

TT&C Modem that's pure software

softFEP-9000 applications for SGLS,
USB, and TDRSS

Custom waveforms are easily
implemented on the platform

The performance of the softFEP-9000's
software algorithms, with floating point
precision, trumps FPGA implementations

The softFEP-9000 pairs our
digital up/down converters
with a commercial server



SOFTFEP-9000

TT&C MODEM

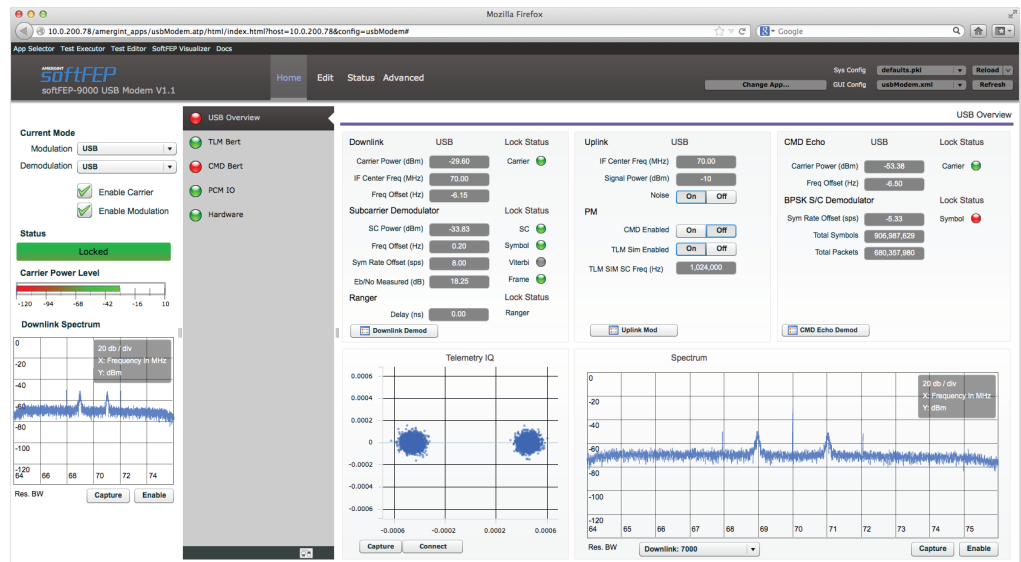
- **Narrowband TT&C Modem.** The softFEP-9000 supports the uplink and downlink signals for a satellite contact. The modem provides a telemetry receiver/demodulator, a command modulator, and a command echo receiver/demodulator. It also performs the processing for spacecraft ranging.
- **Multiple Software Applications.** The softFEP-9000 is truly a software modem - the waveform specific algorithms are implemented entirely in software. Run only the waveforms your satellite uses. Installing a new application on the server lets you add new waveforms down the road when needed with no hardware/firmware changes.
- **softFEP-9000XR.** This 1U XR chassis can be mounted at the antenna or in the equipment room. It provides the signal connections to the antenna subsystem at 70 MHz. RF interfaces are also available, which eliminates the need for external RF converters. The XR chassis performs filtering, decimation, amplification, and conversion to/from digitized samples of the receive and transmit waveforms. These samples are passed over Ethernet to/from the server.
- **TT&C Waveforms.** The waveforms commonly used for satellite TT&C are available for the softFEP-9000. We offer a SGLS application, a USB application, and a TDRSS application. Our product roadmap picks up the new SBW and SEW waveforms.
- **Integrated Automated Test.** Each softFEP-9000 is delivered with a suite of automated test scripts for ongoing verification in the field. They allow you to run BER and other performance tests. The tests can be executed in standalone internal loopback mode or by connecting external test equipment. The auto-generated test reports can be customized.
- **Monitor and Control.** The softFEP-9000 has a user-configurable GUI for standalone operations. The user interface runs in a web browser window enabling the softFEP-9000 to be controlled remotely. The customer can modify, change, and extend the user interface screens. The standard GEMS protocol is supported as well.
- **Industry-Leading Performance.** Contact us to get the softFEP-9000's detailed performance information, including BER plots showing the receiver within 0.7 dB of theory.



The softFEP-9000 has the flexibility to add new modem software applications for future requirements. Customers can also update the commercial server platform to leverage technology enhancements.

Customize what's displayed on the browser interface using our softFEP Visualizer.

The drag-and-drop editor lets you modify the delivered screens and develop new ones.



The softFEP-9000 application performs the modem's waveform processing. It's done entirely in software!

There are applications for the commonly used TT&C waveforms like SGLS and USB.