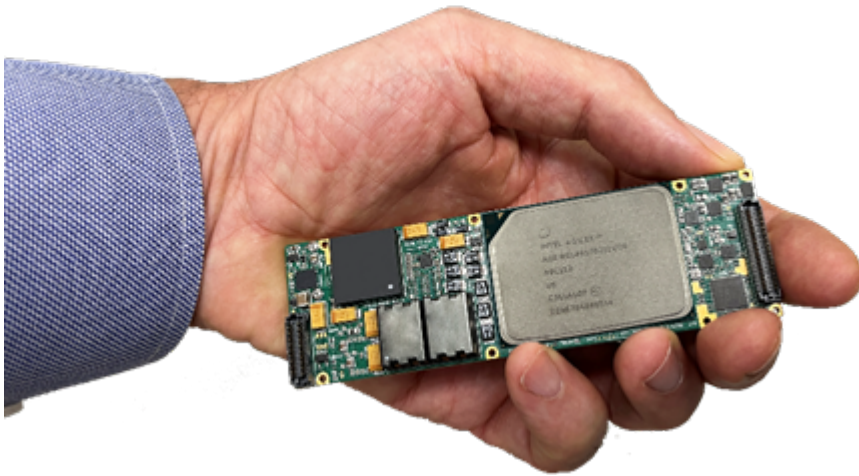


# New Direct-to-Digital COTS Boards Are Powered by 64 Gbps Agilex™ 9 SoC FPGA Direct RF-Series



Annapolis Micro Systems, a leading COTS board and systems supplier, is now offering two powerful direct-to-digital COTS products based on Altera's Agilex™ 9 SoC FPGA Direct RF-Series.

The **WILDSTAR™ SAF1 Small Form Factor Module (WSSAF1)** integrates the Agilex™ 9 AGRW014 FPGA in a palm-size unit, for edge applications close to the sensor and in other tight envelope man-portable environments. It delivers high-performance processing and four channels each of 64 Gbps A/D and D/A converting at 10-bit resolution.

The **WILDSTAR™ 3AE1 3U OpenVPX FPGA Processor (WB3AE1)** integrates the Agilex™ 9 AGRW027 FPGA in a standard 3U VPX SOSA™-aligned Plug-In Card (PIC) form factor. The AGRW027 FPGA delivers similar performance as the AGRW014 FPGA but with double the channels: 8x transmit and 8x receive.

“By supporting much higher conversion and processing rates,

these boards make it possible for customers to acquire and process adversary emissions from a wider portion of the electromagnetic spectrum, with a lower SWaP RF front end,” said Noah Donaldson, Chief Technical Officer, Annapolis Micro Systems. “Now larger swaths of the RF spectrum can be efficiently digitized, processed, and recorded at the edge.”

“Altera’s Agilex™ 9 SoC FPGAs have enabled AMS to leverage Intel’s State of the Art (SOTA) packaging technology resulting in significant SWaP reduction in a single RF FPGA for the Defense Industrial Base at an accelerated pace,” said John Sotir, Senior Director Military, Aerospace, and Government Business Unit, Altera.

WSSAF1 includes an RF Card (**WISM00**) that provides analog front-end personalization and an optional Digital Card (**WISD00**) that provides back-end personalization. In development is an NVIDIA Jetson AGX Orin™ Module Card (**WISD11**) that adds a GPU, CPU, and deep learning and vision accelerators.

WSSAF1 is in final testing and will ship to customers starting in June 2024. WB3AE1 is anticipated to ship in January 2025.

Altera® Agilex™ 9 FPGAs are breakthrough semiconductor devices that combine an FPGA, ARM, and RF transceiver in a single package. They directly digitize radio frequency signals, eliminating the analog signal down conversion stages required by legacy hardware. This results in significant size, weight, power, cost (SWaP-C) and latency reductions that can benefit demanding radar, communications, electronic warfare, SIGINT, and commercial applications.

These products join a [growing portfolio of Direct RF Solutions](#) that provide direct digitization and very high sample rates.