VadaTech Announces a new 3U VPX Time and Frequency card with Onboard GPS / IRIG

Henderson, NV – August 24, 2020 – VadaTech, a leading manufacturer of integrated systems, embedded boards, enabling software and application-ready platforms, announces the VPX337. The VPX337 provides a complete, feature-rich, GPS/PTP (1588)/IRIG/NTP bus-level timing solution to a VPX system, with exceptional flexibility. The local oscillator can be disciplined by the onboard GPS receiver, or 1PPS, or Inter-Range Instrumentation Group (IRIG) input, to cancel out any oscillator drift or aging. Precision UTC timestamps and GPS location/time/status are all made available via PCIe registers to the host CPU/application. Time trigger output and time event interrupts synchronized to GPS UTC are available under host control. GPS location/time/status data is Broadcast/Unicast out via backplane Ethernet with selectable bonding/failover behavior.

The VPX337 can demodulate IRIG Amplitude Modulated (AM) signals and receive/transmit IRIG DC Level Shift (DCLS) signals. The disciplined clock, 1PPS, divided-down clocks, IRIG DCLS, and time trigger may all be output in any combination to the dual clock options on the VPX backplane channels (P0_REF_CLK+/- and/or P0_AUX_CLK+/-). The unit also acts as a Grand-Master Clock/Clock Bridge between GPS/PTP (1588)/IRIG/NTP to provide enhanced flexibility to the system design. The board also supports Synchronous Ethernet (SyncE) to eliminate clock drift at the Ethernet PHY level.

Additionally, a back-up battery or SuperCap provides non-volatile storage of the Almanac, Ephemeris and last position data to enable rapid “warm start” re-acquisition, usually within 35 seconds. The module’s console is available via front serial or SSH via Ethernet, and locking/holdover status is available via IPMI sensors. A secondary serial port enables GPS NMEA data in/out. The module also interfaces to the backplane via multiple options such as dual GbE to Ports 14 and 15, dual PCIe x4 to Ports 0-7, or 10GbE (XAUI) to Ports 0-7.

About VadaTech

VadaTech provides innovative embedded computing solutions from board-level products, chassis-level platforms, to configurable application-ready systems. With a focus on AdvancedTCA, MicroTCA, VPX and PCIe solutions, the company offers unmatched product selection and expertise. A unique combination of electrical, mechanical, software, and system-level expertise, enables VadaTech to provide customized commercial or rugged computing solutions to meet the most complex customer requirements. VadaTech also offers specialized product solutions for VME, CompactPCI, and other architectures. A member of PICMG and VITA, VadaTech has headquarters, design and manufacturing facilities in Henderson, NV with design, support and sales offices in Europe and Asia Pacific.