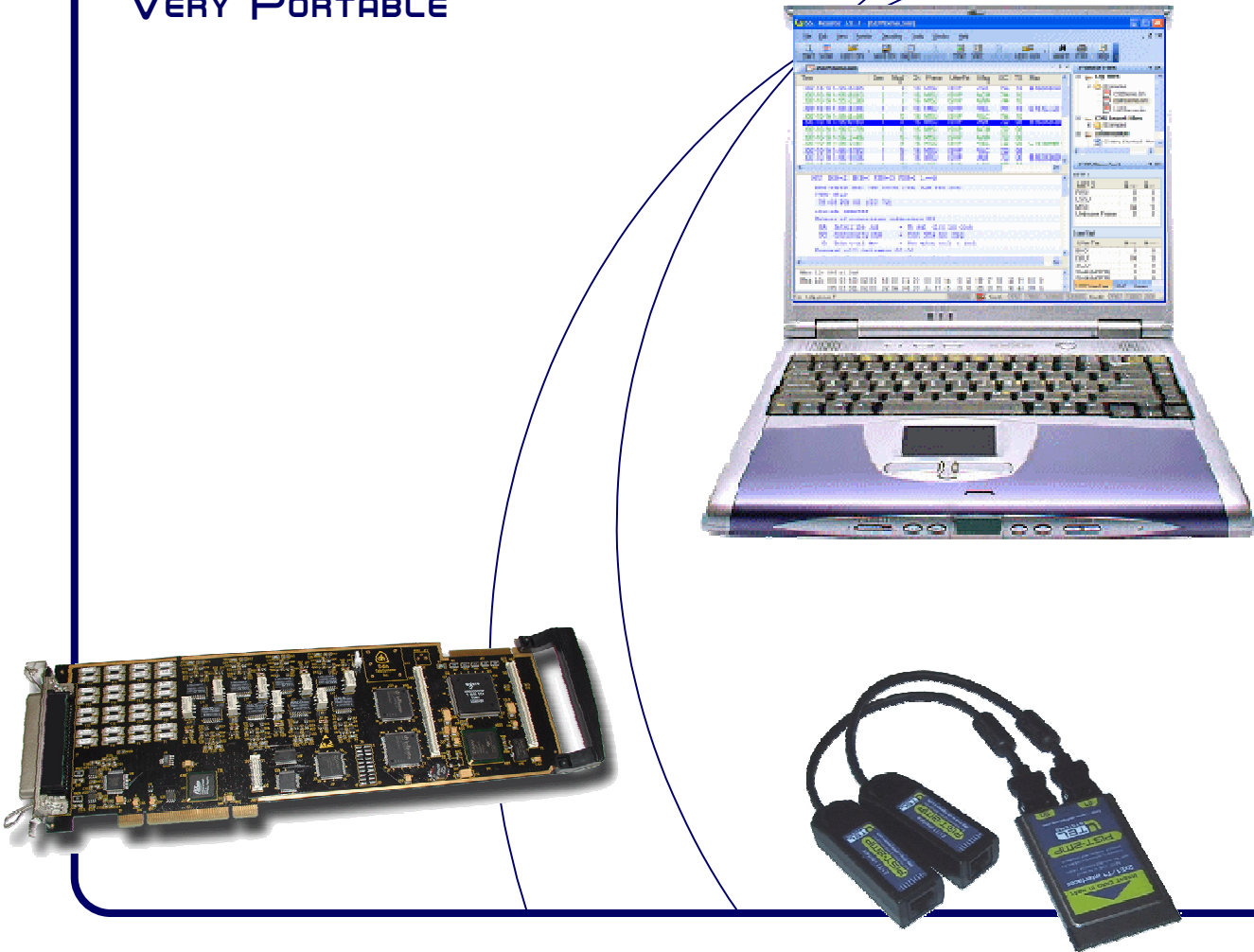


STINGA MOBILE

MONITOR

EXTREMELY COST-EFFICIENT
WORLD CLASS SUPPORT
VERY EASY TO USE
VERY PORTABLE



PROTOCOL ANALYZERS & SIMULATORS
FOR
TRADITIONAL, FIXED MOBILE, CONVERGED AND
NEXT GENERATION NETWORKS



Your customers will notice

STINGA MOBILE FEATURES & BENEFITS

STINGA MOBILE MONITOR

STINGA Mobile Monitor is a stand-alone real-time Mobile protocol analyser—a complete system of software and hardware for fixed mobile networks. For network providers this is a vital tool for error tracking and ensuring Quality of Service (QoS).

