



THE POWER OF SOFTLINK® AMERGINT's Software-Defined Architecture

Provides signal, data, and network processing functions—all in software

Modular, scalable software Apps

Hosted anywhere: hardware, VM, cloud, hybrid

OVERVIEW

AMERGINT solutions are built upon SOFTLINK®, our flexible and configurable software-defined architecture. SOFTLINK leverages modular, scalable software applications (called “Apps”) to rapidly tailor and continually evolve system capabilities with minimal risk and cost. Our delivered Apps—for example, our Modem App, Front End Processor App, and Recording App, to name a few—support a wide variety of domains and customers, ranging from man-rated space flight, to national programs, to commercial and smallsat operations. Robust features include an editable User Interface (GUI), self-generating documentation, and an optional full test suite (TestExec™).

SOFTLINK's power is rooted in its vetted library of mature and reusable software devices (called “SwDs”), which are combined and ordered to create highly customizable and extensible Apps. What's more, SOFTLINK's open architecture and open API empower Apps to be truly “platform and cloud agnostic,” meaning Apps can be hosted on hardware, on Virtual Machines (VMs), in any Cloud, or in a hybrid deployment.



SOFTLINK



Extensibility: Modular, scalable Apps rapidly transform and evolve system capabilities



Reliability: Apps employ a vetted library of mature (TRL-9), reusable SwDs



Testability: Automated test framework (TestExec)



Deployability: Variety of hosting options (hardware, VM, cloud)



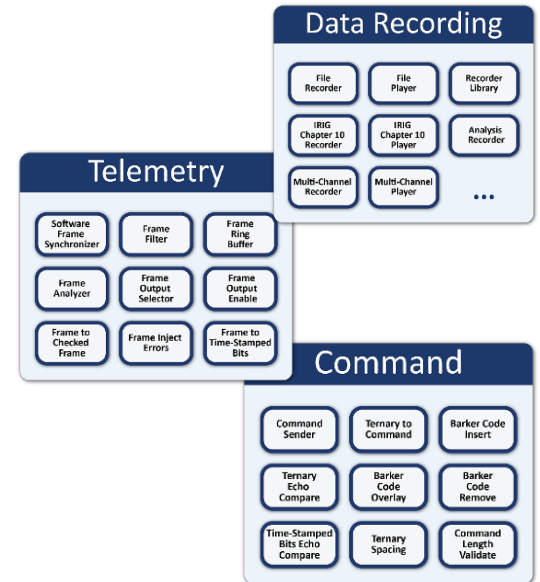
Supportability: All tools and systems use a single architecture

HOW SOFTLINK WORKS

SOFTLINK leverages modular, scalable software applications (called “Apps”) to deliver extensible solutions—solutions that can rapidly transform and evolve. At the heart of SOFTLINK Apps are **software devices** and **processing chains**.

Software devices (called “**SwDs**” and pronounced “Sweeds”) are discrete capability modules. By discrete, we mean each SwD performs a distinct, singular function specific to satellite, space, range, telemetry, and network communications. Examples include frame synchronization, commanding (binary and ternary), modulation/demodulation (by type and technique), randomization, Bit Error Rate Tests (BERTs), and many more. You pick the combination of capabilities that matches your requirements.

SwDs are combined (or linked) into **processing chains** to process, move, and transform signals/data. The processing chains, built using Python scripts or JSON definitions, define the sequence of processing from an input to an output. Processing chains are then combined into Apps to provide a solution. If needed, Apps can even be combined to create more extensive solutions.



VETTED SWD LIBRARY

SOFTLINK’s expanding SwD Library is extensive and vetted, housing more than 1,500 tested, CM-controlled, configurable, reusable SwDs. For ease of use, SwDs are organized into mini-libraries by like function. Examples include:

- » **Utility SwDs:** Data flow control SwDs provide data queues, threading, and switching. Interface converters switch data from an input data type to an output data type. Other utility SwDs include devices that handle bit level manipulation and packet handling.
- » **Network and File I/O SwDs:** Provide support for network protocols (e.g., TCP, UDP, Multicast, PGM), raw sockets, reading data from files, and writing data to files.
- » **Telemetry and Commanding SwDs:** For telemetry, provides full support for frame synchronization, time-tagging, and output of telemetry frames. For commanding, performs both binary and ternary formatting, plus echo checking.
- » **COMSEC Devices SwDs:** Implement COMSEC interface protocols and the control/status interfaces for commonly used COMSEC devices, including KS-252, KIV-7MS, and all MYK units. Provide full support for AES encryption and decryption.
- » **CCSDS and SLE SwDs:** Allow you to process or build CCSDS processing chains that conform to the standards. AMERGINT fully support AOS Transfer Frames, VCDUs, MPDUs, BPDUs, and Space Packets.

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