

High-Performance Mobile Communication for New NI CompactRIO Module

S.E.A. Datentechnik



SEA launches 3G/4G modules directly linking into NI cRIO-9068

Troisdorf, Germany – 6 August, 2013. S.E.A. Datentechnik has launched a series of mobile communication modules that are designed specifically for the NI CompactRIO platform equipped with the new Zynq-based NI cRIO-9068 controller. The innovative SEA 9751 and SEA 9754 modules enable users developing monitoring and measurement systems based on CompactRIO to access the entire application remotely. Comprehensive data exchange and even updates of the complete LabVIEW application software can now comfortably be done from anywhere at high speed using minimal energy. Integration and configuration efforts of the module have been minimised thanks to the SEA units that link seamlessly into the NI Linux-based cRIO-9068 controller.

While the SEA 9751 module allows for high-speed data transfer with 3G technology of up to 14 Mbit/s (via HSPA+), the SEA 9754 supports even faster transfer rates based on the 4G standard. With the built-in 4G/LTE chipsets, peak data rates can reach up to 100 Mbit/s.

Both modules come with an embedded GPS receiver to provide detailed geotag

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information, as well as time stamp data accurate to microseconds, making them particularly well-suited for use in mobile applications or solutions with high-precision timing requirements. Additionally, the units provide a pulse per second (PPS) signal via the backplane or a dedicated front panel connector allowing users to achieve precision timekeeping and time measurement. The built-in backup battery enables the GPS receiver to perform a cold start to be live within a few seconds and, as a result, allows for an almost immediate GPS fix.

Compared to earlier communication modules, the new devices consume up to 25 percent less energy; this is because they integrate seamlessly into the Linux-based real-time operating system (RTOS) of the cRIO-9068 so no longer require their own on-board processor. Another benefit of this is that it makes configuration of the communication parameters and module setup much easier. No additional software for installation and configuration is required as the SEA 9751/9754 units can be configured via a web browser and integrate directly into NI Measurement & Automation Explorer (MAX).

The new SEA 9751/9754 modules not only maintain wireless connection speeds up to fifteen times faster than previous models, with 480 Mbit/s they also allow for nearly five times higher data rates for communication with the CompactRIO platform via the USB uplink port.

The modules are available with an optional mass memory to provide additional storage space of 32 GB for the logging of measurement data. Additionally, there is a spare USB port on the front available for further USB connectivity.

As part of the new offering, SEA offers a range of software drivers and API functions that can be used with NI LabVIEW 2013 development environment.

For more information, visit www.sea-gmbh.com [1].

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[1] <http://www.sea-gmbh.com>