ANATECH ELECTRONICS INC

AT THE CENTER FREQUENCY

An e-Newsletter from Anatech Electronics

July 2018

What's News....

The Connected Drone Is Coming

According to research from Counterpoint, more than 10% of the world's drones will support cellular connectivity by 2022 to make drones visible to air traffic controllers. It's a great opportunity for 5G, which is designed to dramatically reduce round-trip latency. The major carriers are conducting tests, and device manufacturers are exploring it as well. AT&T, for example, is working with San Diego and Virginia and its LTE network will be used to support beyond visual line of sight drone flying where drone pilots can navigate drones in real time via an LTE.

Russia Plans Anti-Satellite Aircraft

Russia says it is developing a plane that can disable the electronics on U.S. satellites and is capable of turning off electronics on military satellites. The aircraft is supposed to have jamming systems that will allow it to conduct electronic suppression of any targets on the ground, in the air, and at sea to disable satellites that provide navigation and radio communication on the ground. This could potentially mean that either the entire satellite would be shut down, command signals from the ground would be spoofed, or a high-power beam directed to cook the electronics or degrade their performance.

Connecting "Dumb" Systems to IoT

A Word from Sam Benzacar

The Internet of Things is supposed to connect everything connectable, but achieving it is harder than it's been claimed to be. Blame the marketing departments for that, or perhaps just wishful thinking, but reality dictates that some "things" will be easier to connect than others, and some can't be retrofitted inexpensively. IoT has been around for long enough now that you'd think the electronics industry and equipment manufacturers would be all over this problem. However, until recently they haven't been, and in large measure still aren't, or so it seems after trolling the Web for solutions.

This is a significant problem considering that industrial IoT is supposed to be one of the applications where the Big Money will be in IoT in the coming years. There are millions of industrial components, some of which are extremely expensive, that have been in place and continue to work well after many years of service. When they were installed the need to evaluate their status remotely may or may not have been taken into consideration.

In the absence of a wired or wireless way to communicate operational their condition, they can fail "without notice" potentially bringing an entire system down with them. This is one of the things that IoT is supposed to solve, but unless there is a way for these legacy components to communicate, it can't happen. The answer is to retrofit such equipment with a sensor or sensors and a transceiver using one of the various short-range wireless standards, or even just a transmitter to send an alert.

Such a solution would have to be very inexpensive, so it could be deployed in large numbers by those without deep pockets, and be able to operate for years on battery power. Unfortunately, although sensors for every conceivable metric have long been widely available and transceiver SoCs are increasing in number and their cost is declining, solutions combining both the sensor, the transceiver, and usually a microcontroller are expensive, typically at least several hundred dollars.

It could be argued that the cost of implementing IoT in these challenging scenarios will be offset by the benefits it accrues from enabling preventive maintenance, increasing uptime, and generally making the host system more efficient, and other benefits depending on the application. But the up-front cost will still be high in most cases and sometimes technically prohibitive if a custom solution is required. With any luck, as IoT matures, lower-cost solutions to this problem that are generic (and thus usable with equipment from any manufacturer) will appear in greater numbers.

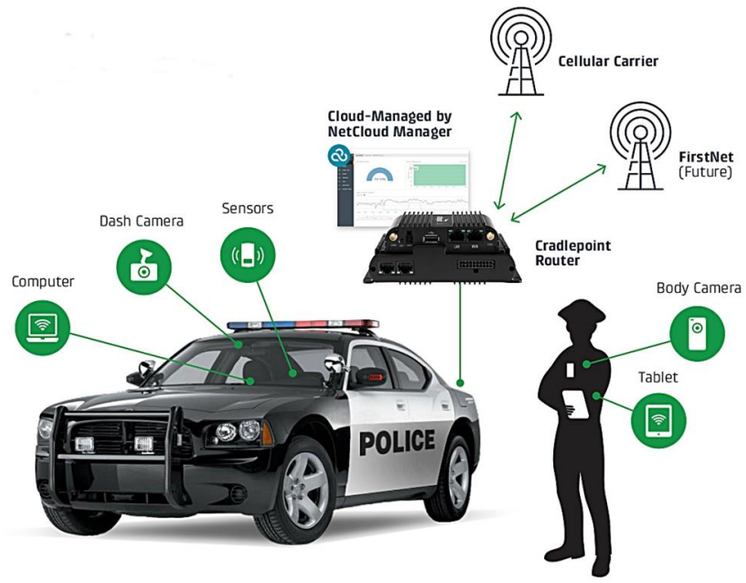
Army Brings Soldier EW Systems Home

A suite of electronic warfare capabilities developed to counter Russia in Europe will now be fielded to an Army unit in the U.S. The 1st Brigade Combat Team, 1st Infantry Division, is the first unit in the country to receive EW prototypes for creating familiarity with the systems before deployment overseas. The Army says mounted, dismounted, and command-and-control systems for electronic sensing and jamming are included. The units have been in Europe for a while and include something called the VROD that the field from an electromagnetic perspective, VMAX that provides electronic attack capability, and a command-and-control tool.

AT&T Moving Fast to Deploy FirsNet

AT&T says it will complete at least 40% of its FirstNet nationwide public-safety broadband network within a year, allowing it to make the leap to 5G via software upgrades. As FirstNet's nationwide contractor, AT&T is obligated complete initial construction of the network, including deployment of 700-MHz, Band 14 systems licensed to FirstNet covering 95% of the U.S. population by March 2022. FirstNet pays AT&T as it meets deployment

milestones. As AT&T builds the system it will deploy equipment to support Band 14 at the same time it deploys equipment to allow operation on 20 MHz of spectrum in its WCS and AWS-3 bands.



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