

TPS for Windows is Micro SciTech's packet telemetry processing software for the Windows NT/95/XP PC platforms.

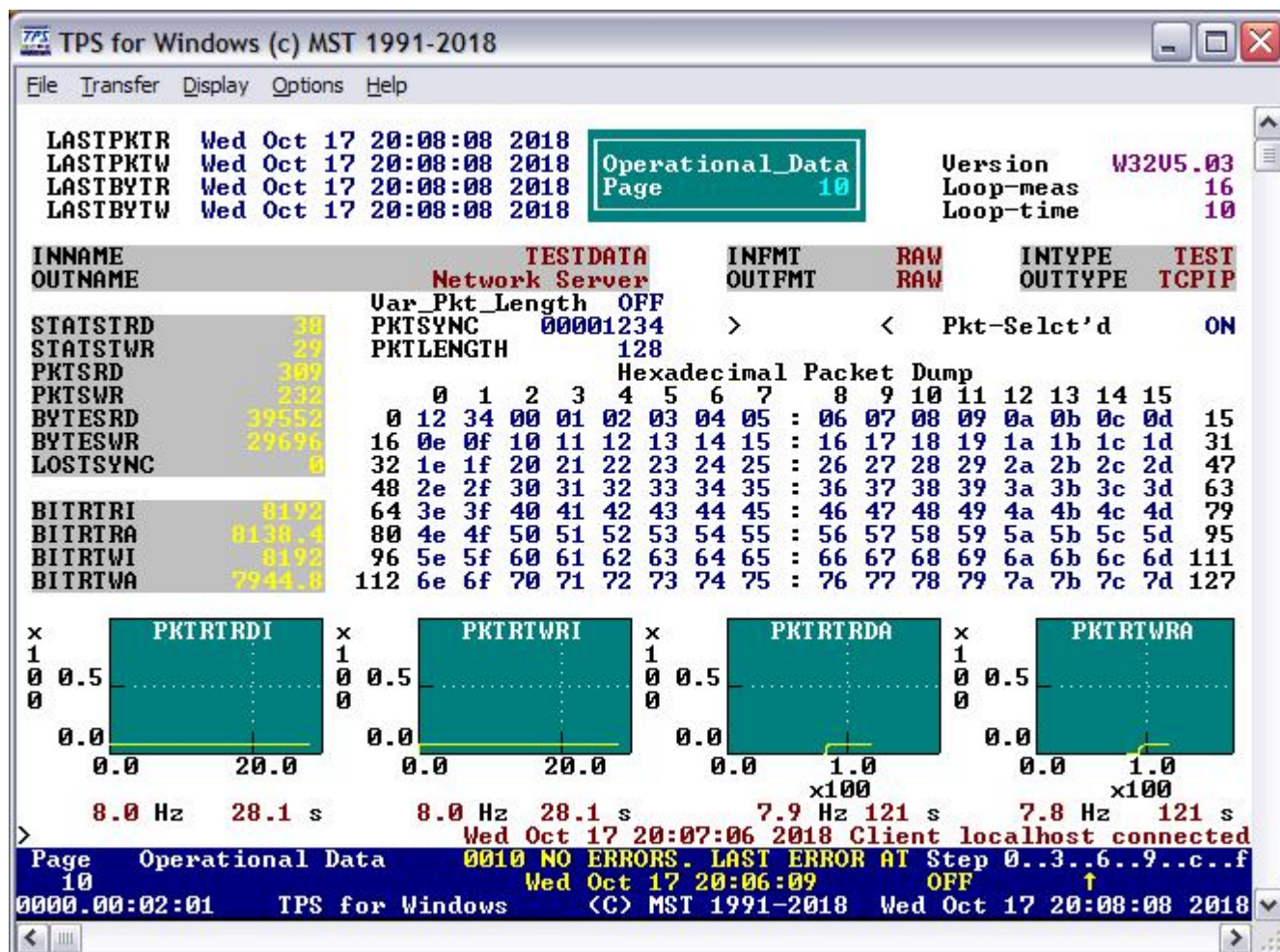
The product is now available free at the web-site www.microscitech.com.

TPS is a mission independent system which means it can be reconfigured for any new mission, i.e. new displays, telemetry data streams and protocols, without software rewrites.

Originally developed for the space payload and satellite telemetry processing market, TPS finds application in any area requiring the real-time or off-line processing of packet data such as telecommunications.

