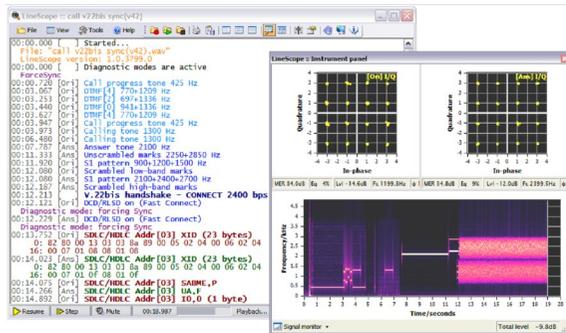


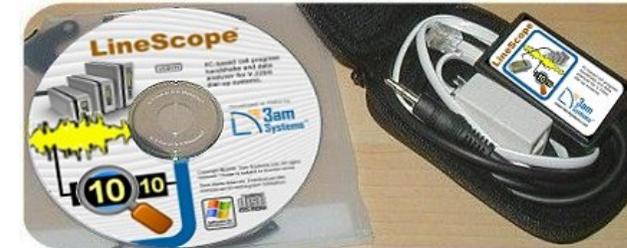
# 3am LineScope

Call progress, modem handshake and data analyzer for V.22bis dial-up systems



*"Get the insight you need, instantly."*

LineScope enables non-intrusive monitoring of synchronous and asynchronous V.22bis communications over a telephone line. It is ideal for embedded modem integrators and dial-up application developers, for troubleshooting new deployments of terminals, modems and transaction gateways. With support for Fast-Connect, SDLC/HDLC and ISO-8583 financial message decoding, LineScope takes the modem line tap approach to a whole new level, providing unique insight into physical layer issues, with tone event logging, constellation displays, eye diagrams and raw bitstream views.



- ✔ Advantages
  - Compact
  - Easy to use
  - Non-intrusive
- ✔ Instrumentation
  - Plots/readouts
- ✔ Protocol analyzer
  - V.22/V.22bis
  - Async/ sync
  - ISO-8583

*A helpful tool for many sectors...*

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>■ Payment application developers</li> <li>■ POS terminal manufacturers</li> <li>■ Dial-up modem integrators</li> <li>■ Financial institutions</li> <li>■ Certification entities</li> </ul> | <ul style="list-style-type: none"> <li>■ Gateway ASIC/FPGA/firmware test</li> <li>■ Remote control and diagnostics</li> <li>■ Embedded modem applications</li> <li>■ Intruder alarm systems</li> <li>■ Production line testing</li> </ul> |
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Please visit our website  
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*As easy as "audio in - data out"...*

- Easy and non-intrusive phone line monitoring using your notebook's soundcard.
- Responsive online support by our technical specialists.

*Troubleshoot handshakes...*

- Automatic detection of FastConnect, async/sync and V.22/V.22bis, with detailed reporting.
- Inspect tone events such as DTMF, call progress and handshake signals.
- Use special diagnostic modes to aid troubleshooting.

*Async/SDLC/HDLC trace...*

- Obtain hex dumps of link layer exchanges.
- Detect retrain and break patterns.
- View raw bitstream.

*ISO-8583 trace...*

- View annotated contents of financial messages.
- Create different configurations from starter templates.

*View constellations...*

- Visually check symbol constellation for impairments such as low SNR, gain compression and phase noise.
- Channel estimates for modulation error ratio, equalizer stress, and carrier level, frequency and jitter.

*Check tones...*

- Get accurate dB/Hz estimates for call progress and handshake tones.
- Built-in spectrum analyzer with peak finder.

*More instrumentation...*

- Channel gain, symbol timing error, carrier offset and phase error plots.
- Demodulator modulus/eye monitor.
- Equalizer coefficients.
- Spectrum analyzer, spectrogram and waveform envelope.

