# Hamlet ® Flexiscope ® Module

# HD/SD Video & Audio Generation with Waveform, Vector & Audio Monitoring



The FlexiScope Module Opt 03 allows the display of HD SDI and SD SDI video and audio signals on the 9000 series range of Hamlet instruments.

The generator

functions independently of the video and audio monitor with 16 available test signals, this allows closed loop testing to take place for your device under test.

The HD/SD serial input connection is made to the centre gold plated BNC socket, which is internally terminated at 75 ohms. The left BNC provides a video and audio SDI generator and the right BNC allows an external timing reference or AES audio signal to be input.

Simple to exchange modules in the FlexiScope, MicroFlex, MonitorScope 9000 and DigiScope 9000, just remove 2 screws and pull the module out of the main frame, insert new module tighten the 2 screws and you are now ready for a new set of inputs.

Television standards supported by this module for both monitoring and generation: including 1/1.001 standards

**HD 60** is 1080/60/2:1

**HD 50** is 1080/50/2:1

**HD 48** is 1080/24/sf

**HD 30** is 1080/30/1:1

**HD 25** is 1080/25/1:1

**HD 24** is 1080/24/1:1

**720 60** is 720/60/1:1 **720 50** is 720/50/1:1

**SD 525** is 525 **SD 625** is 625

A Hamlet "Made to Measure product"

# **Features and Functions**

- Input BNC.
- Loop Out BNC.
- Ext Ref. / AES input BNC.
- Auto sensing of HD and SD formats.
- Audio decode.

# **Generator Features and Functions**

- 16 test patterns: 100% Bars, 75%
   Bars, Split Bars, Bowtie, Sweep,
   Pluge, Multi, Pulse & Bar, Modulated
   Steps, White Screen, Red Screen,
   Convergence, Split equaliser/pll test
   pattern, Ramp, Limit Ramp.
- Individual enabling of Y and C components.
- Embedded audio on any of the four groups.
- User defined 64 character ident.

Selection of tone, silence or no audio packets.

# **Instruments that can use this Module**

- FlexiScope. (Handheld)
- MicroFlex. (Handheld)
- MS9000. (Stand alone with screen)
- DS9000. (1RU Rasterizer)

See the Instruments separate datasheet for full information



#### TECHNICAL SPECIFICATION

#### **INPUTS**

HD/SD digital input. BNC connector. Input impedance 75 ohms. Max d.c. +/- 10V. SMPTE 259M serial digital at 800mV p/p. SMPTE 292M high definition serial digital at 800mV p/p. Auto equalised up to 350 metres of cable at 270mb/s. Auto equalised up to 140 metres of cable at 1.485Gb/s.

**HD/SD digital output**. BNC connector. Output impedance 75 ohms. Equalised version of the serial digital input.

**Ext-ref / AES input**. BNC connector. Input impedance 75 ohms. Max dc +/- 3 volts. Video 0.5 to 2.0V p/p. Digital Audio min 150mV p/p, max 3V p/p conforming to S/PDIF, AES3, IEC60958 or EIAJ CP1201.

#### **OUTPUTS**

HD Output Serial digital BNC connector. Output impedance 75 ohms. SMPTE 292, serial component. 800mV pp. Full 10 bit pattern generation.

Embedded audio tone is a 1KHz asynchronous sine wave at a level of -18dBFS.

SD Output Serial digital BNC connector. Output impedance 75 ohms.

SMPTE 259M, ITU-R BT.601/656 serial component.

800mV pp

Full 10 bit pattern generation.

Addition of CRC checksum word.

Addition of embedded tone at -18db.

# **POWER**

Supplied from the Mainframe Instrument.

# **ENVIRONMENT**

Indoor use, 5 to 45 deg.C. Ambient to 2,000m. Max humidity 80% to 31 deg.C decreasing to 50% at 40 deg.C.

Overvoltage category 2. Pollution degree 1.

#### WARRANTY: - 1 Year.

Extendable free on registration: - To 2 Years By using the service area of our web site <a href="http://www.hamlet.co.uk/serv.html">http://www.hamlet.co.uk/serv.html</a>

#### ORDERING INFORMATION

FlexiScope Module Opt 03

These modules are available as options to the Monitor Scope 9000, DigiScope 9000, FlexiScope and MicroFlex range of instruments.

#### **OPTIONS**

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Hamlet products are Manufactured to ISO9001.2000 and ISO14001 specification. Our most up to date information is available on our web site.

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