

GENERAL MICRO SYSTEMS, INC. TRUSTED AND DEPLOYED SINCE 1979



ROYAL ALBATROSS VME120

Single-Slot, High Performance, 6U VME SBC with Intel® Xeon E3 CPU



Up to 64 GB DDR4 DRAM w/ECC



Operating Temperature Range -20 to +75°C Available in Rugged Level 1-3

SYSTEM HIGHLIGHTS

- 3.0 GHz Intel[®] Xeon[®] E3 (Kaby Lake, 7th Gen Core[™]) (E3-15xxM V6)
- Up to 64 GB of DDR4 memory with ECC
- Three-head Intel $\ensuremath{^{\ensuremath{\mathbb{R}}}}$ HD Graphics P630 with GT2
- Support for DirectX 11/12, OpenGL 4.3/4.4, ES 2.0, and OCL 2.x
- Optional mSATA SSD for OS boot
- One PCI-X/16-Lane XMC site with rear I/O or 2.5" SATA drive

SYSTEM OVERVIEW

The VME120 "Royal Albatross" is a ninth-generation 6U VME SBC module based on GMS's upgradable CPU "computing engine" technology. It is designed to provide the highest level of workstation performance possible in a ruggedized, single-slot VME slot (0.8-in pitch). It may be operated in all VME backplanes in VME64 or VME64x form factors with 3-row or 5-row connectors or an optional P0 interconnect. The Royal Albatross is the highest performance VME SBC in the market with vast I/O options and upgradable CPU.

Royal Albatross is equipped with the latest, most power-efficient Intel[®] Kaby Lake-H workstation processor with Hyper-Threading for a total of up to four physical cores (eight logical cores) operating up to 3.0 GHz and using Intel's Turbo Boost 2.0 up to 4.0 GHz. To harvest this incredible CPU performance, the CPU is coupled with up to 64 GB of DDR4 RAM organized in two banks with ECC support. These Kaby Lake Xeon[®] E3 cores coupled with Royal Albatross's I/O can be used to create multiple virtual machines (VMs) allowing a single Royal Albatross card to replace up to 8 separate single-processor systems.

- One USB 3.0 and two USB 2.0 ports to front
- Four USB 2.0 to rear on P2
- Tundra® Universe II™ VME bridge chip
- Two 10 Gigabit Ethernet ports with TCP/IP Offloading Engine
- Intel® Virtualization Technology (VT-x/VT-d)
- Trusted Execution Technology (TXT)

APPLICATIONS

Royal Albatross is designed to provide the ultimate and first-of-itskind micro-server class VME SBC replacement of multiple legacy VME SBCs (x86 or PowerPC™) with a single SBC utilizing Intel's Virtualization Technology (VT-x/VT-d2). Furthermore, with the Trusted Execution Technology (TXT), the SBC is secure from unauthorized boot devices and unauthorized replications of the system.

The VME120 is ideal for data centers, factory automation, medical, and defense applications, where big investments have been made on a VME platform and where true hard "Real Time" is required. No other bus architecture can provide this hard "Real Time" performance like VME. The Royal Albatross may be ordered from the factory with operating systems such as Windows[®], Linux[®], or RTOS pre-installed.



ENVIRONMENTAL SPECS

SWaP-E:	Greatest computing density in one 6U VME card			
Size:	6U			
Weight:	3 lbs.			
Power:	As low as 60 W			
MIL-STD:	MIL-STD-810G, MIL-S-901D, MIL-STD-461F and DO-160D			
Temperature:	Operates up to extended temp -20°C to +75°C (Optional			
Ruggedness:	Available in ruggedization levels R1-R3			





I/O AND EXPANSION OPTIONS

- Two front panel 10 Gigabit Ethernet ports (copper)
- Two rear Gigabit Ethernet ports
- Four buffered SATA ports with Intel RSTe RAID support
- Line-In, Headphone-Out, and Mic-In
- Four Serial Ports with RS-232/422/485 options
- One HDMI and one VGA video lines to rear on P2
- Super I/O plus COM port to front panel
- Sixteen buffered GPIO lines with interrupt capabilities on P2
- 32 MB of BIOS Flash for system parameters and user data
- VME64 or VME64x support via Tundra® Universe II™
- 3-Row or 5-Row interconnect options
- Compliant with ANSI VITA-1.1, VITA 31.1, VITA 39, and VITA 42
- Single +5V operation

RUGGEDIZATION LEVELS

	TEMP	SHOCK	VIBRATION	MAX IP LEVEL
RUGGED 1	0° - 55°C	20G	.0001 g²/Hz	-
RUGGED 2	-20° - 55°C	20G	.0008 g²/Hz	-
RUGGED 3	-20° - 75°C	52G	.03 g²/Hz	-

 \star Vibration frequency for systems tested between 5Hz-2000Hz

