The STINGA product family covers solutions for:

- **Network Monitoring & Analysis**
- **Protocol Simulation & Analysis**

**STINGA Protocol Analyzer** is suitable for real-time and offline protocol monitoring & analysis, Call Detail Record generation, Quality of Service and Network Performance analysis, error tracking, network surveillance, network maintenance and more.

Protocol stacks within traditional networks, next generation networks, mobile networks and converged networks are supported.

**Features**

- Monitoring multiple TDM (E1/T1/J1) interfaces and timeslots
- Monitoring ATM High Speed Links (HSL) over TDM
- Monitoring multiple electrical and optical Ethernet interfaces
- Real-time and offline monitoring, decoding and analysis
- Call Trace and Interleaved Message Trace
- Call Detail Record (CDR) generation and reporting
- CDR Search and Filtering
- CDR Correlation
- Advanced Message and Call Trace Filtering
- Message Flow Diagram
- Top-down Quality of Service and Network Performance analysis
- Voice monitoring over TDM
- DTMF Detection
- Hex Decoder
- ITU, ANSI, Japan TTC, Chinese ITU and national protocol standards supported
- Portable laptop and desktop solutions
- TDM hardware: USB and PCIe
- Ethernet hardware: Standard onboard or PCIe
## STINGA PROTOCOL ANALYZER

### Interfaces & Protocols

**Interfaces:**
- E1/T1/J1 interfaces, alarm signals and link status
- ATM HSL over TDM
- Ethernet interfaces (10/100/1000) – electrical and optical

**SS7 Networks:**
- SS7oTDM
- SS7oIP/SIGTRAN
- SS7oRUDP
- SS7oRTP

**IP, VoIP, IMS Networks:**
- IP, TCP/UDP/SCTP
- SIP, SDP, SIP-T/SIP-I, RTP, RTCP
- H.323 (H.225.0, H.245)
- Megaco/H.248, MGCP
- DIAMETER, RADIUS
- GTP’, GTP-C, GTP-U
- MLPP, eMLPP
- SMPP

**Mobile Networks:**
- GSM/EDGE/CDMA: Abis, A
- GPRS: Gb, GiMb, Ga/Gn/Gp, Gs, C/D/E/F/Gc/Gd/Gf/Gr/Lh/MM5/Vx
- UMTS: Nb, Iub, Iur, IuCS, IuPS
- LTE: X2-C, X2-U, S1-C/S1-MME, S1-U, S3, S4, S5, S6a, S10, S11, S12, S13, SGs, Gx, Gxa

**Access Networks:**
- ISDN BRI/PRI, Q.SIG, DPNSS/DASS2, V5.1/V5.2

### Software & Hardware

**Software Modules:**
- 20701: STINGA NGN Monitor
- 20551: STINGA SS7 Monitor
- 20542: STINGA Mobile Monitor
- 20527: STINGA ISDN Monitor
- 20536: STINGA V5 Monitor

**Hardware Modules:**
- 20146: PIST-8M-TDM-USB, 4xE1/T1/J1 (4xTX/RX, 4xRX/RX)
- 20127: PIST-16-TDM-PCIe, 16xE1/T1/J1

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