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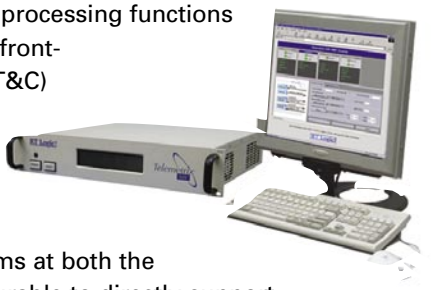
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Find the *Kratos / RT Logic RTL-T505-4E13* at our website: ***Click HERE***

TELEMETRIX 505 CONTROL CENTER FRONT-END (T505)

OVERVIEW



RT Logic's Telemetrix 505 performs front-end processing functions within satellite control centers. An intelligent front-end to the telemetry, tracking, and control (TT&C) application, the T505 provides a convenient TCP/IP-based interface to the telemetry and command signal processing equipment, as well as cryptographic equipment.

The T505 is also used in spacecraft test systems at both the factory and the launch site. The unit is configurable to directly support specialized spacecraft umbilical interfaces.

APPLICATION

Telemetry processing functions include format conversion, frame synchronization, and time-tagging. Bit synchronization and data archive/replay are also supported. Command processing functions include conversion to an uplink encryptor's ternary format, fill command generation, and command echo checking. The T505 can be configured to support TDM or CCSDS processing, including Reed-Solomon decoding, telemetry packet processing, and COP-1 telecommand processing. The T505 can also be used to generate simulated telemetry streams for loopback testing.

The T505 is designed to interface with all commonly used encryption/decryption equipment including KG61/62s (Elwell), Mykotronx units, and the KI-17. The T505 provides a common network-based means for monitoring and control of the KG equipment.

The T505 already has a proven history with most commercially available TT&C applications, and can optionally be configured and statused via its built-in browser interface.

FEATURES

- Telemetry Processing (Up to 12 Streams)
  - Data Format/Polarity Conversion
  - Decoding (Viterbi, Reed-Solomon)
  - Programmable Frame Synchronization
  - CCSDS Transfer Frame/Packet-Level Processing
  - IRIG or NTP-based Time-Tagging
  - PCM Telemetry Simulation
  - Data Archiving/Replay
  - Bit Synchronization
- Command Processing (Up to 6 Streams)
  - Data Format Conversion (Ternary, Binary, Di-Bit, Packets)
  - Time-Critical Commanding
  - Fill Command Generation
  - CCSDS Telecommand Formatting with COP-1
  - Command Echo Verification
- KG Control/Status (Elwell, MYK, KI-17, Others)
- Browser/Java GUI and Client Objects for Monitor and Control
- Full Product Documentation/Customer Support

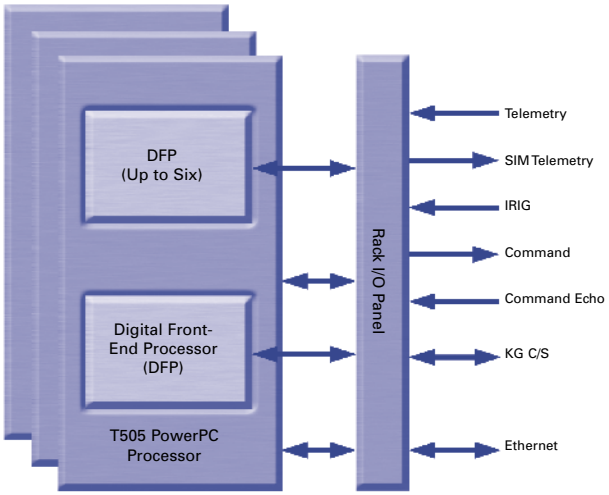
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TELEMETRIX 505

FLEXIBLE DFP MODULES

The T505 makes extensive use of RT Logic's Digital Front-End Processor (DFP) modules. With its on-board FPGAs, each DFP has nearly one million logic gates to host multiple application personalities such as frame synchronizers, command formatters, PCM simulators, and IRIG time decoders. In addition, the module has on-board memory and ASICs for Reed-Solomon encoding/decoding and the PCI bus interface.



RT Logic's Telemetrix software utilizes the reconfigurability of the DFP to tailor the T505 to meet specific control center requirements. The functional modularity of RT Logic's Telemetrix architecture allows scalability of the T505 from one to multiple telemetry, command, and KG interfaces.

STANDARD T505 CONFIGURATIONS

T505SC-100	Single Contact Telemetrix 505 system with frame synchronization, command formatting and all target and host GUI software
T505DC-100	Dual Contact Telemetrix 505 system with frame synchronization, command formatting and all target and host GUI software
T505SC-KI17	Single Contact Telemetrix 505 system with frame synchronization, command formatting, KI-17 interface software and all target and host GUI software
-CX	Optional CCSDS extensions provide telemetry packet processing and COP-1 (commanding) support
-HR	Optional high-rate extensions enable telemetry processing at data rates up to 400 Mbps

SPECIFICATIONS

- **Frame Synchronizer**
  - Data Rates — Up to 400 Mbps
  - Sync Pattern — Up to 64 bits, Mask
  - Bit Slip — (±3 Bits)
  - Programmable Sync Strategy
- **IRIG Time Decoder**
  - IRIG-A, IRIG-B, IRIG-E, IRIG-G
  - 100 nsec Resolution
  - Flywheeling During Loss of Lock
- **Command Formatter**
  - Data Rates — Up to 5 Mbps
  - Ternary — '0', '1', 'S'
  - Binary — 48-bit Di-Bit Packets
  - Selectable Internal/External Clock
- **PCM Telemetry Simulator**
  - Data Rates — Up to 400 Mbps
- **KG Control/Status**
  - KI-17, MYK, Elwell, Others
- **CCSDS Processing**
  - Reed-Solomon Decoding (10,6 and 255,223)
  - Virtual Channel Filtering
  - Telemetry Packets (AOS, Conventional)
  - Telecommands (COP-1)
- **Control/Monitoring**
  - TT&C Application Client Objects
  - Java-Based Browser
  - Front-Panel LCD
- **Dimensions**
  - 2U (3.5") High (Rack-Mount) x 16" Deep
  - 4U (7.0") High (Rack-Mount) x 22" Deep
- **Power (Typical)**
  - 120/240 VAC, 300 Watts
  - 50/60 Hz
- **Operating Environment**
  - 0 to 50° C
  - 10 to 90% Relative Humidity

RT Logic!

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