

COMPLIS

Multi E1 protocol Analyzer for ISDN, SS#7, V5.X and GSM interfaces



COMPLIS is a Multiport and Multiprotocol analyzer designed for the installation, maintenance and troubleshooting of telecommunication networks and equipment.

COMPLIS is a powerful tool for signaling analysis on PCM system based on the European standard E1. Its **eight timeslots** analysis facility makes **COMPLIS** a powerful and versatile tool for **ISDN, SS#7, V5 and GSM** networks maintenance.

Thanks to its integrated Ethernet interface and its **TCP/IP** compliance **COMPLIS** can be let everywhere without any PC and interrogated from a remote site.

Applications

- ✍ Installation, maintenance and troubleshooting of **ISDN** Primary Rate Access and equipment,
- ✍ Installation, maintenance and troubleshooting of **V5.1** and **V5.2** access,
- ✍ Installation, maintenance and troubleshooting of SS#7 links and equipment,
- ✍ Monitoring at the **GSM A_{bis}** interface,
- ✍ **ISDN** Call Data Records (CDR),
- ✍ **SS#7** Call Data Records (CDR),
- ✍ Billing applications.

Main Functions

- ✍ **ISDN** Multi-Protocol Analysis (ETSI E-DSS1, VN6, Q.SIG, DPNSS, DASS2, 1TR6, TN1R6),
- ✍ **SS#7** Protocol Analysis (MTP, SCCP, TUP, ISUP, TCAP, INAP),
- ✍ **V5.x** monitoring with multi timeslots facility,
- ✍ **GSM A_{bis}** monitoring,
- ✍ **Call Data Records** ,
- ✍ Mass storage on hard disk,
- ✍ **Real Time** and Off Line **Filtering**,
- ✍ Management and exporting of results,
- ✍ **Traffic Analysis** (REGLIS option),

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Test SARL au capital de 50.000 Euros

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COMPLIS a complete solution for multiple E1 analysis

COMPLIS is made of a master probe including all the measurement interfaces and a Windows™ PC software for protocol analysis. The master probe includes a 2 Gbytes hard-disk and an Ethernet card allowing so long term monitoring and remote control of the **COMPLIS** probe.



Rear panel of the COMPLIS probes with the eight line interfaces and the ethernet card for TCP/IP connection

Thanks to its modularity **COMPLIS** is able to capture and decode traffic coming from different locations of the telecommunication network. The following facilities are integrated in the **COMPLIS** offer:

☒ **ISDN Network and Equipment maintenance and troubleshooting:**

COMPLIS is able to monitor at the same time up to eight **ISDN Primary Rate Accesses (PRA)**. **COMPLIS** is then a powerful tool for public and private network installation, maintenance and troubleshooting. **COMPLIS** software offers you a full decoding of public and private protocols such as **E-DSS1 (ETSI), VN4/VN6, 1TR6, Q.SIG, DPNSS, X.25/D** ... Private protocols support makes **COMPLIS** a powerful tool for **PBX** configuration. The **Call Data Records** facility provides a clear synthesis of all communication established on the access.

☒ **SS#7 Network and Equipment maintenance and troubleshooting:**

COMPLIS is a cost-effective solution for **SS#7** maintenance. The **COMPLIS** software decodes the main **SS#7** protocols and layers (**MTP, SCCP, TUP, ISUP, TCAP, INAP, SSUTR2**). Layers filters (**FISU, LSSU**) are available and help you to focus on the relevant information. **Call Data Records** allow you to identify faulty links.

☒ **ETSI V5.1 and V5.2 Access Network maintenance:**

Thanks to its multi timeslot capability **COMPLIS** is the adequate tool for troubleshooting at the **V5** interfaces. **COMPLIS** allows you to analyze up to eight timeslots on the same PCM link. With the **COMPLIS** software you get a complete understanding of the **V5** events and layers including Control Protocol, **PSTN** and **ISDN** protocols for the **V5.1 interface** and Bearer Channel Connection Protocol, Link Control Protocol and Protection Control protocol for the **V5.2 interface**.

