



SERIALTEST COMPROBE PROTOCOL ANALYZER

Features and Specifications

Copyright © 2000-2011 Frontline Test Equipment, Inc. All rights reserved. You may not reproduce, transmit, or store on magnetic media any part of this publication in any way without prior written authorization of Frontline Test Equipment, Inc. FTS, Frontline, Frontline Test System, and ComProbe are registered trademarks of Frontline Test Equipment, Inc. All other trademarks and registered trademarks are property of their respective owners.



CONTENTS

Serialtest ComProbe	1
Features	2
Protocol Decoders Included.....	2
DecoderScript.....	2
Data Capture	2
Data Displays.....	2
Search.....	3
Filters.....	3
Statistics Display.....	3
Control Signal Display	3
Data Transmission.....	3
Timestamping	4
Configuration Management.....	4
Export Features.....	4
Help	4
Specifications	5
How Serialtest ComProbe Taps the Circuit.....	6
System Requirements	6



SERIALTEST COMPROBE

Serialtest ComProbe is a PC-based analyzer for passively monitoring or actively testing **both synchronous (sync) and asynchronous (async) serial data communication** circuits and networked equipment. The product offers an economical solution for debugging, testing, and troubleshooting equipment, circuits, and software applications. Typical test applications include: utility meter reading, railroad signal and switch monitoring, PC based control, bank ATMs, lottery and gaming, and credit authorization.

Serialtest ComProbe captures and analyzes data bytes, control signals (modem leads), and data communication protocol information—all the information required to troubleshoot data errors, protocol problems, control signal problems, byte errors, and timing problems. It also transmits data bytes, strings, and files, which enables users to simulate a "live" operating environment.

Serialtest ComProbe decodes monosync, bisync, HDLC, SDLC, X.25, SNA, frame relay, PPP, SLIP, and TCP/IP protocols. The analyzer tests synchronous data circuits at speeds up to 64 Kbps, and asynchronous circuits at data rates up to 38.4 Kbps. Data is decoded at the frame, byte and bit levels, thus enabling users to rapidly detect and isolate even the most minute and intermittent communication protocol related problems associated with data communication products, applications, and networks.

Serialtest ComProbe runs on any Windows XP compatible PC. The RS-232 ComProbe adapter (included with the product) connects the host PC, via the parallel printer port, to the circuit under test. RS-422, RS-485, RS-530, V.35, and other specialized interfaces are supported through the use of optional converters.

Serialtest ComProbe includes software, a Quick Start Guide, a ComProbe RS-232 adapter, a "Y" ribbon cable, and either a 120 volt (STC2X) or 230 volt (STC2X-230) power supply.

Serialtest ComProbe is an indispensable test tool for data communication product developers, network integrators, network troubleshooters and field service technicians. The protocol analyzer enables shorter and less costly development intervals for data communication equipment and applications, faster and more efficient data network installations, and improved mean-time-to-repair following equipment and network outages.



FEATURES

Protocol Decoders Included

- Monosync, bisync, HDLC, SDLC, X.25, SNA, Frame Relay, Async PPP, PPP, SLIP, PPP, SLIP, and TCP/IP carried over PPP and/or SLIP.

DecoderScript

- Quickly create custom decodes for proprietary protocols and extensions to existing protocol decoders.
- If you don't have the resources to write a decoder yourself, contact Frontline to get an estimate for their decoder staff to write the decoder for you.

Data Capture

- Captured data includes data bytes, control signals, and error conditions.
- Capture to a File Series automatically closes and saves a capture file to disk based on size or a predefined time, and then opens a new capture file incremented by 1 and continues data capture.
- Add notes to your capture files describing the contents of the data for use with resolving problems and archiving.

Data Displays

- Data can be analyzed in real-time using the Event Display , Frame Display , Signal Display , Breakout Box , and Statistics .
- Multiple synchronized windows can be viewed simultaneously.
- Frame/Packet contents are decoded to the byte and bit level.
- Byte level information is displayed in either a split-line DTE over DCE format, or in a mixed format.
- Characters can be displayed in ASCII, EBCDIC, or Baudot.
- Nonprintable characters are displayed using hex and mnemonics.
- Supported radix's include hex, octal, decimal and binary.
- Add bookmarks to highlight important bytes and frames for easy access.



Search

- Byte Level: timestamp, control signals, errors, and patterns (patterns include wildcard characters at the bit level, nibble level, and byte level);
- Frame Level: frame decodes can be searched on the text of the decode, with or without wildcards.

Filters

- Display Filter parameters include filter-in or filter-out protocols, messages, data patterns, and an advanced mode for complex filters.
- Quick filters for the Frame Display Window include protocol filtering in and out, filtering on the Summary Pane, and filtering on messages.
- Tab filters in the Frame Display allow you to filter in frames/messages that contain specific protocols.

