

FEATURE LIST

Microcontroller:

- High performance, low power 32-bit ARM Cortex-M3 based MCU
- 4-48 MHz @ 1.25 DMIPS/MHz
- Internal & external watchdog for added reliability

Memory & Storage:

- 256 KB EEPROM
- 4 MB flash for code Storage
- 2 x 1 MB external SRAM for data storage
 - SEU protection by means of an FPGA-based EDAC
 - SEL protection by detecting and isolating latchup currents
- MicroSD socket for storage up to 2 GB

Communication:

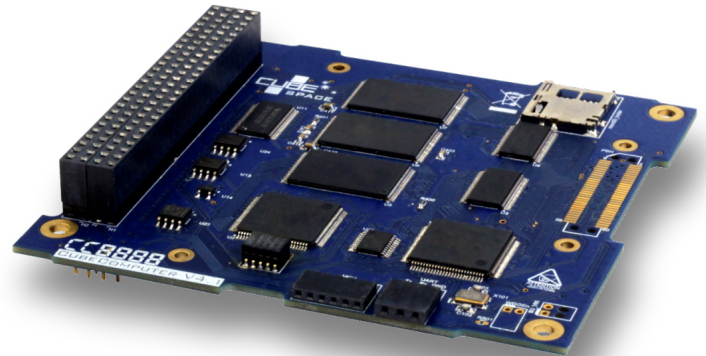
- 2 x I2C interface with multi-master capabilities
- 1 x Debug UART interface on external header
- 1 x CAN interface up to 1 Mbps

Piggyback Header:

- Design a mission specific piggyback board that can interface directly with CubeComputer
- Includes pin-outs for: 3.3 V, 5 V, battery supply, 4 x PWM, 4 x ADC, UART, SPI, I2C, and more

Software:

- Full compilation of drivers for OBC
- Robust bootloader with the ability to store and load multiple programs in-flight
- Compatible with variety of commercial Real-Time Operating Systems



APPLICATION

- Onboard computer suitable for nanosatellite C&DH, TT&C, mass storage, and ADCS
- PC104 form factor, compatible with CubeSat standard

TESTING & HERITAGE

- Successful vibration and heated vacuum tests
- Radiation tests (TID @ 20 krad, SEE @ 60 MeV)
- ADCS OBC on QB50 precursor satellites

SPECIFICATIONS

Operating voltage	3.3 V
Power consumption	200 mW (typical)
I2C bus voltage	3.3 V
Operating temperature	-10°C to 70°C
Mass*	50 g – 70 g
Dimensions*	90 x 96 x 10 mm

*Depends on configuration options

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