

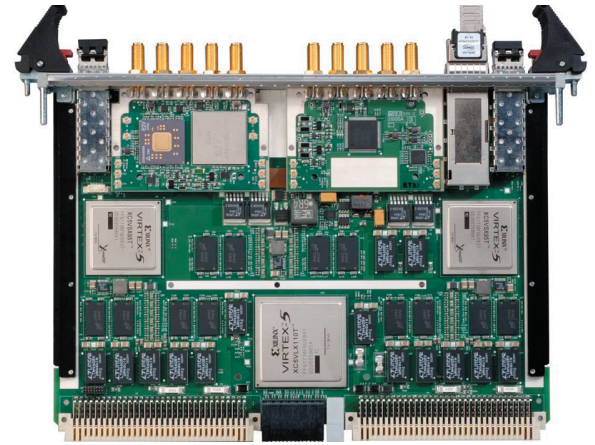
**Extreme Signal Acquisition, Generation and FPGA-based Processing**

The QuiXilica-V5 family of signal acquisition, generation and processing products combine the best available ADC and DAC technology with high density FPGA processing to enable extremely high performance DSP applications. Using Xilinx Virtex-5 FPGAs combined with large memory resources and a rich set of interconnect options, QuiXilica products can be used as building blocks for advanced SIGINT, ELINT, COMINT, EW / ESM and Radar applications, both in the lab and for rugged, deployed solutions.

Product	Inputs	Outputs
<b>Tarvos-V5</b>	6 x 16-bit x 185 MSPS	1 x 16-bit x 185 MSPS
<b>Atlas-V5</b>	8 x 12-bit x 1 GSPS	
<b>Titan-V5</b>	4 x 12-bit x 1 GSPS	4 x 14-bit x 1.2 GSPS
<b>Charon-V5</b>		8 x 14-bit x 1.2 GSPS
<b>Neptune-V5</b>	2 x 10-bit x 2.2 GSPS	
<b>Triton-V5</b>	1 x 10-bit x 2.2 GSPS	1 x 12-bit x 4 GSPS
<b>Orion-V5</b>		2 x 12-bit x 4 GSPS
<b>Calypso-V5</b>	6 x 12-bit x 1.6 GSPS or 2 x 12-bit x 3.2 GSPS	
<b>Proteus-V5</b>	2 x 10-bit x 5 GSPS or 4 x 10-bit x 2.5 GSPS or 8 x 10-bit x 1.25 GSPS	

**QuiXilica-V5 Products Provide:**

- 6U form factor for legacy VME applications with optional VXS high speed interconnect, up to 2.5 GB/s per slot
- Built-in network connectivity through VME P2, VXS P0, or front panel I/O to enable network-centric FPGA processing
- Modular ADC and DAC options using the latest technology for optimum resolution and bandwidth with excellent signal integrity
- Sample-accurate trigger synchronization across multiple boards for high channel count applications
- Configurations with both ADC and DAC channels for low latency waveform generation and response
- Integrated power and temperature monitoring for system-level management and fault protection
- Wide range of ruggedization options, including rugged air and conduction cooled versions
- Comprehensive Developer's Kit including all required interface cores, network interfaces, bitstream management and reference / sample designs.


**All QuiXilica-V5 Models Feature:**

- Three Xilinx Virtex-5 FPGAs, up to 2,336 DSP slices using 2 x SX95T + 1 x SX240T
- 3 GB of DDR3 memory with aggregate bandwidth of 38.4 GB/s
- Front Panel QSFP site, 4 fibers x up to 6.4 Gbps
- Front Panel SFP sites, 2 fibers x up to 3.2 Gbps
- Gigabit Ethernet through SFPs, VITA 41.6 P0, or P2 transition module
- Optional VXS P0 interface with up to 2.5 GB/s full duplex links

## Environmental / Ruggedization

In addition to providing high performance, Tekmicro boards and systems have been designed for ruggedization and power management. Tekmicro products operate effectively in laboratory, rugged air-cooled, and rugged conduction-cooled environments to meet the needs of deployed applications.

### Ruggedization Options

Specification	Commercial	Rugged Level 2	Rugged Level 3
Cooling	Convection	Convection	Conduction
Operational Temperature	0° to +55 °C (300 LFM airflow)	-40 to +70 °C (600 LFM airflow)	-40° to +85 °C (At Card Edge)
Storage Temperature	-40° to +85 °C	-55° to +100 °C	-55° to +125 °C
Relative Humidity	10% to 95% non-condensing	5% to 95% non-condensing	0% to 95% non-condensing
Conformal Coating	No	Yes	Yes
Shock	½ sine pulse, 20 g, 11 ms	½ sine pulse, 20 g, 11 ms	½ sine pulse, 40 g, 11 ms
Vibration (Sine)	2 g peak 15 to 2,000 Hz	10 g peak 15 to 2,000 Hz	10 g peak 15 to 2,000 Hz
Vibration (Random)	0.003 g <sup>2</sup> /Hz from 15 to 2,000Hz	0.04 g <sup>2</sup> /Hz from 15 to 2,000Hz	0.1 g <sup>2</sup> /Hz from 15 to 2,000Hz



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