

Connect serial data streams to ethernet networks

Low-cost network appliance includes multiple applications

Front panel or remote setup and control



SOFTFEP[™]
NETWORK APPLIANCE

- **RS-422 Telemetry Receipt.** The softFEP Network Appliance receives up to five serial telemetry streams (data/clock) and performs time-tagging of the satellite's downlink data. The telemetry frames are forwarded to TCP/IP Clients over the LAN.
- **RS-422 Telemetry Transmit.** The softFEP receives time-tagged telemetry streams from TCP/IP Clients on the LAN and transmits the data serially (data/clock) on up to five channels.
- **Serial/IP Multiplexer/Demultiplexer.** This application pairs two softFEPs across a WAN. Telemetry streams are received serially (clock/data) on one softFEP. The streams are multiplexed and transmitted to another softFEP via a WAN, where they are demultiplexed and re-serialized. Time-release, rate, and latency are managed.
- **RS-422 Tx/Rx BERT.** Up to five data streams are independently generated using built-in Transmit BERTs configured for a PRN pattern. Each stream is transmitted serially (data/clock). The received serial data streams are passed to independent Receive BERTs for pattern and error checking.
- **IP Tx/Rx BERT.** Telemetry is generated using built-in Transmit BERTs configured for a PRN pattern and transmitted to TCP/IP Clients over the LAN. Telemetry is received from TCP/IP Clients over the LAN and passed to Receive BERTs for pattern and error checking.
- **Time Processing.** The softFEP Network Appliance maintains time accuracy using a combination of NTP or IRIG-B.
- **KS-252 Protocol Conversion.** Connect serial telemetry streams to the KS-252 for decryption and frame synchronization.
- **WAN Emulator.** Model your wide area network's behavior and simulate real-world data transport scenarios.
- **Front Panel Configuration.** The softFEP system supports front-panel configuration of basic network functions. IP addresses, Masks, Gateways, NTP Servers, and Syslog Servers can all be configured from the front panel using the simple LCD interface.

Network Appliance Applications

Serial Telemetry

Serial Commands

Multiplexer

Demultiplexer

KS-252 Protocols

Tx BERT

Rx BERT

WAN Emulator



The softFEP Network Appliance includes multiple applications that connect your serial data streams and Ethernet networks

Key Functions	Specifications
Telemetry Data Rates	Up to 20 Mbps per Channel
Telemetry Receipt	Up to 5 Serial Channels
Telemetry Transmit	Up to 5 Serial Channels
Multiplexer/Demultiplexer	5 Channels Bi-directional 100 Mbps Composite Rate
Tx/Rx BERT	Up to 20 Mbps PN Patterns
KS-252	Telemetry Packets
WAN Emulator	Variable Latency Dropped Packets
Time Reference	IRIG, NTP
Options	Frame Synchronizers Command Formatters Serial Command Interface
Other	Front Panel Setup/Control Remote GEMS Interface

Interfaces	Specifications
Telemetry	DB-9F RS-422
Command	DB-9F RS-422
IRIG In	BNC
IRIG Out	BNC
Ethernet (10/100/1000)	RJ-45 (2)
Optional	TTL I/O Panel

Physical/Environmental	Specifications
Dimensions	1.75" (H) x 6" (D) x 17.5" (W)
Power	120 VAC, 50/60 Hz, 5 Watts
Temperature	5-30°C Operating 0-35°C Non-Operating
Humidity	< 90% Non-Condensing