

# Hamlet® DigiScope™

## DS9000 HD/SD or SD/CST

**MEASUREMENT AND MONITORING OF ALL HD, SD AND COMPOSITE SIGNALS. EMBEDDED, AES/EBU AUDIO AND EXTERNAL REFERENCE INCLUDED. A MODULAR APPROACH USING PATENTED “ALL DIGITAL” PROCESSING.**

### Features and Functions



**Measurement and monitoring of all HD, SD and Composite signals. Embedded, AES audio External reference included. Uses Patented “all digital” processing.**

The DigiScope DS9000 is a 1U rack mountable, low power device with 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 multi-format measurement is required. The DS9000 is a modular instrument so it is easy for the user to upgrade at any time.

The DS9000 unit is capable of HD SDI, SD SDI and composite video signals and audio in its embedded, or AES/EBU formats. For analysis, measurement and monitoring. There is a headphone socket on the front so the decoded audio can be monitored.

*This product contains proprietary patented designs.*

#### Rack Unit

- Worlds first modular HD/SD SDI /composite 1U rack measuring 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
- Three input module slots
- Output to DVI or XVGA monitor, 1024 x 768 @ 60Hz digital or analogue monitor, via a DVI-I socket.
- Audio output jack
- Operator and factory store and recall presets
- Patented proprietary 10 bit processing of all signals
- Computer remote IP control via, up/downloads data via USB/RJ45
- 12 VDC powered, mains adapter included

#### Module Options:

##### HD/SD\*

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

##### SD/Composite\*

- Input BNC.
- Loop Out BNC.
- Ext Ref. / AES input BNC.
- Audio decode.

##### Other Options\*:

- RJ45

## TECHNICAL SPECIFICATION

### INPUTS WITH SDI-CST 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 MODULE

#### SD/HD 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.

#### SD/HD 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.

### 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.

### OUTPUTS

Output to DVI or XVGA monitor, (1024 x 768 @ 60Hz digital or  
analogue monitor, via a DVI-I socket. ) Audio output jack, USB's  
and RJ45

Specifications and features herein are subject to change without prior notice. Hamlet Video International Limited products are covered by a number of Applied or  
Granted UK, North American and World Patents. Prior art is claimed in All Territories on features and functions incorporated in the product designs herein.  
Hamlet is a registered Trademark of Hamlet Video International Limited. Flexiscope, Whichwire and Videoscope are registered Trademarks of Hamlet Video  
International Limited. Monitor Scope, Digi Scope, Adept, LCD Scope, Protean, Digi Gen, VidScope, GenPen, Micro Scope, Pico Scope, PC Scope, Chameleon,  
Digital Window, Programme Level Meter and Stereo Scope are Trade Marks of Hamlet Video International Limited.

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

Copyright © 2008 Hamlet Video International  
01/08

### AUDIO MONITOR

Accuracy Better than 0.1db over full scale range.  
Characteristics BBC, EBU, Digital, DIN, Nordic and VU.

### AUDIO MONITORING OUTPUT

3.5mm stereo jack.

### 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: - 1 Year.**

Extendable free on registration: - To 2 Years

### AVAILABLE MODULES\*

High Definition/Standard Definition Serial Digital input module (all  
current standards using one BNC) with embedded audio decoder.  
HD/SD SDI loop out BNC and Ext reference in BNC. {MF- HD/SD}.

Standard Definition SDI and Analog composite module, with  
embedded audio decoder. {MF – SD/CST}.

### ORDERING INFORMATION

#### DS9000 DIGISCOPE

For operational areas where engineering features are required. On  
screen SDI analyser, waveform, vectorscope

**At least one input module required**

**\* Features available as options (see options list below)**

#### OPTIONS

DS – chassis	DigiScope DS9000 chassis
DS – HD/SD	HD and SD SDI input module
DS - SD/CST	SD SDI and Composite input module