Features

- Single or multi-user networked operation
- Serial, disk or custom data I/O
- Frame synchronisation
- Data completeness checks
- Data extraction and decommutation
- Data record and playback
- Text and graphical displays
- On-line configuration
- Engineering units conversion
- Alarm limit checking
- Parameter recording
- Self-test data generation
- Application Programmers Interface
- Pre-configured displays and test data
- Post-flight analysis toolkit



Single or multi-user networked operation: TPS can run standalone or in a Windows networked environment. In a networked environment, a front-end data server running TPS provides data via an ethernet or serial network to one or more PCs also running TPS. Each PC runs TPS as a complete system allowing it to fully function on only one PC if desired and making all network nodes interchangeable.

Serial, disk or custom I/O: Data is input to TPS via the PC serial ports, a disk file or any other medium using TPS's Application Programmers Interface (API). Serial port protocols are as for the Windows environment and disk files can either be PC resident or accessible across an ethernet link connecting Windows hosted PCs. Custom I/O driver software can also be hooked into TPS via the API to provide wide support for data acquisition such as analogue I/O.

Frame synchronisation: Any data packaged into fixed blocks or frames, where each frame starts with a synchronisation bit pattern, can be processed by TPS. TPS will immediately lock-on to the first synch found and resynchronise thereafter whenever corrupt data is encountered without losing any packets.

Data completeness monitoring: Upon locking on to the frame synchronisation pattern, the incoming data is optionally monitored for checksum, frame sequence and data length errors.

Data extraction and decommutation: By specification of the byte index and an optional bit mask, TPS can extract, in real-time, any parameter from 1 bit to 8 bytes for numeric parameters and text strings of any length.

Data record and playback: All telemetry data can be recorded to disk in either raw binary, compressed or ASCII format. TPS can later replay the data at any playback speed - real-time, fast forward, slow motion or single frame step mode. Packets can also be selectively replayed dependent upon whether a parameter falls inside or outside of a user specified range.

Text and graphical displays: Parameters can be displayed numerically or graphically in real-time. Display formats available include decimal, hexadecimal, octal, binary, fixed or floating point scientific numbers and character text. Any parameter can be plotted against any other parameter and multiple plots and numeric displays can be freely mixed on a single display page. Each TPS station can display up to 1024 parameters per page with 10,000 pages per station.

On-line configuration: All TPS displays can be configured on-line or off-line. The on-line configuration supports drag and drop of all display ports. Double clicking the mouse over a display port brings up a full menu of all display options.

Engineering units conversion: All parameters can be converted to engineering units using a wide range of mathematical functions plus standard polynomial, bit-mask and byte-swap operations.

Alarm limit checking: Displayed parameters can be monitored such that if a parameter falls inside or outside of a user specified range, the user has the choice of sounding an alarm, blinking the display, pausing the data flow and logging the parameter to disk.

Parameter recording: Parameters can be recorded to disk in a tabular form, readable with a simple text editor and suitable for import into a spreadsheet for detailed analysis.

Self-test data generation: For the complete autonomous testing of a TPS system, TPS can generate its own telemetry data and transmit it to other TPS stations on the network.

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Application Programmers Interface (API): TPS has an open architecture which allows you to incorporate your own I/O interface, graphics interface, telecommand Interface and calibration functions. Thus existing telemetry software can be incorporated into TPS without having to completely scrap any older systems. With the API, TPS simply becomes a data acquisition engine around which developers can build their own custom system.

Note that the API is not available with the free TPS 2018 product. Enquire for more information: sales@microscitech.com

The key API replaceable components are:

Telemetry I/O drivers	e.g. A/D data acquisition
Command interface	e.g. for telecommand, feedback control
Graphical displays	e.g. temperature gauges, flow meters
Menu system	e.g. to enhance the operator interface
Calibration functions	e.g. empirical look-up tables

Pre-configured displays and test data: TPS comes with a standard suite of displays plus additional sample displays and data collected from a variety of projects since its original 1991 release.

Post-flight analysis toolkit: With TPS comes a suite of off-line tools for processing of recorded packet and parameter data. All the tools are aimed at reducing or converting the data either for replay using TPS or incorporation into other software such as spreadsheets. The toolkit provides such tools as packet format conversion, reduction and parameter file splicing.

TPS is now available completely free.

Go to the web-site for the free download - no personal details or registration are required:

www.microscitech.com.

For more information email:

info@microscitech.com