

CubeComputer

Low-power radiation tolerant flight computer

Description

CubeComputer is a low power flight computer that implements latch-up protection and EDAC to make it tolerant to radiation exposure. The computer can be used as ADCS OBC, main flight OBC or a combination of both. It uses a Cortex M3 processor running at 48MHz.



Ordering Information

Lead time	3 Months
Price	4 500 USD
Flight Heritage	>10 Total years in-flight

Communication

- 2 x I2C
- 2 x UART
- 1 x CAN V2.0B
- 1 x SPI

Software

- Full driver suite
- Bootloader
- Support FreeRTOS

Microcontroller

- 32-bit ARM Cortex-M3
- 4-48 MHz @ 1.25 DMIPS/MHz
- Internal & external watchdog

Memory and Storage

- 32 KB EEPROM
- 4 MB flash for code storage
- 2 x 1 MB external SRAM for data storage
 - SEU protection: FPGA based EDAC
 - Latch-up protection
- MicroSD socket

Piggyback Utility Header

- Enables addition of mission specific extension board
- Pin-outs for:
 - 3V3
 - 5V
 - VBat
 - 4 x PWM
 - 4 x ADC
 - UART, SPI, I2C
 - IOs

General Specifications

Operating voltage	3V3
Power consumption	200mW (typical)
I2C bus voltage	3V3
Operating temperature	-10 to 70C
Mass	50 g – 70 g
Dimensions	90 x 96 x 10mm

Environmental Specifications

Vibration	8.03g RMS random
Thermal (operational)	-10 to 70C
Radiation	20kRad

CUBESPACE, THE LAUNCHLAB
STELLENBOSCH, CAPE TOWN
7600, SOUTH AFRICA



FACEBOOK/CUBESPACEADCS

WWW.CUBESPACE.CO.ZA

+27 21 808 9499