



PRESS RELEASE

X-ES Ships VITA 67 RF Tuner System with VPX Intel® Core™ i7 Processor

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Extreme Engineering Solutions, Inc. (X-ES) ships the [XPand1202](#), a fully integrated OpenVPX-based (VITA 65) SDR development system featuring VITA 67 RF connections. The system integrates one [XPedite7470](#) 3U OpenVPX Intel® Core™ i7-based SBC, up to four DRS SI-9138 3U VPX VITA 67.1 dual-channel RF receivers, and one DRS SI-7138 3U VPX VITA 67.2 RF frequency reference module. This completely standards-based system also includes OpenVPX Ethernet and PCI Express (PCIe) switches, as well as an OpenVPX backplane with 3U VPX VITA 62-compatible power supply slots.

The XPand1202's VITA 67 RF connectors enable the SI-9138 and SI-7138 to access sensitive analog signals directly through the backplane. This simplifies module installation by removing the need to manually connect cables between payload modules after they are inserted. It also reduces system SWaP by eliminating the extra space needed for routing these cables between the front panels of the installed modules.

The SI-9138 modules utilize their state-of-the-art dynamic range and phase noise performance to analyze the system's incoming RF waveforms and digitize them using a 16-bit ADC sampling at 128 MHz. The digitized waveforms are time-tagged and formatted using VITA 49 Radio Transport (VRT) and are then transported on the backplane via a high-throughput x4 PCIe interface to the XPedite7470 SBC for processing.

The installed modules communicate with each other over an OpenVPX backplane using both PCIe and Gigabit Ethernet. PCIe is utilized for sending high bandwidth data between the SI-9138 RF receiver modules and the VITA 48 REDI XPedite7470 SBC, and it is routed through the OpenVPX [XChange3012](#) PCIe switch. Gigabit Ethernet is used for sending command and control messages between the payload modules and is routed in the backplane as a dual-star configuration from each payload module through two separate 3U VPX Ethernet switches, the XChange3012 and [XChange3011](#). The XChange3012 can provide a switched SerDes 1000BASE-X port to each payload module slot, while the XChange3011 provides a switched 1000BASE-T port to each payload module slot. Both of these networks could be accessed outside of the system through external Gigabit Ethernet ports from the switches.

[Contact X-ES](#) to start developing with your SDR application with the VITA 67 and OpenVPX-based XPand1202.

About X-ES — Extreme Engineering Solutions, Inc. (X-ES), a 100% U.S.A.-based company, designs and builds single board computers, I/O boards, power supplies, backplanes, chassis, and system-level solutions for embedded computing customers. X-ES offers cutting-edge performance and flexibility in design, plus an unparalleled level of customer support and service. For further information on X-ES products or services, please visit our website: www.xes-inc.com or call (608) 833-1155.

About DRS Technologies — DRS Technologies is a leading supplier of integrated products, services and support to military forces, intelligence agencies and prime contractors worldwide and is the 2013 recipient of the Defense Security Service Award for Excellence in Counterintelligence as well as three James S. Cogswell Awards for Outstanding Industrial Security Achievement. The company is a wholly owned subsidiary of Finmeccanica SpA (FNC.MI), which employs approximately 70,000 people worldwide.

Datasheet: <http://www.xes-inc.com/assets/products/files/XPand1202-DS.pdf>
Press Photo: www.xes-inc.com/assets/photos/content/092550_XPand1202.jpg

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