Smartronix’ Telemetry and Data Systems (TDS) Division provides world-class aerospace system solutions for telemetry receiving, processing, recording, archiving, and data mining for Government and industry clients on six continents. TDS developed the first PC-based telemetry data processor more than 25 years ago. Since then, the TDS offering has grown to include the most feature-rich ground-based data processing and recording systems in the world for use in all data processing applications. Our current capabilities and products include:

**OMEGA NExT Real Time Data Processing Software**

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

**IMUX G2 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.

**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.
Telemetry & Data Systems

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.

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.

RF Receivers and Combiners

RF Receivers and Combiners come in four different form factors: rack mount, PCI card, X-5000/Series 5000 daughter card, and RF Receiver Brick (USB Device). All are capable of L, S, and C Band operation and all provide popular demodulation techniques (including SOQPSK).

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.

Bit Synchronizers

TDS has produced state-of-the-art bit synchronizers for more than 25 years. The DBS-400 is a rack mount PCM bit synchronizer that can provide 1 to 4 channels of I/O at up to 60 Mbps per channel. This stand-alone bit synchronizer is multi-featured and digitally controlled; and provides state-of-the-art BER performance. The DBS-400 excels in harsh noise conditions with a signal-to-noise ratio level superior to other units in its class and represents a breakthrough in high-speed digital bit synchronizers. Its patented loop width and tracking features enable the DBS-400 to attain the performance levels of bit synchronizers costing two or three times as much.

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.

About Smartronix

Smartronix, Inc. is a U.S. based, highly reputable IT and engineering solutions provider specializing in Cloud Computing, Cyber Security, Health IT, NetOps, Software Development, and Mission-Focused Engineering. In today’s demanding and ever-changing technology and warfare landscapes, we continue to provide innovative, agile, and secure mission-critical solutions that transform and modernize operations and help contribute to our national security and defense. Smartronix, Mission Assured.

Smartronix, Inc.
Sales: 301-373-6033 sales@smartronix.com www.smartronix.com

For additional information, or to set up a demo or site visit, please contact a member of our TDS Team:

Sales: sales@smartronix.com 301-373-6033
Customer Service: support@smartronix.com 301-373-6055
Smartronix, Inc. 44150 Smartronix Way Hollywood, MD 20636