

# Portable Waveform Monitor

## 25G ST 2110 and 12G-SDI with Battery Power



### 12G SDI/25G IP Professional Monitoring “To Go”

The QxP features an integral 3U, multi-touch LCD screen with class-leading waveforms in a portable unit. A choice of V-mount or Gold-mount (G-mount) battery plate is available for portability, making the QxP equally at home on-set in SDR or HDR Productions, Grading, Shading, or QC, MCR, Engineering and R&D environments.

Inheriting the flexible architecture of the QxL rasterizer, the QxP includes SMPTE ST 2110, 2022-6 and a wide-range of formats as standard.

For realtime IP workflows the QxP supports simultaneous Generation and Analysis of SD/HD/3G/UHD/EUHD 2110 payloads on generic SFP28/25 GbE interfaces, with ST 2022-7 Seamless IP Protection Switching (SIPS) and independent PTP followers on both media ports for fully-redundant media network operation – all with AMWA NMOS IS-04 and IS-05.

Picture view, waveform monitor, vectorscope, extensive audio metering, audio channel-status, detection of common Dolby formats, ANC status and payload; on-screen display of closed captions and Ancillary Time Code (ATC); Loudness monitoring; advanced control and logging with human readable event logs; browser-based remote operator GUI access over noVNC and a full REST API are provided as standard.

### Optional in-field license upgrades

In-field upgrades are available for a rich set of options: UHD/4K, IP-MEAS, HDR, Dolby E decode, PCAP capture, EUHD and extensive Audio/Video/ANC test signal generation.

### Flexible architecture for advanced Physical Layer Analysis

Factory-fitted options provide SDI interfaces and RTE™ real-time SDI eye/jitter analysis, with an engineering grade data view and an optional, advanced SDI-STRESS toolset.

Whether working in HD, UHD, SDR, HDR, SDI or IP, conventional or remote production, the QxP combines the user-configurability and advanced tools required for full operational flexibility when transitioning to next generation workflows.

### Key Features

- 3U instrument with integral 1920 x 1200, 7 inch LCD screen
- HDMI Rasterizer output with up to 16 instruments
- Touchscreen, button or mouse-driven user interface for local and remote operation
- Intuitive interface with presets - QxP puts you in control
- Choice of V-mount or Gold-mount Battery Plate for external battery and portable operation
- Class-leading Waveforms in a portable device
- Available in: IP only, IP & SDI, IP & SDI Eye & Jitter each with the option of battery V-mount or Gold-mount
- SFP28 IP media interfaces fitted as standard, with SDI option for Hybrid SDI/IP
- Options for UHD/4K, IP-MEAS, Dolby E, HDR, PCAP, EUHD, AV-ANC Gen and SDI-STRESS
- IP-MEAS test suite provides a comprehensive set of tools for SMPTE 2110 and 2059 (PTP) compliance verification and commissioning
- AMWA NMOS IS-04, IS-05 and PTP system resource detection via IS-09
- ST 2110-20 payloads up to 4K60P 444 12-bit over 25G IP networks with 2022-7 and dual PTP
- Fully-featured SDI toolset: audio, Dolby-detect, Data view, ANC status and ANC Inspector included as standard
- 128 SDI audio channels, ST 2110-30 Class C, 32 channel metering, 5.1/2.0 Loudness measurement
- Remote access and control with remote browser access using noVNC
- Built-in speaker and headphone jack

# QxP Rear Panel



## Specifications

Monitor	
Display Resolution	1920 x 1200
Display	7 inch LCD
Touch	Multi-touch
User Interface	
HDMI instrument output, 1920 x 1080, 4:4:4 RGB, Type A	HDMI 2.0a
3G-SDI instrument output, 1920 x 1080, 4:2:2 YCbCr	Micro BNC
User Interface Video/Audio	2110-20 / 2110-30/-31
Remote browser GUI access	noVNC
Ethernet IP Inputs / Outputs (Accepts Generic SFPs)	
2 x SFP28 10 / 25G cages	Standard
2 x QSFP28 cages	Reserved
Upgrade to 25GbE support	Software Option
Networking & Control	
10 / 100 / 1000 BASE-T	RJ45
8 x Bidirectional GPI Socket	26 pin HD D-Type
SDI Inputs / Outputs	
4 x SDI inputs, SD/HD/3G, 75 ohm terminated BNC	Factory Option
2 x SFP+ MSA / Non-MSA cages (12 Gbps copper or fiber SDI interfaces)	Factory Option
4 x SDI outputs, SD* / HD / 3G, 75 ohm BNC	Factory Option
SDI I/O to 6G/12G (Requires Factory SDI Option)	Software Option
RTE** Real-Time Eye input (12G/6G/3G/HD/SD-SDI) x 1 (SDI input A) BNC	Factory Option
Formats Supported	
Core IP Formats: 3G / HD / SD* ST 2110-20/-30/-31/-40 / 2022-7, 2022-6	Standard
ST 2110-30/-31	Class C
ST 2110 UHD / 4K Formats	Software Option
ST 2110 RGB UHD / 4K EUHD Formats	Software Option
Core SDI Formats: 3G / HD / SD*	Factory Option
12G / 6G / 3G / 1.5G-SDI UHD 4K (Requires Core Formats)	Software Option
Audio Inputs / Outputs	
4 x 75 ohm AES selectable I/O (26 pin high-density D-Type socket)	26 pin HD D-Type
1 x Stereo analog audio output (26 pin high-density D-Type socket)	26 pin HD D-Type
8 channel 48 kHz PCM audio	HDMI and SDI Instrument Out
Audio Monitoring	
Front panel speaker	Integral
Headphone socket	¼ inch jack
Reference	
Reference input, Tri-level or B&B with cross-lock	75 ohm Micro-BNC
Form Factor	
Size (Width x Height x Depth - excluding projections)	215 x 132 x 330 mm
Weight	4.1 kg†
Electrical	
4 pin XLR DC power connector	11-17V, 70W typical, 100W max
Internal AC power supply with IEC connector	100-240 VAC, 77 typical, 110 W max
Choice of External Battery V-mount or Gold-mount	Factory Fitted

