IMUX G2 Data Recorder/Reproducer

IMUX G2 is an industry-leading IRIG 106 Chapter 10 compliant data recorder and reproducer. The system can be configured as a rack mount or portable unit. The IMUX G2 has many unique features, including multiple input and output types, ability to record two Chapter 10 files simultaneously, and integrated bit synchronizers.

Best Source Selector/Best Data Engine (BDE)

BDE provides an innovative and revolutionary method to dynamically blend all incoming data streams into one composite data stream for output or internal data processing. Smartronix TDS provides high fidelity data by dynamically buffering all the sources arriving in the main mission control location and looking at each stream on a bit by bit basis. Our BDE then uses a bit voting algorithm to build a composite data stream from all the data streams during the entire mission. This effectively eliminates the errors from any one stream and any data loss from switching from one stream to another, providing the highest quality data output possible based on multiple data stream inputs.
Series 5000 and X-5000 Data Processors

The Series 5000 telemetry hardware platform is a fifth generation architecture leveraging more than 25 years of experience and thousands of mission-critical telemetry systems delivered worldwide. Based on a Commercial-off-the-Shelf (COTS) open architecture, the Series 5000 delivers unprecedented speed, configurability, and precision.

Series X-5000 is a small dual stream data processor that can be rack mounted (1U) or portable (1.75” x 12” x 7”). The X-5000 has its own embedded processor and Real Time Operating System (RTOS), which provides Ethernet communication for setup and data transfer to a host PC. Multiple X-5000 systems can be synchronized together with an external 10 MHz clock and Ethernet hub to provide more PCM streams to the host computer for processing and display.

OMEGA NExT Real Time Data Processing Software

OMEGA NExT provides EU conversion, data distribution, real-time display, and Chapter 10 compliant data archiving as one of the most powerful and easy-to-use telemetry data processing software applications ever produced. Developed during the past few years with the latest software development tools, OMEGA NExT provides unparalleled software stability and performance.

OMEGA Data Environment (ODE)

ODE is a post test data mining software tool that leverages search engine technology to allow the user to visualize large data sets quickly, search all data published to ODE, display heterogeneous types of data on one screen, provide restricted access to data, export time slices or whole data sets to other formats, and attach descriptive metadata to data sets.

RF Receiver Bricks

A high performance single (or dual) band telemetry receiver is designed for portable ground-based, shipboard, and airborne operations. Combined with the PCM Data Brick and the powerful OMEGA Real-time Telemetry Processing software, the PCM Receiver Brick offers Instrumentation and Telemetry Engineers an ideal solution for portable real-time telemetry data applications.

PCM Data Brick Portable Data Processor

The PCM Data Brick is a small USB-based portable telemetry data processor with an integrated bit synchronizer and IRIG A, B, and G time inputs. The PCM Data Brick provides data processing (up to 50 Mbps per stream) and multiple bricks can be used in conjunction with one host computer. The PCM Data Brick works with new OMEGA NExT software and the previous OMEGA SERV software.

A2 Airborne Flight Data Recorder

The A2 Airborne Recorder/Concentrator is a compact and rugged IRIG-106 Chapter 10 compliant device that can measure and record both synchronous and asynchronous data types. Record, save, and transmit physical data as Chapter 4 PCM and save all collected data on solid-state media. The A2 is scalable and distributable to fit any airborne application. Compatible with our powerful Omega NExT software, data can be collected, decommutated, and visualized in real-time.