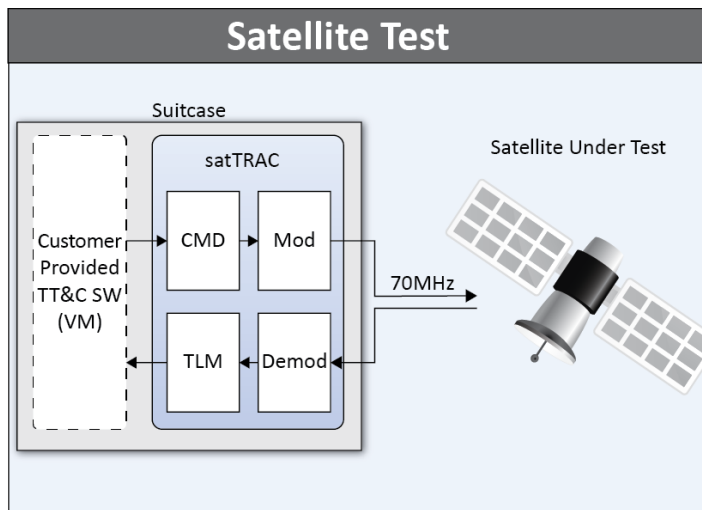
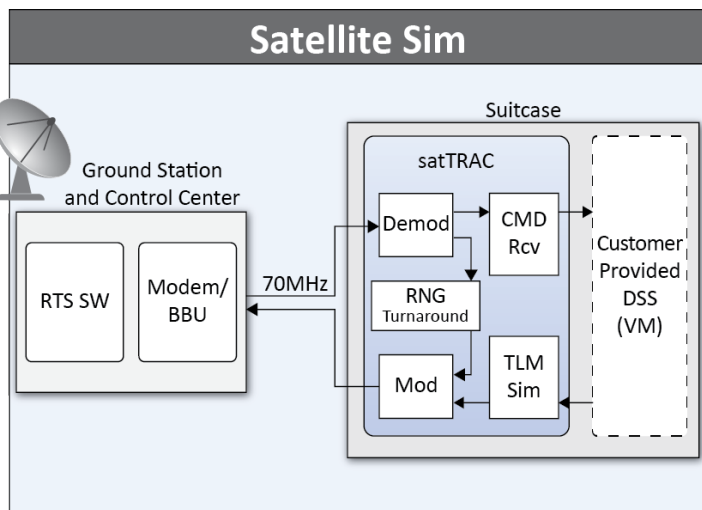


**Portable TT&C Tester for Satellite or Ground Test**

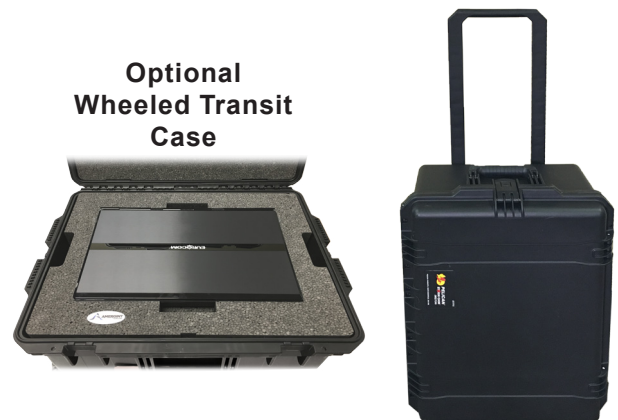
The satTRAC 70 MHz Suitcase Tester is a fully functional software modem hosted on a portable server and packaged in an optional airline checkable wheeled transit case. The Suitcase Tester consists of a satTRAC Signal Converter Chassis and a mobile server platform running Linux with built-in monitor, keyboard, and mouse. All DSP and digital processing occurs in software within the mobile server. Software applications define the functionality of the Tester, including the waveforms and coding supported.



There are two primary families of Suitcase Tester applications available. 1) The first is a fully functional modem, capable of testing vehicle transponders and ground support equipment. In this mode, the Suitcase Tester utilizes the same waveforms and digital processing in use on an operational ground asset. It is also capable of running the customer-provided TT&C software package in a Virtual Machine hosted on the same mobile server platform--providing a truly integrated vehicle test solution. 2) In the second mode, the Suitcase Tester acts as the vehicle transponder, and is useful for testing ground modems and the TT&C flight software package. In this mode, a customer-provided Dynamic Satellite Simulator (DSS) may be hosted on the mobile server platform, allowing it to provide real-world feedback to ground control actions.



**Optional Wheeled Transit Case**



## Technical Specifications

IF Output	Specification
Number of Output Channels	1 channel
Output Frequency Range	50 to 90 MHz
Tuning Step Size	< 1 $\mu$ Hz
Instantaneous Bandwidth	18 MHz (max)
Output Power Range	-40 to 3 dBm
Output Dynamic Range	80 dB
Output Power Accuracy	+/- 0.5 dB
Output Impedance (nominal)	50 Ohms
Output VSWR	1.3:1
Output Spurious	< -65 dBc with Output Power from -30 to 0 dBm
Sweep Modes	Triangle, Return to 0
Sweep Rates	10 kHz/s (max)
Sweep Limits	center-500 to center+500 kHz

Physical Information	Specification
IF Connectors	50 Ohm BNC
Weight (including optional case)	< 50 lbs
Mobile Server Dimensions	2.5 H x 16.8 W x 11.4 D (in)
satTRAC-70MHz Compact BBU Dimensions	2.0 H x 12.6 W x 11.5 D (in)
Optional Case Dimensions	24.6 L x 19.7 W x 11.7 D (in)

Environmental Information	Specification
Mobile Server Temperature (Operating)	10°C to 35°C
Mobile Server Temperature (Storage)	-20°C to 60°C
Mobile Server Relative Humidity	20% to 80% non-condensing
satTRAC-70MHz Compact BBU Temperature (Operating)	-5°C to 45°C
satTRAC-70MHz Compact BBU Temperature (Storage)	-40°C to 65°C
satTRAC-70MHz Compact BBU Relative Humidity	5% to 90% non-condensing

IF Input	Specification
Number of Input Channels	2 channels
Input Power Range	-100 to 7 dBm
Instantaneous Dynamic Range	74 dB (max)
Noise Figure	< 9.5 dB (typical) 12 dB (max)
VSWR	1.5:1
Input Impedance (nominal)	50 Ohms
AGC (31 dB range) time constant	0.001 to 1 seconds
Input Frequency Range	62 to 80 MHz
Instantaneous Bandwidth	10 MHz
Tuning Step Size	< 1 $\mu$ Hz

System Power	Specification
Mobile Server	100V/240V 50/60 Hz 660W (Max; 300W typical)
satTRAC-70MHz Compact BBU (sourced from separate supply)	12 VDC at 5 amps

Timing and Reference Signals	Specification
Frequency Reference	10 MHz
Internal Reference Accuracy	< 0.1 ppm
Time References Supported	IRIG-B, 1PPS, NTP
Time Reference Voltage Levels (for IRIG and 1PPS)	0.1 to 5 V peak-to-peak
Timing Reference Impedance	50 Ohms
Timing Reference Switching Threshold	-22 dBm
Timing Reference Max Input Level	+10 dBm

Built on AMERGINT's extensible SOFTLINK framework, the Suitcase Tester is available with a full suite of applications including many waveform, digital processing, channel simulation, and recording options. Please see satTRAC Application Datasheets for additional details.