IN SYNC

MAY 2020

From the CEO

Here at GMA we continue to ensure our staff are safe in their work environment whether at home or those essential personnel safely separated at work. We know this has been a difficult time for everyone and we hope this email finds each of you doing well.

As the World looks to slowly restart itself we are here and ready to provide any technical support you may require. We have changed our GMA newsletter to provide you with more concise and timely updates on new technologies, products and information that we hope will benefit you whether working from home or office.

Until visits are once again a reality we look forward to staying in touch over the phone, emails, newsletters and webinars. Please reach out to us at any time for any assistance you may require. Please be safe and stay healthy.

In the news

Phased Array antennas are becoming popular in today's world of telemetry and data acquisition. Raven Defense has successfully demonstrated their Raven Advanced Phased-Array Telemetry Resource (RAPTR) system. This antenna is a cutting edge multi-beam airborne electronically scanned telemetry tracking system. RAPTR is scalable to meet installation envelopes on multiple aircraft and may be tailored to adjust system G/T, frequency coverage, number of targets, and system scan volume.

Exploring our principals

www.orcatechnologies.com

ORCA Technologies prides itself in providing reliable, affordable options to fulfill all time and frequency needs, including custom solutions.

ORCA Technologies' new Trestles made a splash in the time and frequency industry taking those principles and creating the most versatile and yet affordable Network Time System utilizing Smart Port technology.

Now with Fiber, SAASM and M-Code Capabilities

Phone: 949-361-0212
Email: sales@gmasales.com
www.geilmarketing.com

Upcoming Events

2020 Hill AFB Technology Expo

Virtual Event June 3rd

GPS Basics

Satellites transmit information allowing terrestrial users to receive the information and calculate their position, velocity, and time.

Precise timing receivers require at least four satellites in-view in order to calculate the solution for accurate time. There are usually more than 4 satellites in view however, 6-8 or more is common.

There are a few different GPS frequency bands. Two of the more common bands are: L1- Centered around 1575.42 MHz and L2- Centered around 1227.6 MHz.

L1 is the most common band used by civilian GPS receivers.

L2 can also be used in a limited fashion by civilian GPS receivers in conjunction with L1 to add ionospheric corrections and achieve better accuracy.

L1 and L2 also carry encrypted data that can only be used by government authorized end users.

GMA GEILMARKETING

Did you know:
Ionosphere: The layer of the Earth's atmosphere that contains a high concentration of ions and free electrons and is able to reflect radio waves. It lies above the mesosphere and extends from about 50 to 600 miles above the Earth's surface.

LUMISTAR

Lumistar has moved, effective April 18, 2020. It turns out that 2019 was a "Banner Year", their best ever. They have you to thank for this. Their old facility was getting a little too small and they were busting at the seams.

Their new facility is a far more modern building that has about 2.5x more space and should serve their needs for many years to come. Only their physical location is changing, they continue to work hard for you. Including producing the groundbreaking, smallest and most configurable telemetry receiver on the market. The LS-28 offered by Lumistar is a Dual Channel Receiver / Combiner RF to Bits TMoIP Network Telemetry Box which can be held in the palm of your hands. With many different features suited for multiple customer bases, the LS-28 continues to exceed customers' expectations.

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Telspan Data

Consider a complete data processing system from Telspan offered in their DataHUB with NetView Data Fusion & Display software.
DataHUB:

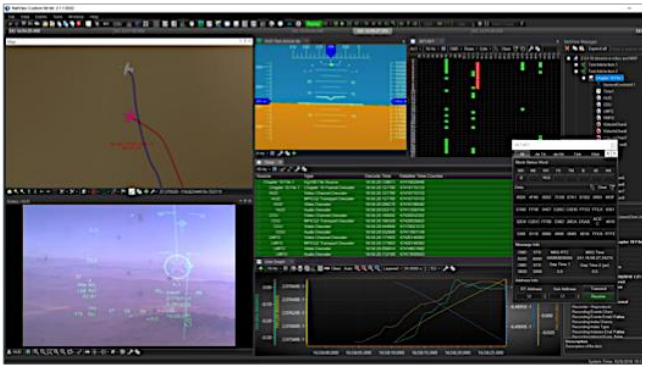
Features

- 8 PCM, 2 Analog & Video, 3 Ethernet
- CH10 Record/Reproduce/Publish/Subscribe
- SoC Logic/Linux System
- IRIG 106 CH7/HDLC Encode/Decode
- GPS, PTP, NTP, IRIG-A/B/G TCG
- Removable NVMe Hard Drives
- Web GUI & CLI Interfacing
- DQM/DQE Best Source Selection

NetView Data Fusion:

Features

- Live, Replay & Publish/Subscribe
- Record/Reproduce CH10 UDP & DataHUB Streams
- Dock/Float Displays Across Monitors
- Raw Data Displays; 1553, PCM, Ethernet, etc.
- CH10 Data Exports
- RMM/Tape/CF Archive to Files
- Full Math Engine & Derived Parameters
- Auto Setup from TMATS Setup Records
- Full TMATS Import & Export
- Complete C# .NET SDK/API



GENERAL DYNAMICS
SATCOM Technologies

General Dynamics SATCOM Technologies produces the highest quality Rugged Portable Rack-Mount Transit cases featuring:

- Durable GMT (Glass Mat Thermoplastic) composite case exterior
- Slide-out riveted aluminum CEA 310 rack.
- Eight multi-axis shock mounts
- Watertight closures
- Durable at temperatures exceeding -20° F (-29° C) to +185° F (85° C)
- Available from 3U-14U rack height

They asked us to convey the message that they are continuing operation at all locations within local, state, and national guidelines, they are committed to supporting all of their customers' requirements during the COVID-19 pandemic and want to wish you all the absolute best during these trying times.

SAASM

SAASM – Selective Availability Anti-Spoofing Module, is only available for authorized users and is slowly being replaced by M-CODE signals.
SAASM utilizes L1 and L2 encrypted signal bandwidth that resists jamming and spoofing.

M-Code

A new military code or M-Code signal improves anti-jamming and secure access beyond SAASM's capability.
Some M-code capability is available on the GPS Block II satellites however primary availability is on GPS Block III satellites. GPS Block III satellites have 2 transmit antennae. One is a whole Earth coverage beam similar to the current Block II antenna. The other one is a directional antenna that provides a "spot beam" that can be directed at a region several hundred kilometers in diameter, increasing receiving power by 20dB within that region. M-Code full activation is expected in 2022.

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