Monitoring networks with STINGA Protocol Monitors give network providers a true assessment of network signals and performance. These detailed network data are useful in terms of becoming more proactive, gain better control over own networks, and ensuring the network is delivering on its premises. The monitored data can work as a basis for network planning, analysis of customer experience, protocol analysis, and network surveillance etc.

The Call Detail Record (CDR) generator, makes it easy to create custom reports and statistics for executives. These reports give a more functional overview of network data and makes it easier to do network planning and maintenance.

It also becomes easier to resolve network problems and protocol irregularities with STINGA Mobile Monitor. And, when monitoring in real-time, issues can be resolved before anyone notice.

BENEFITS—improve your business

- ◆ Cost-efficient solutions
- ◆ Real-time monitoring, decoding, and statistics
- ◆ Easy-to-use Windows based user interface
- ◆ Improve Quality of Service in your network
- ◆ Provide important information about network behavior and performance
- ◆ Generate Call Detail Records for executives. Generate different statistical reports presenting Network Performance and Quality of Service parameters.
- ◆ Make network management and planning easier
- ◆ Resolve your network problems easily, before your customers even notice
- ◆ Direct expert support offered online by skilled telecom engineers.
- ◆ Tailored and custom solutions in just a few days
- ◆ Scalable and flexible solutions
- ◆ Training available by highly experienced and skilled protocol and signalling specialists
- ◆ Easier to track and search for protocol irregularities
- ◆ Billing and accuracy verification. Can compare reports with Billing systems

The PCMCIA and PCI cards are supporting both SS7, V5 and ISDN PRA software modules for protocol analysis and simulation.

KEY FEATURES

- ◆ Mobile protocol analysis/monitoring
- ◆ SCCP and TCAP CDR Builders
- ◆ PCMCIA, ExpressCard and PCI based solutions
- ◆ Monitoring up to eight bi-directional E1/T1/J1 interfaces
- ◆ Top-down QoS and Networks Performance analysis

OVERVIEW

Components

The cost-efficient STINGA MOBILE test instruments from Utel Systems comprises the following components:

- ◆ One or more hardware cards (PCMCIA or PCI) with E1/T1/J1 and/or Ethernet and/or ATM interface
- ◆ One or more software modules: MOBILE Monitor for protocol analysis

Highly Portable

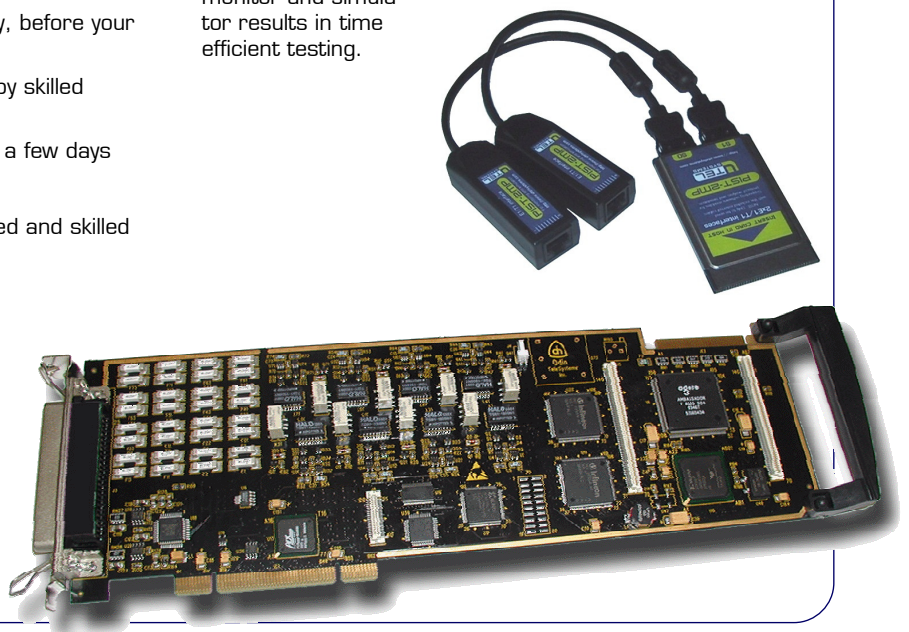
“All-in-one” concept: PCMCIA based instrument with many applications in one notebook. With these hardware and software components, highly portable protocol simulators and analyzers, desktop protocol simulators and analyzers, and rack-based monitoring probes are supported.

