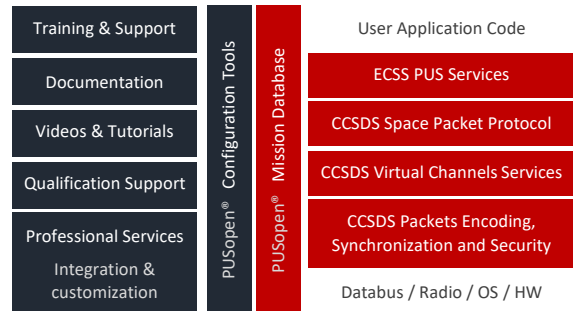


With easy deployment and efficiency of communication in mind, two well-established space communications standards ECSS PUS and CCSDS joined into PUSopen®.

PUSopen®, easy to use, software library provides full stack of communication on-board of your satellite and in Ground Stations. We'll cover you space mission from early system and software prototyping stages to in-orbit operations. Join our community at [12gfs.com](http://12gfs.com) for professional services and support.



## CORE CAPABILITIES

### Enabling Reliable and Secure Communication for Your Space Mission

**Compatibility and Security.** Make your mission compatible with major Ground Station providers via industry-recognized ECSS and CCSDS protocols and standardized PUS service. Protect your communication with AES-128 encryption.

**Early prototyping.** Every mission starts with early prototyping. Try *PUSopen® Prototyping Tools* to optimize your development cost before investing in expensive flight hardware.

**Easy deployment.** PUSopen® requires minimum effort to configure and deploy. To make sure it fits your mission, PUSopen® is compatible with a range of CPU platforms, Operating Systems, and compilers.

**Extensibility.** Although PUSopen® covers 90% of the needs for most small and nano-sat missions, the solution is extensible for control of custom payloads and functions. Extensible with custom ECSS PUS services and TT&C handling.

**Training and Support.** We go with you all the way. Whether your mission needs design review, software integration support, PUSopen®, and Space Communication training, our experienced staff will help you.

## KEY FEATURES

### Industry-recognized standards

- **ECSS PUS Services**

Convenient TT&C telemetry reporting, custom functions, data uplink, and downlink.

- **CCSDS Space Packet Protocol**

Make your mission communication compatible with major Ground Station operators.

- **CCSDS Virtual Channels**

Convenient data prioritization is vital for efficient communication schemes.

- **CCSDS TM/TC Synchronization and Encoding**

Efficient packet recognition in a byte stream.

- **Powerful AES encryption**

Keep your data uplinks and downlinks secure.

- **Platforms**

x86, ARM, MSP430, RISC-V

- **Supported Operating Systems**

FreeRTOS, RTEMS, bare-board  
Microsoft® Windows®, Linux

\* PUSopen® solution is OS-independent.

- **Compilers**

GCC, Keil

- **APIs**

C, C++, C#, Python

Static and Dynamic binding to fit a range of software architecture.