cage for SDI RX modules	Up to 4x 3G/HD/SD-SDI for 4K/UHD Input (SQD/2SI), Copper/Fiber modules***
2x SDI Input	2x BNC (3G/HD/SD-SDI), Input impedance: 75 Ω unbalanced
2x HDMI	1x HDMI 2.0b up to 4096x2160
1x DP	1x HDMI 1.4 (HDCP 1.4) up to 1920x1200
1x SDI Output	DP 1.1 (HDCP 1.4) up to 1920x1200
Headphone Output	Loop Out (3G/HD/SD-SDI), Output impedance: 75 Ω unbalanced
1x Option Slot****	Stereo 3.5mm mini jack
	Supports one optional I/O module (e.g. QIO 12G SDI or QIO Video over IP ST2110)

External Control

Ethernet Network	Remote control, calibration, dynamic IMD and Tally / RJ-45 8pin, 10/100/1000 Base-T
AUX	External keyboard, Q-Light Control / RJ-10 4pin
GPI	Static IMD and Tally, function key / RJ-45 8pin
USB	USB 2.0 Connector, Preset load/save, Firmware update

Electrical / Mechanical

Operating Temperature	5 °C - 35 °C
Power Requirement	AC 100 - 230V, 50/60 Hz
Power consumption min ($\pm$ 5% tolerance)	33 W
Power consumption typ ($\pm$ 5% tolerance)	61 W
Power consumption max ($\pm$ 5% tolerance)	135 W
Dimensions (Width x Height x Depth)	740 mm x 411 mm x 90 mm
Weight excluding Mounting ($\pm$ 3% tolerance)	approx. 9.8 kg
Mounting	VESA MIS-D, 100 x 100, M4 x 10 mm, C
Housing Color	RAL 9005 Black

* The monitor may not support the colorspace in full.

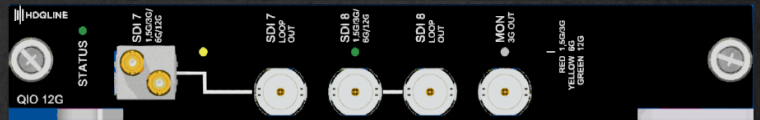
** Measure View is only supported by H(R)DP/H(R)DL series.

*** Not included, SFP modules can be ordered optionally

**** No option slot is available for low profile H(R)D./Q(R)DL series.

QIO Dual 12G Input Module

The **QIO-12G** module adds 2x 12G SDI UHD/4K inputs (1.5G—12G) to the HDQLINE monitor platform.



External Keyboards

Q-AUX-KBD Rack mount 19" AUX keyboard



Q-UM-KBD Under monitor AUX keyboard



Other accessories

- Reference Light for calibrated ambient/wall lighting behind monitors (on request)
- Dual coax 3G SDI RX SFP+ module, HD-BNC (SFP-3G-SDI-HR)
- Dual fiber 3G SDI RX SFP+ module, LC (SFP-3G-SDI-DR-OPT)
- Dual coax 12G SDI RX SFP+ module, HD-BNC (SFP-12G-SDI-HR)
- Dual fiber 12G SDI RX SFP+ module, LC (SFP-12G-SDI-DR-OPT)
- HDR Preview license (included in reference monitors HRDP/QRDP series)
- 19" rack mount kit for 17" monitors
- 19" rack mount kit for 18.5" monitors
- VESA 400/200 adaptor