Cost-efficient Windows-based Test Instruments

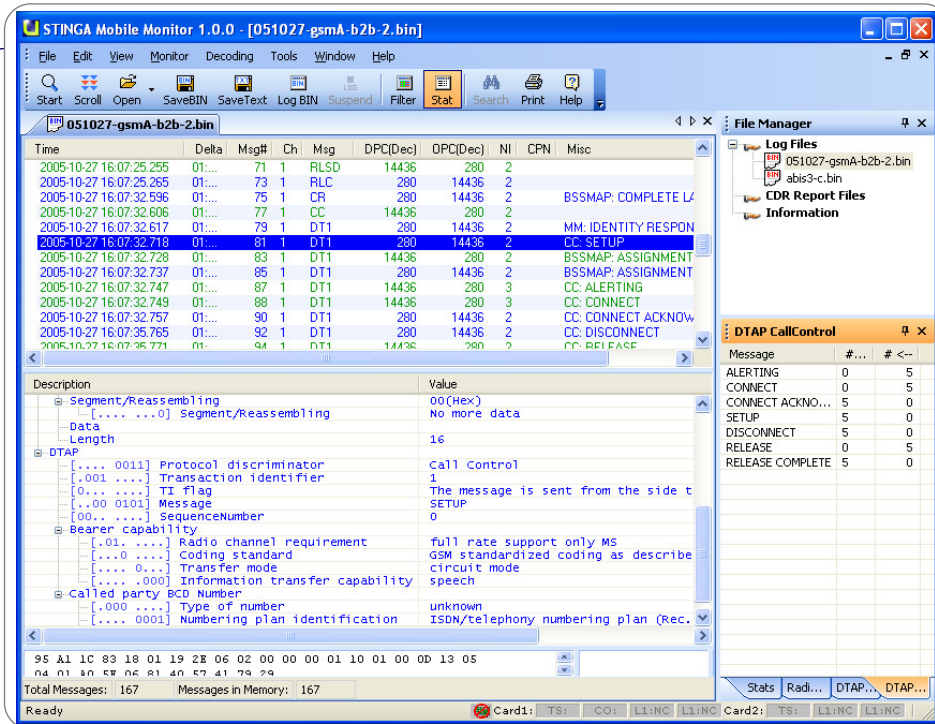
All software and hardware components are running on standard notebook and desktop PCs with Windows, providing cost efficient IT service, fast learning curve, easy and cheap access to replacement units.

Same User Interfaces for all Products Reduce Costs

All test instruments from Utel Systems are based on the same windows user interface framework. The user do not have to focus on how to use different applications, meaning full focus on different protocols and network technologies in use. Same decoding format for monitor and simulator results in time efficient testing.



STINGA MOBILE PROTOCOL MONITORING & ANALYSIS



Easy to use Windows-based user interfaces. Integration with Microsoft Word, Microsoft Excel and Adobe Acrobat Reader is supported. Log files and CDR Report files are easily accessed from the Monitor Files pane. Real-time statistics are displayed in the different statistics panes.

hex format to get it detailed decoded. This protocol information could be some messages captured by a 3rd-party analyzer that you for example have received by e-mail.

MOBILE MONITOR - PROTOCOL ANALYSIS

Real-Time Monitoring

It is possible to monitor two E1/T1/J1 interfaces with one notebook, and up to eight E1/T1/J1 interfaces with the PCI based desktop/rack solutions. Up to five timeslots can be monitored simultaneously for each line interface. More E1/T1/J1 interfaces can be monitored with the notebook solution by using a 3rd-party E1/T1/J1 concentrator.

Real-Time Decoding

Comprehensive real-time decoding of MTP, SCCP, DTAP, BSSMAP, BTSM, MM, RR, CC etc. (see last page) is provided. Customer configured one-line decoding, detailed decoding and hex information are displayed. Physical link status is displayed with indicators in the status bar and layer 1 alarms are printed in the one-line decoding window.

Filter Mechanisms

Through a user friendly dialog a comprehensive user specified filter mechanism is available.

Search

It is possible to search for information in all captured messages, and it is also possible to specify which columns in One-Line Decoding to search.

Audio Monitoring

It is possible to listen to a specific user channel. With the PCMCIA solutions, the audio is played through the PC-speakers using the built-in sound card. With the PCI solutions, an on-board codec is used to play the audio in a connected head set.

