

## News February 2023

### Q-Tech acquisition of AXTAL

Q-Tech Corporation, a US-based leading supplier of high-reliability crystal oscillators, announces the acquisition of Axtal GmbH & Co. KG, founded by Brigitte and Bernd Neubig 20 years ago - a German manufacturer offering frequency control products with world-class ultra-low phase noise capabilities. Both companies are technology leaders with an extensive selection of frequency and timing products specifically designed for aerospace, defense, avionics, high-temperature, instrumentation and master clock applications.



The **Q-Tech** and **Axtal** product portfolios combined offer the full range of crystal oscillators: from basic clocks (**XO**) and temperature-compensated (**TCXO**), to microprocessor-controlled (**MCXO**) and oven-controlled (**OCXO**) Quartz oscillators. Both companies also offer additional technologies for complex modules and oscillators with multiple outputs and with optimized performance under vibration.

This acquisition provides satellite manufacturers with a single source of advanced crystal oscillators designed for the entire gamut of space applications from Low Earth Orbit (LEO), Medium Earth Orbit (MEO) and Geostationary Earth Orbit (GEO) to Deep Space.

Q-Tech's website has been updated to include Axtal product search capabilities. There is a Axtal drop-down list at the top as well as a search button on the home page. Please follow the link. <https://q-tech.com/>

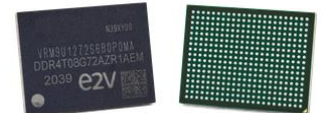


### avalanche technology continues to enhance support for idealized boot solutions for Adaptive SoCs such as Xilinx (AMD) Versal, UltraScale+ & UltraScale.

With our Gen 3 Space Grade P-SRAM™ families already becoming synonymous with SWaP-optimized space architectures, the Dual QSPI devices and supporting collateral are offering designers a cleaner method to boot complex Adaptive SoCs by leveraging robust yet flexible write protection schemes. With the advanced capabilities of Versal, UltraScale+ and UltraScale requiring larger image sizes, the Avalanche Gen3 Dual QSPI densities of up to 8Gb provide ample space to support multiple mission images, an RTOS, and still leave room for working memory, all in one device with NO wait states, NO wear leveling or external ECC and NO shielding. Avalanche recently released two popular development kits to accelerate evaluation, development, and prototyping for this killer application, both available from **Protec GmbH**, including one that plugs into an existing VCK190 evaluation board using the Samtec connector. Please check out our supporting documentation, including recently updated development kit user guides to walk you through the process of how to boot a Xilinx Versal.



### Space Edge Computing Boosted by Teledyne e2v new 8 GB DDR4 Memory



Teledyne e2v today announces the introduction of an **8 GB Space DDR4** memory as part of its edge computing solutions for space. This announcement follows the successful conclusion of all internal de-risking activities, including Radiation/Latch-Up tests and preliminary Industrialization checks. As demand for compact, high-density memories surge, Teledyne e2v stresses that its latest memory chip is compatible with all contemporary high-end space processing components. The list includes processors from AMD/Xilinx VERSAL® ACAP, space FPGAs, MPSOCs, Microchip RT PolarFire®, together with many proprietary ASICs.

**Ultra-fast, high-density 8 GB space DDR4** memory offers the same form factor and pin-to-pin compatibility to the earlier 4 GB option - making it the ideal enhancement for next generation spaceborne developments.

**8 GB DDR4 Engineering Models (EMs) available now, Flight Models (FM)s due in 2024**



### VPT's VSC Series of Space COTS Converters

The **VSC Series** of commercial off the shelf (COTS) products are intended for "New Space" applications as part of our space product line. The series ranges from 5W to 30W of output power and includes single and dual outputs of 3.3, 5, 12, and 15V with a wide input range of 15V to 50V with 80V transient capability. The VSC Series is radiation tested to 42MeV/mg/cm<sup>2</sup> and guaranteed to 30MeV/mg/cm<sup>2</sup> for SEE & tested to 40krad(Si) and guaranteed to 30krad(Si) for TID.



A full line of input EMI filters is available to meet MIL-STD-461 or equivalent conducted emissions requirements. The series is designed for smaller satellites in low earth orbits (LEO), and NASA Class D missions where the balance of cost and guaranteed performance is critical.