SPECTRA
Defense Technologies

CALCULEX
Spectra Defense Technologies

For defense programs requiring high speed, high capacity, high resolution time, field-programmable recording data, Calculex delivers mission computing for air, sea, and land environments.

AS9100D CERTIFIED

Founded in 1986, with four decades of providing innovative, cost effective and reliable data acquisition, recording, processing and routing solutions. **Three inventions have become U.S. government standards.**

Products 100% designed, manufactured and supported in the US.

Calculex industry standard products include our RAPTOR and RIPR product families.

Provides advanced technology solutions for fixed and rotary wing platforms including fighters, bombers, attack helicopters, transports, UAVs, ISR, and special mission aircraft.

Small, simple company infrastructure provides agility and affordability — **high value to the USG. Customizable solutions are available.**

Calculex has been part of Spectra Defense Technologies since February 2021.

RIPR 1400 SERIES MODELS

Recorder, Integrated Processor Router

Models 1401, 1402, 1403 | Small stackable/reconfigurable multi-channel & multi-format recorders

KEY FEATURES

Minimized SWaP
Unparalleled advantage in platforms requiring reduced size, weight, and power with maximized processing capabilities

Rugged MIL-STD Performance
Qualified for the harshest environments with assured performance through high shock, vibration and environmental hazards

Customized COTS I/O
Versatile mix of digital and analog ports with seamless integration of stackable data and video I/O modules

Rapid Deployment
Quick configuration for customized data and video capture, processing and recording

Real-time Control
Ethernet and serial control with reprogrammable routings, link speeds, and device status monitoring

FLEXIBLE CONNECTIVITY

Up to 2 channels RS422 PCM at 20 Mbps per channel, up to 4 channels 1 Gb Ethernet, up to 2 channels of Mil-Std 1553 Mux Bus

Receive, 2 channels audio, and up to 8 channels discrete I/O

Time synchronization from IEEE-1588, IRIG B AM or DC, 1553, or with optional GPS Receive

Data output features include 2 channels PCM output formatted with Chapter 7 TM Downlink or Ethernet Over Serial Streaming (EOSS) HDLC

EXPANDABLE DESIGN

Up to 4 Stackable Data Acquisition Modules including 8 ch Mil Std 1553, 8 ch PCM either RS 422 or Serial, 8 ch SD video, 34 ch RS-343, 16 ch ARINC 42

It can record in IRIG 106 Ch 10 format or as a NS using Network File System format

It can provide AES 256 encrypted recording using ASE-256 Self Encrypting Drives

RAPTOR SYSTEM Ultra-High Performance Data Acquisition

Next-generation flight test instrumentation and sensor recording

KEY FEATURES

Ultra-High Speed I/O
24 channels of fiber optic connectivity for real-time data acquisition at unprecedented speeds. Currently recording all channels with a mixture of 2 Gb Fiber Channel, 10 Gb Optical Ethernet, and 25 Gb Optical Ethernet, with current hardware demonstrating 100 Gb Ethernet recording.

Massive Storage Capacity
132 TB Removable Memory Module expandable to 640 TB with AES-256 encryption

Exceptional Write Performance
36 Gbps data write speed with 72 Gbps roadmapped for next generation

Industry Standard Compliance
Open IRIG 106 standard compliant for multi-vendor interoperability

Never Miss Critical Data
Captures sensor data from both fiber channel and Ethernet with full-fidelity recording

Advanced Integration
Time-synchronized data packet formatting integrates with COTS and GOTS analysis software

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Cage Code: 0D6N8
Duns Number: 18-858-7794

Certifications:

AS9100D ISO9001:2008
Boeing 'Gold' Rated Supplier