Decode Single Message

With the Decode Single Message feature, it is possible to import protocol information on

Point Code Editor

A Point Code Editor is included to let the user add descriptions to point codes. Descriptions for a large amount of international point codes are included – descriptions for national point codes must be added by the user. Both hex and ITU formats are supported.

Call Trace View

It is also possible to present captured messages in a Call Trace view to group messages related to the same connection. In this Call Trace view, CDRs (call detail records) are generated on the basis of the captured messages. These CDRs can be saved to file for later CDR Statistics Report generation, or exported to Microsoft Excel for further analysis.

Real-Time Statistics

Statistics on BTAP, BSMAP, BTSM and other messages are reported in real-time. The statistics counters are presented separately for each monitored direction. The statistics can be save to file later analysis.

Remote Control

The monitor application is constructed to be remotely controlled over a IP connection (like a dial-up connection). The graphical user interface is installed on a local PC, while the monitor "agent" is running on a remote PC connected to the tapping point through

BTSM DedicatedChannel		
Message	# -->	# <--
Channel Activation	0	8
Channel Activation Acknowledge	8	0
Deactivate SACCH	0	5
Encryption Command	0	2
Handover Detection	1	0
Measurement Result	49	0
RF Channel Release	0	7
RF Channel Release Acknowledge	7	0

STINGA MOBILE TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Hardware & Software Requirements

- ◆ Software modules running on Windows XP/Vista/7/Server 2003/2008
- ◆ PCMCIA cards with two dongles with built-in amplifiers and RJ45 connectors.
- ◆ ExpressCard/54 with two built-in amplifiers and two RJ45 connectors.
- ◆ Half or full length PCI/PCIe cards with up to eight E1/T1/J1 interfaces. A special monitoring card with sixteen receivers (no transmitters) is also available - typically used in monitoring probes for monitoring up to eight bi-directional E1/T1/J1 interfaces.
- ◆ Any Network Interface Card (NIC) providing a standard Ethernet interface.

Interfaces and Protocols Supported

- ◆ E1/T1/J1 alarm signals and link status
- ◆ MTP: ITU, ANSI, Japan TTC, Chinese ITU
- ◆ SCCP: ITU, ANSI, Japan TTC, Chinese ITU
- ◆ GSM: Abis: LAPD, BTSM, MM, CC, RR, SMS
- ◆ GSM A: BSSAP (BSSMAP, DTAP), MM, CC, RR, SMS
- ◆ GPRS Gb: Frame Relay, NS, BSSGP, LLC, SNDCCP, TOM, GMM/SM/SMS, IP and PPP
- ◆ GPRS Gn: IP, UDP, GTP
- ◆ GPRS Gs: MTP, SCCP, BSSAP
- ◆ GPRS Ge: MTP, SCCP, TCAP, CAP
- ◆ GPRS Gr/Gc/Gf: MTP, SCCP, TCAP, MAP
- ◆ Other protocols and national protocol variants are implemented on customer requests.

Options

- ◆ Impedance Converter: A small external adapter for 75 Ohm dual coax (BNC or Type 1.6/5.6) termination to 120 Ohm twisted pair RJ45 termination. No AC power or batteries required.
- ◆ T-Attenuator: A small external adapter for tapping into a twisted pair signalling link for non-intrusive monitoring. RJ45 connectors. No AC power or batteries required.
- ◆ Rack-based harmonicas with RJ45 or BNC connectors.

Related Products

- ◆ STINGA Monitoring System
- ◆ STINGA Monitoring Probe
- ◆ STINGA Report Generator
- ◆ STINGA NGN Monitor
- ◆ STINGA SS7 Monitor
- ◆ STINGA SS7 Simulator
- ◆ STINGA ISDN Monitor
- ◆ STINGA ISDN PRA Simulator
- ◆ STINGA V5 Monitor
- ◆ STINGA V5 Simulator
- ◆ STINGA IRI Analyzer

Manufacturer

Utel Systems AS
Jon Lilletuns vei 3, NO-4879 Grimstad, Norway
Main Office: Tel: +47 3704 6192 • Fax: +47 3704 6191
Internet: www.utelsystems.com
E-mail: sales@utelsystems.com

Distributor

Please contact us for information about your local distributor. A distributor overview is also available at our web site.



Your customers will notice

Specifications and descriptions in this document are subject to change without prior notification.

The Utel Systems name and logo are registered trademarks of Utel Systems.

All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.