

MASTER OBC

CUBESAT ON-BOARD COMPUTER

MASTER is 2NDSPACE's flexible OBC, offering high versatility combined with **performances** and **reliability**. The product is designed to ensure high robustness and a wide range of capabilities and interfaces to support CubeSats and nanosatellite platforms to meet most operational-demanding missions.

The product family includes two solutions: MASTER, a flexible OBC designed for a wide range of CubeSat applications, and MASTER II, a cutting-edge solution offering exceptional performance and flexibility for demanding commercial missions and high-end small satellites.

Dual-core processor for real-time operation

Over-The-Air updates for in-orbit software implementation

13 communication interfaces and multiple sensor integrations

Supports FreeRTOS and MBed software ecosystems

Integrated libraries for interface with 2NDSPACE avionics

Integrated libraries for interface with reference COTS



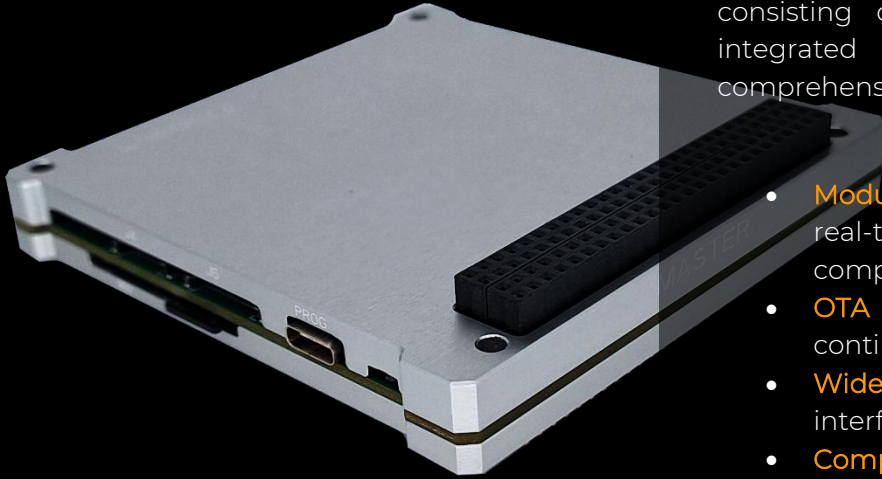
PRODUCT **FEATURES**

	MASTER
Dimensions [mm]	97 x 92 x 20
Mass [g]	130 g
Section 1 Processor	Dual-Core ARM Cortex M7 @ 480 MHz + Cortex M4 @ 240 MHz
RAM	64 Mbit synchronous DRAM
Flash Memory	32 Mbit serial SPI NOR flash
Operating System	Linux, FreeRTOS
Storage	Dual µSD slots
Interfaces	CAN, RS422, RS485, UART, USART, I2C, SPI
ADC Inputs	8x configurable
Sensors	6x
Power Input	5V regulated
Operating Temp.	-40 °C to +85 °C

QUALIFICATION AND ACCEPTANCE TEST

	Functional/AIT	Electrical control	Vibration test	Mechanical Shock	TVAC Test
Qualification Test	✓	✓	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C	NASA GEVS: GSFC-STD-7000A ESA ECSS-E-ST-10-03C
Acceptance Test	✓	✓			

2NDSpace



MASTER is designed to meet the needs of CubeSat platforms from 1U to 16U, offering high versatility and consisting of a dual-core processing unit with integrated memory, data storage, and a comprehensive set of communication interfaces.

- **Modular architecture:** Dual-core processor for real-time operation and high-performance computing
- **OTA Support:** Over-The-Air updates for continuous software improvement
- **Wide Range of Interfaces:** 13 communication interfaces and multiple sensor integrations
- **Compatible Environments:** Supports FreeRTOS and MBed software ecosystems

