

Multiformat Rackmountable 1U , Waveform, Vector and Audio Monitor and Generator rasterizer*



The DigiScope DS9000 is a 1U rack mountable, low power device with HD, DVI and XVGA outputs for use on external displays, which is an ideal alternative to, and/or replacement for broadcast measuring devices in production or engineering environments. Especially where repetitive monitoring or measurements need to be made. Areas such as, master control, pre or post production, remote sites and OB vehicles. Indeed anywhere serial digital signals or multiformat measurement is required. The DS9000 is a modular instrument so it is easy for the user to upgrade at any time.

AbsoluteCare, a four year back to base warranty is included upon registration. (Conditions apply). The DS9000 unit is capable of error analysis, measurement and monitoring with EYE pattern 3G, HD, SD and composite video signals and audio in its embedded, or AES/EBU formats and generating HD and SD video and audio signals dependant on the installed modules*.

Waveform, Vector, Audio and Picture can be monitored and measured. Coloured traces, Line Select, stuck bit detect (no activity on one data line).

There is a headphone socket on the front so the decoded audio can be monitored.

There are two versions the DS9000 "A" and DS9000 "B" to choose from. The "A" variant is full specification with full absolute care warranty available; the "B" variant has a reduced functionality set which comes in at a lower price than the "A". The "B" version has no quad/tiled display, no cursors, no downloads, no gamut, a 1 year warranty as standard, extendable to 2 years upon registration.

This product contains proprietary patented designs

Features and Functions

- World's first modular 3G, HD, SD &
- Composite 1U rack measuring, monitoring and generation instrument*.
- Easy access to full waveform and vector functionality: Parade (YCrCb), 2H, H, Hmag, 2V, V, Vmag, Full field line select, Bow tie, Ext - ref, HFT™ - (Hands Free Timing™) and Filtering
- V, H and Phase cursors for accurate measurement & reporting
- Data and gamut analysis, time code logging of assigned errors
- Coloured displays of waveforms, vectors, audio bar graphs and phase display
- Select audio source, bar graph type, peak hold, de-emphasis
- Split tile layout, picture display in 4:3 or 16:9
- Two input module slots
- Output monitoring to HD/SD, DVI or XVGA screens, 1024 x 768 @ 60Hz digital or analogue monitor, via a DVI-I socket.
- Audio monitoring output jack
- Operator and factory store and recall presets
- Computer remote IP control via, up/downloads data via USB

FlexiScope Module Options Available Description

- HD, SD Video and Audio input module
- SD, Composite Video and Audio input module
- HD, SD Video and Audio input module with Test Signal Generation
- HD, SD Video and Audio input module with EYE pattern included
- 3G, HD, SD Video and Audio input module
- 3G, HD, SD Video and Audio input module with EYE pattern included

Other Options:

- For those with first generation DS9000 upgrade to HD/SD DVI module output
- * Depending on installed Module see separate module datasheets for more information.

See our website for applications

www.hamlet.co.uk

TECHNICAL SPECIFICATION

INPUTS WITH HD/SD FLEXISCOPE MODULE

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.

INPUTS WITH SD/CST FLEXISCOPE MODULE INPUT

BNC connector. Input impedance 75 ohms. Max d.c. +/- 10V. SMPTE 259M serial digital at 800mV p/p. Auto equalised up to 350 metres of cable at 270mb/s. PAL or NTSC composite video 0.5 to 2.0V p/p.

SDI 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.

INPUTS WITH HD/SD TSG FLEXISCOPE MODULE

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

SDI 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

WAVEFORM MONITOR

Response Flat is +/- 0.5% 50Hz to 5.5MHz.

Low Pass is -3db @ 1.5MHz, -60db @ 6.75MHz.

Timebase H, 2H and Hmag (x5). V, 2V and Vmag.

Line select is any line from the frame. Parade is a 3H display of input or filter parade.

VECTOR MONITOR

Video Traditional component or composite display. Component accuracy 0.2%. Bandwidth 3.375MHz. Composite accuracy 1%. Bandwidth 1.3MHz.

AUDIO MONITOR

Audio Stereo phase display of left or right audio pair. Phase accuracy 2 deg.

Accuracy Better than 0.1db over full scale range.

Characteristics BBC, EBU, Digital, DIN, Nordic and VU.

AUDIO MONITORING OUTPUT

3.5mm stereo jack.

VIDEO MONITORING OUTPUT

HD/SD (input dependent), DVI or XVGA monitor, (1024 x 768 @ 60Hz

digital or analogue monitor, via a DVI-I socket.)

Audio output jack, USB's

ENVIRONMENT

Indoor and Out door 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.

PHYSICAL

DIMENSIONS: - 490mm x 250mm x 45mm.

WEIGHT: - 3Kg.

WARRANTY: - Upon registration - 4 years from purchase date.

By using the AbsoluteCare registration area of our web site, otherwise 1 year.

<http://www.hamlet.co.uk/support/warranty/>

ORDERING INFORMATION

DS9000 DIGISCOPE

At least one module is required, there are six modules to choose from:

* Features available as options (see options list below)

OPTIONS	FlexiScope Option Modules
DS-HD/SD	HD and SD input module
DS-SD/CST	SD and Composite input module
DS-WFM/GEN	HD and SD input module with video and audio test signal generator included
DS-HD/SD+EYE	HD and SD input with EYE display for front line maintenance.
DS-3G/HD/SD	3G, HD and SD input module
DS-3G/HD/SD+EYE	3G, HD and SD input module with EYE pattern display for front line maintenance
DS-HD/DVI	HD, SD and DVI /XVGA output for First Gen DS9000's

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Hamlet products are Manufactured to ISO9001.2000 and ISO14001 specification.

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10/04/2012

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