



CCSDS CALCULATOR

Ingenicomm's CCSDS Calculator application is an easy-to-use tool for in-the-field calculation of CCSDS telemetry and telecommand data formats and rates.

Frame Layout Generation

The CCSDS Calculator application provides an easy-to-use mechanism for calculating the field positions and bit-level layouts of CCSDS telemetry and telecommand protocol units. Given a total frame size and a selection of data formats and encoding schemes, the CCSDS Calculator generates a sample frame, which can be examined to determine the position and size of specific fields.

Automatic Rate Conversion

The CCSDS Calculator allows users to seamlessly convert between over-the-wire channel rates and end user data rates by calculating the aggregate effects of protocol and encoding overhead on the available bandwidth. The application can be used to estimate the total bandwidth requirements needed to support a specific instrument data rate, or calculate the bandwidth available across all instruments for a specific aggregate channel rate.

Broad Protocol Support

The CCSDS Calculator supports a broad spectrum of CCSDS protocols, including Conventional (V1) and AOS (V2) Telemetry and Telecommand, Convolutional and Reed-Solomon encoding, and Space Packet and Bitstream services.

Graphical Output

In addition to displaying the positions of individual fields within a frame, the CCSDS calculator generates easy-to-read graphical diagrams indicating the relative positions and sizes of transfer frame elements. These diagrams can optionally be exported from the application for use in presentations and documents.

Mobile Platform Compatibility

The CCSDS Calculator application is compatible with most major iOS devices (including the iPhone, iPad, and iPod Touch) as well as Android devices.



Key Features

- Telemetry and telecommand frame generation and analysis
- Channel and user rate calculation and conversion
- Broad support for CCSDS data formats and encoding schemes
- Export of transfer frame layout diagrams



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