Statistics Display

- Provides DTE and DCE totals for characters, bytes, events, errors, characters. If there is a decoded protocol associated with your data then stats also include frames/messages, and frames/messages per second, percentage utilization and frame/message size distribution.

Control Signal Display

- Real-time breakout box includes timing diagrams and counters for control and signal leads.
- Timing diagrams enable captured control signal transitions to be viewed with respect to captured data bytes.

Data Transmission

- Data strings and files can be transmitted one time, multiple times, or continuously.
- Data transmission delays can be inserted in millisecond, second, or minute increments.
- Control signals can be set on or off.



Timestamping

- Provides both absolute and relative displays of event timing for bytes and frames/messages.
- Calculates time intervals between events and frames/messages (delta time) and effective data rate.
- Timestamp resolution to <1 microsecond.

Configuration Management

- I/O configurations, protocol stacks, and filters can be saved for future use.

Export Features

- Using the Export Utility Export Events in text or binary format.
- Export output suitable for importing into a spreadsheet, database or other post-process program for intricate analysis of the data. Templates include Excel/Access, CSV, and re-transmit.
- Frame Display Window Summary Pane Export, exports the contents of the Summary Pane into CSV format for loading into spreadsheets or other programs to do intricate statistical analysis of protocol and network information.
- C++ software program, which demonstrates the use of a simple API capable of reading a binary export file, is also included.

Help

- Comprehensive online help provides complete operating instructions.
- Quick Start Guide enables rapid product set-up and operation.



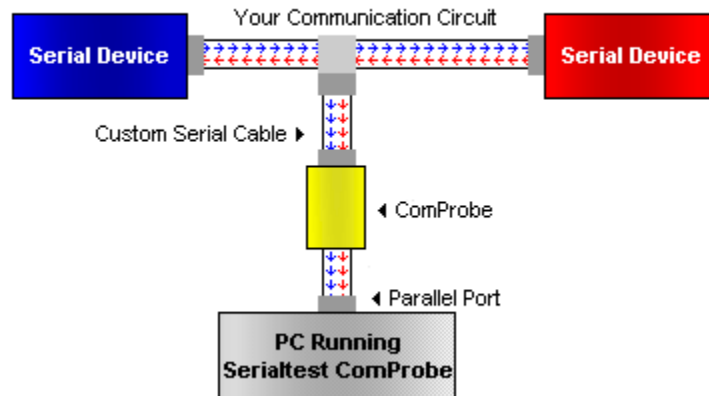
SPECIFICATIONS

Data Interfaces	RS-232/V.24 comes standard; (RS-422/449/485/530, V.35/36/10/11, and X.21 interfaces supported through optional converters).
Data Rates	Up to 38.4K bps async, 64K bps sync, including support for user-defined non-standard data rates.
Operating Modes	Monitor DTE, Monitor DCE, Monitor Both, Source DTE, and Source DCE.
Communication Modes	Asynchronous, Synchronous, Isochronous.
Bit Order	LSB (normal) or MSB (reversed) first.
Flow Control	Software (including user-defined Xon/Xoff), Hardware (RTS/CTS and DTR/DSR).
Character Sets	ASCII, 7-bit ASCII, EBCDIC, Baudot.
Parity	None, Even, Odd, Mark, Space.
Word Length	5, 6, 7, or 8 bits.
Stop Bits	1, 1.5, or 2 bits.
Timestamping	Absolute and relative timestamping; <1 microsecond resolution.
Software Options Included	Write custom decodes using DecoderScript language.
Protocols Supported	Monosync, bisync, HDLC, SDLC, X.25, SNA, Frame Relay, Async PPP, PPP, SLIP, TCP/IP (including ARP, RARP, DNS, HTTP, ICMP, IGMP, NBDS, NBNS, NBSS, SMTP, and UDP). Optional FrameDecoder add-on enables the ability to write custom decoders for proprietary protocols and extensions to existing protocol decoders.



HOW SERIALTEST COMPROBE TAPS THE CIRCUIT

Connect the ComProbe's attached cable to the parallel (printer) port of the PC containing the Serialtest ComProbe software. Connect the single-ended side of the "Y" cable to the ComProbe adapter, and connect each side of the double-ended side of the "Y" cable to the circuit to be tested.



SYSTEM REQUIREMENTS

- Pentium 1 GHz or higher.
- Windows XP (32-bit).
- RAM: 512 MB.
- Disk Space: 35 MB.
- Parallel Printer Port.
- Maximum data rate supported is dependent on PC processor speed.