

Multiformat Hand Held, Waveform, Vector and Audio Monitor and Generator*



Hamlet re-establishes the base line for portable T&M equipment with the MicroFlex Mach 2. Mach numbers depend on the composition of the surrounding medium, especially pressure. The pressure on end users budgets is well known to Hamlet so they have re-invented the award winning MicroFlex with a new build, reducing cost and offering combination option module sets and a carry case all included. The MicroFlex Mach2 is the latest addition to the world's smallest multi-format multi-standard handheld

waveform, vector, audio, and picture monitor range. With custom designed processing and gate arrays and the added advantage of a lower cost with the same small size and accuracy makes the Mach2 the ideal choice. The built-in 3.5 diagonal high quality VGA (640 x 480) TFT display shows the picture in 4:3 or 16:9 format. It shows conventional waveform, vector and audio displays together with data analysis. Easy to plug-in option modules allow operation in all current formats; enable future standards to be accommodated and allowing easy upgrade for the user at any time. A carry case is now included, as is the module option pouch.

The MicroFlex Mach2 unit is capable of analysis, measurement and monitoring 3G, HD, SD and composite video signals and audio in its embedded or AES/EBU formats and can generate HD and SD SDI video and audio signals dependant on the module installed.

Waveform, Vector, EYE pattern, Audio and Picture can be monitored and measured.

There is a headphone socket and a speaker on the base so the decoded audio can be monitored. Computer downloads and data uploads are via USB.

Using the WFM/GEN module, video and audio generation is available simultaneously with the monitoring and measurement allowing a closed loop testing environment to be set up with the device/system under test. With an ergonomically designed machined aluminium case, it has an operating time of over 2 hours on 6 x AA batteries or from the supplied 12V power adaptor.

Patented proprietary 10 bit processing of all signals

This product contains proprietary patented designs.

US 6,493,024B1 GB2329294

Features and Functions

Hand Held Unit

- NEW baseline for portable T&M
- Fast operation, high return on investment.
- World's smallest hand held HD SDI, SD SDI & composite capable measuring and monitoring and generation instrument*
- Data and gamut analysis, time code logging of assigned errors
- Easy access to full functionality: Parade (YCrCb), 2H, H, Hmag, 2V, V, Vmag, Full field line select, Bow tie, Ext - ref, HFT™ - (Hands Free Timing™), Filtering
- Coloured displays of waveforms, vectors audio bar graphs and phase display
- Select audio source, bar graph type, peak hold, de-emphasis
- Picture display in 4:3 or 16:9
- Built-in monitoring speaker, output jack
- Operator and factory store and recall presets
- Patented proprietary 10 bit processing of all signals
- Computer remote control, up/downloads data via the USB port.
- Internal battery or 12 VDC powered, mains adapter included

Microflex Mach2 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

See our website for applications

www.hamlet.co.uk

TECHNICAL SPECIFICATION

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 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/D 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.

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

Built-in 3.5" diagonal high quality VGA (640 x 480) TFT display 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.

OUTPUTS

Audio output jack and USB

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

PHYSICAL

DIMENSIONS: - h 165mm x w 95mm x d 36mm.

WEIGHT: - 650g

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

MicroFlex Mach2

Multiformat hand held, waveform, vector and audio Monitor.

Now includes carrycase

At least one input module required

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

OPTIONS Microflex Mach2 Option Modules

OPTIONS	Microflex Option Modules
Mach2-HD/SD	HD and SD input module
Mach2-CST/SD	SD and Composite input module
Mach2-HD/SD+TSG	HD and SD input module with video and audio test signal generator included
Mach2-HD/SD+EYE	HD and SD input with EYE display for front line maintenance.
Mach2-3G/HD/SD	3G, HD and SD input module
Mach2-3G/HD/SD+EYE	3G, HD and SD input module with EYE pattern display for front line maintenance

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

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