PHABRIX Qx
UHDTV1 / 4K & UHDTV2 / 8K Generator, Analyzer, Monitor

Designed as a complete solution for testing the new UHDTV formats, the PHABRIX Qx features the very latest technology in a new ‘future-proof’ platform targeted at broadcasters and manufacturers looking for a comprehensive test and measurement solution. The key differentiator of this new instrument is its ability to provide simultaneous generation and analysis tools on signals with up to 48Gbps payloads offering both video and audio instruments.

The Qx comes complete with support for HD-SDI, 3G-SDI, 6G-SDI and 12G-SDI as standard. Two base models are available: one complete with physical layer analysis and one without.

Incorporating the ‘World’s first’ real-time 12G-SDI physical layer analysis tool-set with automatic SMPTE compliance measurements, the PHABRIX Qx enables comprehensive testing for both UHDTV1/4K and UHDTV2/8K infrastructures. Importantly the PHABRIX Qx can present measurements for both overshoot and undershoot along with eye height, rise time and fall time - compulsory when verifying SMPTE compliance and a key differentiator with Qx technology. With an analogue front end bandwidth in excess of 30 GHz, the Qx is perfect for 12G-SDI eye and jitter testing.

The PHABRIX Qx supports both generation and analysis of UHDTV signals simultaneously - a must have for closed loop testing and a standard feature on the Qx. The low noise floor of the Qx generator sets a benchmark standard for quality testing of the new standards.

With 4 x 12Gbps BNC inputs and 4 x 12Gbps BNC outputs the platform is able to support UHDTV standards up to 4320P60. In addition two fully connected SFP+ cages provide support for both 12Gbps optical SDI SFPs and 10GbE SFPs for the testing of IP based infrastructures. A range of format options will be available including SMPTE 2022-6.

The Qx is controlled using an intuitive user interface consisting of mouse, keyboard and 1920x1080 HDMI and SDI instrument outputs. The all new client/server based Qx GUI provides up to 16 simultaneous scalable instrument windows backed by a powerful preset mechanism.

On first release the Qx is focused on support for manufacturers requiring a sophisticated tool set for test and measurement of UHDTV. The Qx is based on FPGA design enabling ‘in the field’ upgrades of this rapidly developing product.

Support for HDR (High Dynamic Range), WCG (Wide Colour Gamut), HFR (High Frame Rate) and the advanced object based audio formats will be provided as the standards develop.

All registered PHABRIX Qx units come with a 2 year warranty.
**UHDTV1 / 4K & UHDTV2 / 8K Generator, Analyzer, Monitor**

**DESCRIPTION**
- Format agnostic, future proof chassis
- HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI as standard
- Physical layer tool-set

**INPUTS**
- 4 x SDI: HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI 75 Ohm terminated BNC
- 12 Gbps eye input x 1 (on one of the 4 12 G-SDI inputs) BNC
- SFP+ MSA/NON-MSA 12 Gbps copper or fibre, 10 Gbps Ethernet

**OUTPUTS**
- 4 x SDI HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI 75 Ohm terminated BNC
- SFP + MSA/NON-MSA 12 Gbps copper or fibre, 10 Gbps Ethernet

**GENERATOR**
- 4 x SDI HD-SDI, 3G-SDI, 6G-SDI, 12G-SDI 75 Ohm terminated BNC

**LOCKING**
- Locking reference 2 x 75 Ohm terminated BNC, Tri-level or black burst syncs 50/59.94/60Hz

**AUDIO**
- AES/Analogue audio/GPI/LTC on 26 pin high density D Type socket
- 8 channel 48kHz PCM audio on HDMI and SDI Instrument output
- Internal loudspeaker: Beeper

**USER INTERFACE**
- HDMI 1.4 instrument output, 1920 x 1080, 4:4:4 RGB, Type A
- SDI instrument output, 1920 x 1080, 4:2:2 YUV, BNC 75 Ohm
- User interface control front panel USB 2.0 host port type A socket + 2 rear panel USB 2.0 ports

**NETWORKING**
- 10/100/1000 base T
- Micro USB service connection x 2

**UPGRADE**
- FPGA firmware/software upgrade via Ethernet/USB

**OPTIONS**
- Desktop mounting kit - feet
- 19” Rack mount
- 10.5”/9.5” Rack mount

**ENVIRONMENTAL**
- Power consumption: 30W typical -70W
- AC Power adapter (included), 90-264VAC, 120W
- Dimensions (width x height x depth) excluding projections: 253 x 44 x 211 mm
- Weight: 1.9 kg
- Warranty (2 year standard increased to 3 - 5 years with Warranty package)

### TABLE: Mapped Video Payload (Gbps) *number of 12Gbps links required*

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<tr>
<td>UHDTV1/4K</td>
<td>25 12G</td>
<td>10 (2)</td>
<td>17 (2)</td>
<td>34 (4)</td>
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<tr>
<td>UHDTV2/8K</td>
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