☒ **GSM Abis Monitoring:**

COMPLIS provides a clear understanding of protocols exchanges between the **Base Transceiver Station (BTS)** and the **Base Station Controller (BSC)** of a **GSM Network**. The **COMPLIS** PC based software decodes the Physical Layer, the data Link layer and the layer 3 Messages and Information elements used for the **BTS** management (**BTSM**) including Radio Resource Management (**RR**), Mobility Management (**MM**) and Call Management (**CM, CC, SMS and SM**).

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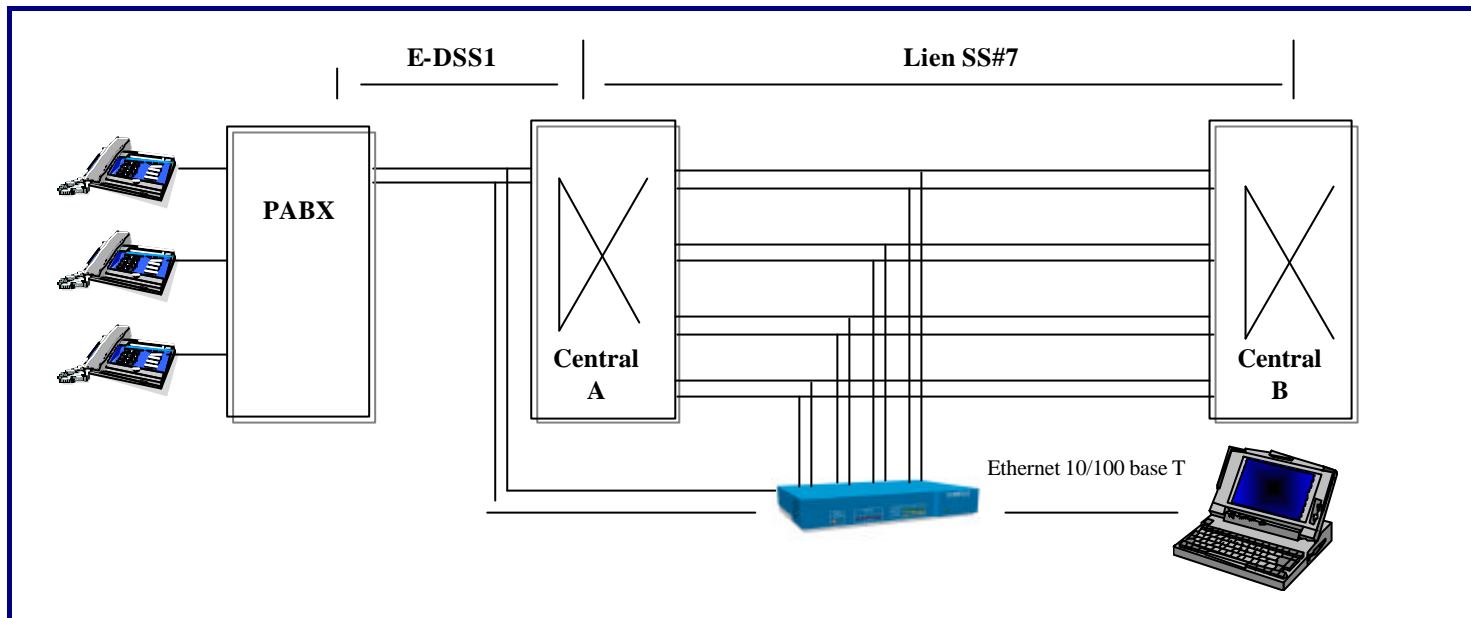
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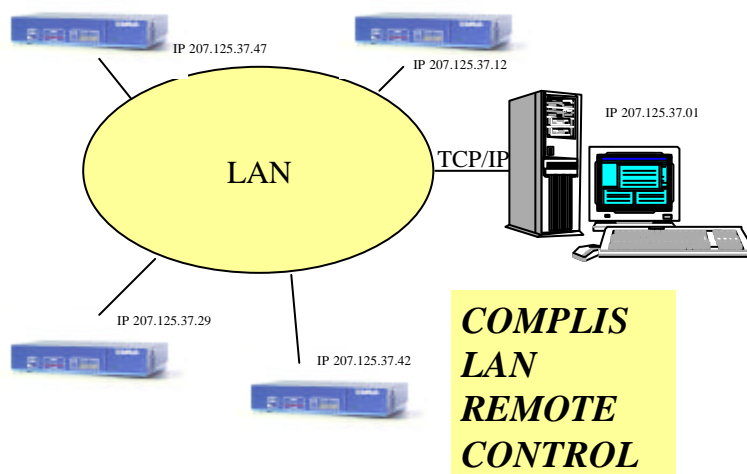
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Thanks to its multi-protocols decoding facility **COMPLIS** is the adequate tool for troubleshooting at different interfaces (e.g SS#7 and E-DSS1) allowing so switches and Private Branch Exchanges (PBX) maintenance.



