

Recorder for telemetry and command data streams

Data quality monitors perform realtime analysis of the data being recorded

Playback, export, and import recordings

Useful in factory test, launch site, and on-orbit operations



SOFTFEP™ Data Recorder

- **Record Multiple Telemetry and Command Data Streams.** The raw data streams, along with meta-data are stored to the softFEP's RAID5 disk storage. The specific input channels to be recorded is configurable. Serial RS-422 inputs and network inputs are supported.
- **Real Time Data Analysis while Recording.** The input data streams are routed to one or more domain-specific data analyzers. These data quality monitors generate status information, error logs, and statistics about the data being recorded for display.
- **RF/IF Recording.** Pairing the Data Recorder with a satTRAC Signal Converter provides for high-fidelity recording of S-Band/L-Band signals or 70 MHz signals as digitized samples. Playback of the stored recording reproduces the original signal at RF or IF.
- **Playback of the Recordings.** The Playback of a Recording is configurable, allowing all or only a subset of the channels to be replayed.
- **Simultaneous Recording and Playback Sessions.** Recording and Playback on the softFEP Data Recorder are independent and can occur simultaneously. There can be one active Recording, one active Playback, or an active Recording and an active Playback.
- **Scheduling of Recording and Playback Operations.** The softFEP provides a Scheduling function that allows the user to schedule Recording Sessions to start/stop at a prescribed future time. The same is true for being able to schedule Playback Sessions.
- **Management of the Stored Recordings.** The softFEP provides for automated management of the RAID5 storage subsystem to ensure adequate space for future recordings. The automated "clean-up" is typically configured to remove the oldest recordings first. Any recording can be "Preserved," protecting it from being auto-deleted.
- **Export/Export of Recordings.** Recordings can be exported to removable media such as DVD, CD, USB drive, or a removable disk drive, and recordings from any other softFEP Recorder can be imported to the RAID5 disk storage subsystem. This allows recordings to be archived permanently or to be moved between softFEP Recorders.



Functional	Specifications
Data Recording	Five Input Channels (Expandable) Up to 20 Mbps Each One Optional High Speed Input Up to 800 Mbps
Signal Recording	20 Msps per channel (Requires satTRAC Signal Converter)
RAID5 Storage	Up to 20 TB, Expandable to User Requirements
Data Analyzers	Dead Clock, Static Data, Frame Syncs
Error Correction	Reed-Solomon
Data Playback	Five Output Channels (Expandable) Up to 20 Mbps Each One Optional High Speed Output Up to 800 Mbps
Export	Archive to Removeable Media DVD, CD, USB, Removable Disk
Import	File Transfer Between Recorders
Other	Recordings Management Scheduling

Interfaces	Specifications
Input Channels	RS-422 Data/Clock, HD-26
High Speed Input Channel	ECL, LVDS, or N-CML Data/Clock, SMB
Output Channels	RS-422 Data/Clock, HD-26
High Speed Output Channel	ECL, LVDS, or N-CML Data/Clock, SMB
RF In	2200-2300 MHz 1600-2400 MHz (unfiltered)
IF In/Out	62-80 MHz
IRIG In	IRIG-B, SMB
IRIG Out	IRIG-B, SMB
Ethernet (10/100/1000)	RJ-45
Network Protocols	UDP, TCP/IP
Optional Interface	TTL I/O Panel
Physical/Environmental	Specifications
Dimensions	3.5" (H) x 30" (D) x 17.5" (W)
Power	120 VAC, 50/60 Hz, 500 Watts
Temperature	5-30°C Operating 0-35°C Non-Operating
Humidity	< 90% Non-Condensing