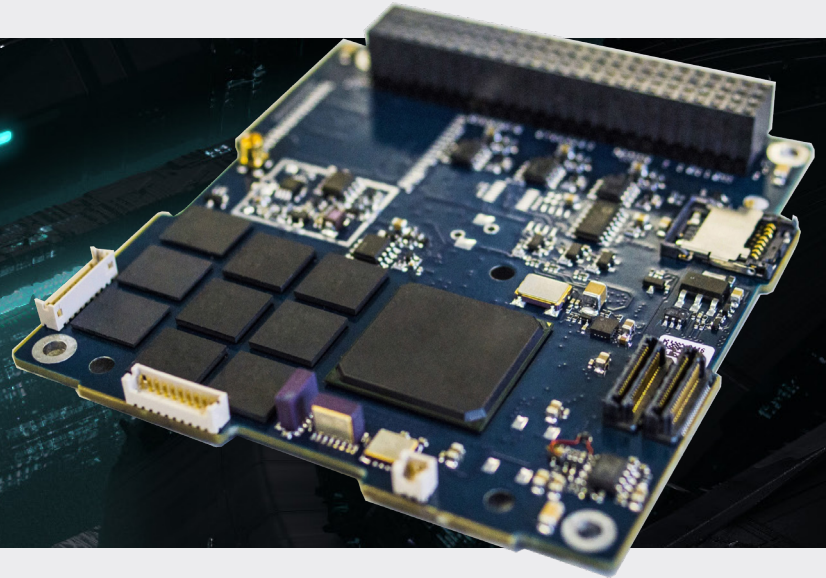


ADVANCED PRECISION PERFORMANCE



Developed to deliver 'always-on' operation, KRYTEN-M3 computing solutions work every time on time. Flight proven across multiple mission applications for a range of customer requirements, this readily available solution has advanced error detection and correction. Featuring a SmartFusion 2 SoC including Cortex-M3 processor @ 50 MHz delivering 62.5 DMIPS, and enhanced hardware/firmware recovery mechanisms, the KRYTEN- M3 delivers advanced precision performance for the most demanding nanosatellite missions.

Our reliable space data handling solution is safeguarded with autonomous single event latch-up protections,

delivering high performance computing with integrated cache and Non-Volatile MRAM Memory. All protected by SECCED and EDAC mechanism to guard against radiation effects.

The inclusion of 4 GB of SLC flash memory provides ample space for mission data storage. GPS is available on Kryten-M3- PLUS models.

KRYTEN-M3 is supplied with a BSP including bare metal drivers, comprehensive API reference documentation, a full user manual and thoroughly documented source code.



PERFORMANCE

Highly configurable, the software combines a component based OBSW framework and flight-proven software solutions to meet all the command and data handling needs of the next generation of highly capable CubeSats.



RELIABILITY

Our inbuilt protections are based on over a decade of design heritage guarantee real-time-on-time operations. KRYTEN solutions have autonomous single event latch-up protection, integrated cache and Memory Protection Unit, EDAC protected memories and FIFOs. JTAG with ETM support is available for programing and debugging.



EFFICIENCY

Developed to deliver 'always-on' operation, KRYTEN-M3 computing solutions have over a decade of flight and design heritage, guaranteeing real-time-on-time precision performance. Requiring <1W during operations, it is one of the most power efficient off-the-shelf onboard computers available on the market.

TECHNICAL SPECIFICATIONS

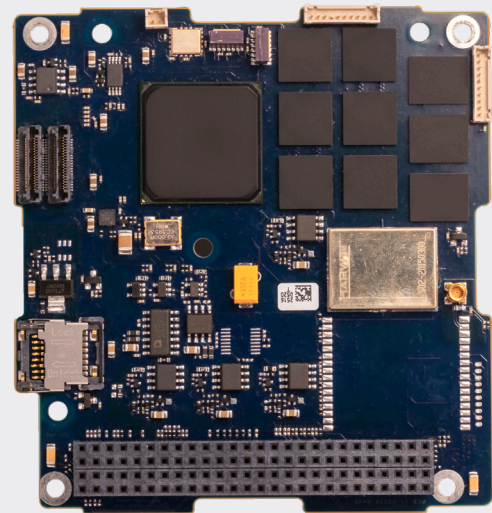
General	
Design Life	5 years in LEO
Processor	Smart Fusion 2 SoC including an ARM Cortex-M3 processor delivering 62.5 DMIPS
Processor Clock	50 MHz
SCET	Real time counter (w/40mins. Backup Power)
MRAM	8 MB
Operating Temperature Range	-40°C to +80°C
Boot Image Storage	256 kB eNVM + 8MB MRAM
Radiation (TiD)	20 kRAD
Typical Energy Usage	6.4 mJ/DM
GPS (PLUS model only)	<10m RMS position accuracy <1m/s RMS velocity accuracy

Interfaces		
I2C		2
SPI	7 Chip Select Lines	1
UART	3.3 V Logic	8
RS422 1	(can be used as 2xRS485)	1
CAN		1
DTMF		1
	JTAG w/ETM Support + 1 Serial	
Debugging	Debug	1
LVDS	20x Lines, Expansion	1
QSPI	(2x LVDS, 1x 3V3 Logic)	3
GPIO	3.3 V Logic	17

* Not all interfaces are available simultaneously

Size, Weight & Power	
Nominal Power Consumption	400 mW (typ), 1 W max
Mass	61.9 g
Length	95.89 mm
Width	90.17 mm
Height*	5.51 mm

* Height from top PCB to lowest component



To make an enquiry, request a quotation or learn about AAC Clyde Space's other products and services, please contact: enquiries@aac-clydespace.com



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