## Ordering Information

### QxP Chassis Options

<b>PHQXP-V</b>	QxP 3U SD / HD / 2K 10GbE IP Waveform Monitor/Analyzer, V-mount
<b>PHQXP-G</b>	QxP 3U SD / HD / 2K 10GbE IP Waveform Monitor/Analyzer, G-mount
<b>PHQXP01-3G-V</b>	QxP 3U SD / HD / 2K 10GbE IP/SDI Waveform Monitor/Analyzer, V-mount
<b>PHQXP01-3G-G</b>	QxP 3U SD / HD / 2K 10GbE IP/SDI Waveform Monitor/Analyzer, G-mount
<b>PHQXP01E-3G-V</b>	QxP 3U SD / HD / 2K 10GbE IP / SDI Waveform Monitor/Analyzer, Eye/Jitter, V-mount
<b>PHQXP01E-3G-G</b>	QxP 3U SD / HD / 2K 10GbE IP / SDI Waveform Monitor/Analyzer, Eye/Jitter, G-mount

### QxP Chassis Upgrades (Return to Factory)

<b>PHQXPM-01</b>	QxP SDI I/O return to factory upgrade (requires PHQXP)
<b>PHQXPM-01E</b>	QxP SDI Eye/Jitter return to factory upgrade (requires PHQXP01-3G)

### QxP IP Options

<b>PHQXPO-IP-25G</b>	25GbE media network (requires 2x PHSFP-25G-SR or PHSFP-25G-LR)
<b>PHQXPO-IP-MEAS</b>	IP Measurement 2110-21, PIT histograms, Timing
<b>PHQXPO-IP-PCAP</b>	PCAP 2x25Gbps line rate capture tool 4GB max.
<b>PHQXPO-IP-NGT</b>	2022-6 IP Network Traffic Generator Tool (requires PHQXPO-GEN)
<b>PHSFP-10GE-SR</b>	SFP+ 10GBASE-SR Ethernet MM 850nm 300m
<b>PHSFP-10GE-LR</b>	SFP+ 10GBASE-LR Ethernet SM 1310nm 10km
<b>PHSFP-25GE-SR</b>	SFP28 25GBASE-SR Ethernet MM 850nm 100m
<b>PHSFP-25G-LR</b>	SFP28 25GBASE-LR Ethernet SM 1310nm 10km

### QxP SDI/IP Software Options

<b>PHQXPO-DOLBY</b>	Dolby E Decoder, Metadata Analyser, LtrT/LoRo downmix, metering
<b>PHQXPO-GEN</b>	SDI/IP AV Test Signal Generator (SDI requires PHQXP01-3G or PHQXP01E-3G)
<b>PHQXPO-UHD</b>	2K Extended + UHD/4K IP/SDI (ST 2110 requires PHQXPO-IP-25G) (SDI requires PHQXP01-3G or PHQXP01E-3G)
<b>PHQXPO-EUHD</b>	Add RGB, 12b, 444, 48-60 Hz UHD formats to ST2110 (requires PHQXPO-UHD)
<b>PHQXPO-HDR</b>	HDR/WCG support, CIE1931, HDR Heat map (PQ, HLG, S-Log3, SR Live)

### QxP SDI Options

<b>PHQXPO-SDI-STRESS</b>	12G-SDI Stress Test Toolset (requires PHQXP01E-3G, PHQXPO-UHD, PHQXPO-GEN)
<b>PHSFP-RT12-1310</b>	SFP+ SM(10km) LC Non-MSA, Tx 1310nm, Rx 1260-1620nm SD*/HD/3G/6G/12G-SDI

### QxP Fitting Kits / Cables

<b>PHQXC-1</b>	12G-SDI Eye Measurement Test Cable 1m
<b>PHQXK7</b>	3U 19 inch rackmount kit (1x QxP Chassis)
<b>PHQXK8</b>	3U 19 inch rackmount kit (2x QxP Chassis)
<b>PHQXK9</b>	QxP desktop kit (adjustable feet plus handle)

Please see the PHABRIX website for more information.

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\* Future software release.

† Excluding external battery.

E&O - As our policy is one of continuous improvement, we reserve the right to vary details without prior notice.