

Line Scope Option

Waveform monitor & vector scope over IP

The Line Scope over IP is a firmware option for the Densité Series DEC-1003 and DEC-1023 Composite to SDI Decoder, the ENC-1103 SDI to Composite Encoder, the FRS-1103 SDI Frame Synchronizer, as well as the VCP-1021 Composite Control Probe and the SCP-1121 Digital Video Control Probe. The Line Scope option allows these cards to stream video measurement data for a single line of video in real time to multiple iControl client PCs over a standard TCP-IP network.

The Line Scope display allows precise analysis of 525 and 625 digital video signals using the same Composite or Component waveform displays found on conventional scopes. This unique solution includes functionality similar to those of conventional scopes as well as many other functions

at a fraction of the cost. Unlike other "remote" scope solutions, the Line Scope over IP does not transmit snapshots of waveform displays, instead it streams measurement data in real time.

The Line Scope over IP option simplifies video monitoring by allowing operators and maintenance personnel to perform analysis of the video signals over IP, rather than having to access the actual video signal. The integration of this feature directly within processing cards means that operators can see waveform displays as they are adjusting levels on the card. Control and monitoring of signal levels can be done either in the same building (LAN) or across the country (WAN).

KEY FEATURES AND BENEFITS

- > Accurate remote measurement at low cost
- > Low bit rate allowing use of several Line Scopes simultaneously using minimum bandwidth
- > Integrated solution: embedded in the processing or monitoring card
- > User configurable color, intensity, trace & graticule
- > Real time operation
- > Multi-standard: 525 and 625 lines
- > Waveform displayed on iControl

Typical applications (all over IP)

- > Control and monitoring of proc-amps
- > Remote transmitter site monitoring
- > Centralized monitoring of multiple remote facilities
- > Inexpensive quality control of server ingest & playback
- > Signal transport (cable/telco/satellite service)

The Line Scope over IP is a firmware option for many Densité Series modules, including the DEC-1003 and DEC-1023 decoders, ENC-1103 encoder, FRS-1103 frame sync, HDC-1801 and HDC-1861 downconverters, and the SCP-1121 and VCP-1021 probes. Waveform monitor and vector scopes can be displayed individually or simultaneously, and can be combined with all the other features of the Densité cards, including video thumbnails, alarms, audio level meter, CC, V-Chip, and VITC decoding.



TECHNICAL SPECIFICATIONS

COMPONENT SCOPE

GRATICULES WAVEFORM MONITOR (525)

Vertical scale: Divided from - 300 to 800 mV (525)
Divided from - 350 to 800 mV (625)

Vertical gradation: 100 mV increments

Additional marks: 700 mV (100 %), 610 mV, 350 mV (50 %), 90 mV, 0 mV

Units: mV

H. cal normal mode: 5 μ s/ div. (major div.)
1 μ s/ div. (minor div.)

H. cal mag mode: 1 μ s/ div. (major div.)
200 ns/ div. (minor div.)

VECTORSCOPE (525, 625)

Mode: 75 %, 100 % color bars

Box: 2 % of 700 mv (\pm 14 mv)

DISPLAY

On screen indication: Standard, line selection, field

Scope representation: Waveform monitor, vectorscope, W+V

Scalable picture: Scalable without picture degradation (true vector process display)

Frame rate: Up to 10 fps

WAVEFORM MONITOR CONTROL

Zoom: Normal, upper bottom

Display selector: ANC, Y, Pb, Pr

Display mode: Overlay, parade

Offset level PB/PR: 0 mV, 350 mV

Trace position: Auto centering, manual, reset

Line/field selector: 525; F1: 1-263 F2: 264-525
625; F1: 1-313 F2: 314-625

Intensity: Trace & graticule (controlled individually)

VECTOR SCOPE CONTROL

Zoom: Center, quadrant 1,2,3,4

Magnifier: 1X, 5X, manual

Trace position: Auto centering, manual, reset

Amplitude: 75 %, 100 %

Setup: Yes, No

Intensity & trace color: Definable by the user

COMPOSITE SCOPE

GRATICULES WAVEFORM MONITOR

Vertical scale: Divided from -50 to 140 IRE units (NTSC)
Divided from -350 mV to 1 volt (PAL)

Vertical gradation: 10 IRE increments

Additional marks: -40, 0, 7.5, 12, 75, 100, 140 IRE

Units: IRE and mV

H. cal normal mode: 5 μ s/ div. (major div.)
1 μ s/ div. (minor div.)

H. cal mag mode: 1 μ s/ div. (major div.)
200 ns/ div. (minor div.)

VECTORSCOPE

Mode: 75 %, 100 % color bars

Small box: \pm 2.5 (NTSC)
 \pm 2.5 IRE units (NTSC)

Small box: \pm 3 (PAL)
 \pm 5 % (PAL)

Large box: \pm 10 (NTSC)
 \pm 20 % of chrom amplitude (NTSC)

Large box: \pm 10 (PAL)
 \pm 20 % of chrom amplitude (PAL)

PHASE MEASUREMENT

Minor mark: 2 °

Major mark: 10 °

DISPLAY

On screen indication: Standard, line selection, field
Scalable picture: Scalable without picture degradation (true vector process display)
Frame rate: Up to 10 fps

WAVEFORM MONITOR CONTROL

Zoom: Normal, black, middle
White filter: Chrominance pass, low pass, flat
Trace position: Auto centering, manual, reset
Line/field selector: NTSC F1: 1-263 F2: 1-262
PAL F1: 1-313 F2: 314-625

VECTORSCOPE CONTROL

Zoom: Center, quadrant 1,2,3,4
Magnifier: 1X, 5X, manual
Trace position: Auto centering, manual, reset
Rotation: 360 ° slider, reset
Amplitude: 75 %, 100 %
Setup: Yes, no

WAVEFORM & VECTORSCOPE

Intensity & trace color: Definable by the user

COMMON SPECIFICATIONS

Selection: NTSC, 525 or PAL, 625 (auto sensing)

IP transport

Data compression: Proprietary
Bit rate transmission over IP; waveform monitor and vectorscope: 0.5 to 5 kbps (NTSC, 525)
1 to 8 kbps (PAL, 625)

Waveform monitor control

Horizontal & vertical magnifier: 1X, 5X, manual

ORDERING INFORMATION

ADC-1101-OPT-LS	Line Scope over IP option for ADC-1101 converter (see page 124)
DEC-1003-OPT-LS	Line Scope over IP option for DEC-1003 10-bit decoder (see page 118)
DEC-1023-OPT-LS	Line Scope over IP option for DEC-1023 10-bit decoder (see page 120)
ENC-1103-OPT-LS	Line Scope over IP option for ENC-1103 encoder (see page 164)
FRS-1103-OPT-LS	Line Scope over IP option for FRS-1103 frame synchronizer (see page 116)
HDC-1801-OPT-LS	Line Scope over IP option for HDC-1801 downconverter (see page 110)

HDC-1861-OPT-LS	Line Scope over IP option for HDC-1861 downconverter (see page 112)
SCP-1121-OPT-LS	Line Scope over IP option for SCP-1121 analog digital probe (see page 202)
VCP-1021-OPT-LS	Line Scope over IP option for VCP-1021 composite probe (see page 204)

Related products

iiControl Application Server,
iControl Web