COMPLIS LAN integration and Remote Control

COMPLIS is the right tool for troubleshooting everywhere in the telecommunication network. Thanks to its Ethernet card you can easily get the data from a remote site only by connecting the **COMPLIS** to the Local Area Network. Connection can also be made directly from the PC to the **COMPLIS** without connecting to the LAN.





With **COMPLIS** you benefit from a powerful Windows™ PC based application providing high level protocol analysis and probe remote control facilities **ACTW eXpert**.

- ⊗ **Real Time and Off-line** protocol analysis is available for ISDN, SS#7, V5.x and GSM protocols. **COMPLIS** software provides you a clear understanding of those protocols. Results can be easily stored and exported through standard file format,
- ⊗ **Filters and search facilities** available for all the protocols allow you to quickly focus on the relevant information (Layers filters, SAPI TEI, information, text filters),
- ⊗ **Call Data Records** provide you a synthetic overview of all the communications that happened on the access.

Technical Specifications

	COMPLIS LITE	COMPLIS
Capabilities	4 E1 timeslots Monitoring	8 E1 timeslots Monitoring
Electrical		
Connector	4 x RJ-45 & Coax	8 x RJ-45 & Coax.
Impedance	High Impedance, 75 ? BNC .	High Impedance , 75 ? BNC.
ISDN - Primary Rate Access (PRA)		
Layer 1	ITU-T Rec I.431, ETS 300 011	
Layer 2	LAP-D, ITU-T Q.921, ETS 300 125	
Layer 3	E-DSS1* (ETSI), Q.931, VN4/VN6*, 1TR6, DPNSS, TN1R6, DASS2 N-ISDN, Q.SIG* (ECMA, ISO, ETSI), X.25/D *: Including decoding of supplementary services.	
Filters	Real time and off line: Layers, frames type, TEI, SAPI, information element, addresses, Call Reference, Text Equation editor.	
SS#7 - Signaling System N°7		
MTP (Message Transfer Part)	Q.700 - Q.710	
TUP (Telephone User Part)	Q.721 - Q.725	
TUP French version	SSUTR2 1994	
ISUP (ISDN User part)	Q.761-Q.766	
TCAP (Transaction Control Part)	Q.771-Q.774	
INAP (Intelligent Network Application Part)	Q.1218, ETS 300 374-1	
Filters	Layers, FISU, LSSU, MSU, CIC, OPC, DPC, Text....	
V5.X - Access Network		
V5.1	ETS 300 324-1	
V5.2	ETS 300 347-1	
Filters	Layers, Frame type (ISDN, PSTN, BCC Protocol, Control Protocol..), Text	
GSM A_{bis}		
Standards	ETS GSM 08.56, 08.58, 04.08.	
Filters	Layers, SAPI and text filters.	
Miscellaneous		
PC interface	Ethernet for TCP/IP remote control and RS 232 for IP address setting.	
Weight	2 Kg	
Size	29 x 185 x 60	
Power supply	5 V / 5 A	

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