

## Satellite Telemetry, Ranging, and Commanding

Next-Gen Software Radio on a High-Availability Server  
Connected to a High-Performance Signal Converter  
via Digital IF



## SATTRAC™ Modem/Baseband Unit

- **Economical and Trusted** - satTRAC is AMERGINT's game-changing Modem/Baseband Unit (BBU) for telemetry, ranging, and commanding. Since 2011, satTRAC's mature hardware and software framework has been successfully deployed on vital commercial, civil, and DoD satellite programs.
- **Proven Compatibility and Performance** - With demonstrated compatibility in satellite factories and on-orbit, satTRAC provides a low-risk, long-term ground station solution.
- **Full Cycle Support** - satTRAC is designed explicitly to achieve a long life-cycle and low maintenance costs. AMERGINT's team of dedicated experts provides up-front guidance on how best to leverage the innovative features of satTRAC. Later, during sustainment, AMERGINT's Technology Refresh Program™ (TRP) ensures painless and economical transitions of operating systems, server platforms, and security policies.
- **Software Performance is Better** - Leveraging high-availability servers with pure software signal processing enables floating-point accuracy and yields excellent BER performance.
- **Customer Configurable User Experience** - Get up to speed quickly with satTRAC's configurable Graphical User Interface (GUI). Hide what you don't need and emphasize the key parameters to streamline operations.
- **No Export License Required** - Recent U.S. Policy change allows AMERGINT to export satTRAC without a license.
- **Expanded Features and Tools** - The AMERGINT satTRAC Modem/BBU provides more than just a high-performance, economical alternative to the legacy generation of products. satTRAC upgrades your ground station with many built-in, cost-saving capabilities:
- **Published Open Interfaces**
- **Auto-Generated Documentation and Diagrams**
- **Full-time Spectrum Analyzer**
- **Built-in Testing with Auto-Generated Reports**
- **Optional Integrated Recorder, FEP, and Network Gateway**
- **Legacy Modem/BBU Interface Emulation**
- **Security Hardened Linux Operating System**
- **Channel Emulator**



Join the Rapidly Growing List of AMERGINT Customers Revolutionizing the Satellite Ground Station

## Software and Hardware:

AMERGINT's architecture is based on generic and interchangeable hardware. The functionality of satTRAC is defined by the software application. Many independently verified applications may be hosted on a single satTRAC Modem/BBU. With this design, you pay for, integrate, and test only what you need. Mix and match whole applications or just the parts you need for your ground station.



## Software Applications (see individual data sheets for details):

**Group1** – TLM, RNG, and CMD for FS-1300, LS-1300, GEOStar2, GEOStar3, Eurostar 2000/3000, Spacebus 2000/3000 and similar satellites

**SatSim1** – Satellite transponder simulation for FS-1300, LS-1300, GEOStar2, GEOStar3, Eurostar 2000/3000, and Spacebus 2000/3000 satellites

**Group2** – TLM, RNG, and CMD for 702, 601, A2100 and similar satellites

**SatSim2** – Satellite transponder simulation for 702, 601, and A2100 satellites

\* **SGLS** – TLM, RNG, and CMD for the Space-Ground Link System

\* **TDRSS** – TLM, RNG, and CMD for the Tracking and Data Relay Satellite System

**AFSCN** – TLM, RNG, and CMD for Air Force Satellite Control Network missions

**C2V2** – TLM and CMD for International Space Station Visiting Vehicles

**USB** – TLM, RNG and CMD for traditional STDN USB satellites

**Direct1** – TLM and CMD for direct carrier modulations

\* This application is ITAR controlled



## Hardware Platforms:

AMERGINT's software applications run on a high-availability, commercial off-the-shelf server that connects to signal converters via Digital IF over Ethernet. Digital IF separates the processing from the signal interfaces enabling more efficient ground station architectures.



### satTRAC Server

Dual-redundant, hot-swap power supplies and disk drives. Servers from Dell, HP, and other vendors are supported.

### satTRAC 70 Signal Converter

70 MHz to/from Ethernet Digital IF



### satTRAC SL Signal Converter

S/L-Band to/from Ethernet Digital IF



**satTRAC is the Game Changing Choice in Satellite Telemetry, Ranging, and Commanding**

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