NEWSPACE MARKET

NEWSPACE MARKET · COMPANY PROFILE

CAVU Aerospace

United Kingdom · founded 2016 · cavuaerospace.uk

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PRODUCTS	SERVICES	WITH DATASHEETS

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as of 20 August 2026

ABOUT

CAVU Aerospace

CAVU Aerospace UK is the space division of the CAVU Aerospace group, focused on command and data handling (C&DH) for space applications. The company designs and manufactures radiation-tolerant on-board computers and avionics for satellites, spacecraft, rovers and launch vehicles — from CubeSat-class OBCs to fully redundant FPGA-based systems and SpaceVPX (VITA 78) system controllers, along with thermal control units, frame grabbers and flight-proven satellite cameras. The products build on flash-based Microchip FPGA technology (SmartFusion2, ProASIC3, PolarFire SoC) with inherent SEU immunity that removes the need for configuration scrubbing. CAVU is an official Microchip Design Partner and a SOSA member, with early access to the PIC64 High-Performance Spaceflight Computing (HPSC) architecture. Founded in 2010, the family-owned CAVU Aerospace group employs over 100 people across five locations in the United States and Scotland.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

SERVICES

Services

Design of robust, radiation-tolerant, and high-performance OBC platform

CAVU Aerospace designs robust, radiation-tolerant, and high-performance On-Board Computer (OBC) platforms for demanding space missions, leveraging early access to cutting-edge PIC64 technology as a Mi

Development of rugged hardware, efficient software solutions, and seamless integration of all system components

CAVU Aerospace develops rugged hardware and efficient software solutions, providing seamless integration of all system components to ensure effective satellite operation in harsh space environments.

Efficient thermal management for satellite systems

CAVU Aerospace provides efficient thermal management for satellite systems using FPGA-based control and radiation mitigation techniques to ensure reliable performance in space.

PRODUCTS

Product catalogue

CAVU AEROSPACE

32% Efficiency Triple Junction GaAs Solar Cell

A premium, high-efficiency triple-junction GaAs solar cell designed for space missions, offering 32% efficiency at BOL and robust radiation tolerance for LEO and deep space applica

Efficiency at BOL	32%
Open Circuit Voltage (Voc)	2.666 V
Maximum Power (Pmax)	1.331 W
Efficiency (AM0 spectrum, 25°C)	32.63%
Radiation Tolerance	Maintains efficiency after exposure to high radiation levels
Temperature Stability	Optimized for a wide range of temperatures

price on request datasheet

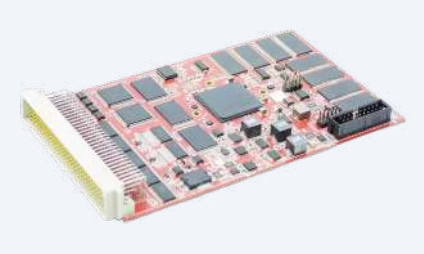
CAVU AEROSPACE

CAVU CDH-FS

The CAVU CDH-FS is an advanced, fully redundant FPGA-based on-board computer system designed for critical space missions, offering continuous operation and resilience against sever

Key System Features	Dual Cold/Hot Redundant OBC Modules
Key System Features	Dual Cold/Hot Redundant ADC/DAC Modules
Key System Features	Double Hot Redundant ADC Converters
Key System Features	Advanced Supervisor & Health Monitoring Module
Key System Features	Efficient Data Synchronization Between OBC Modules
Key System Features	Three Selectable Boot Regions from Bootloader
Key System Features	Fully Customizable Configuration

price on request datasheet



CAVU AEROSPACE

CAVU OBC-1

The CAVU OBC-1 is a cutting-edge, FPGA-based satellite computing system designed for reliable and efficient operation in space, featuring intelligent redundancy and advanced comman

Expected Life-time	3-5 years in LEO
Processor	Microchip/Microsemi SmartFuion2 Flash Based FPGA
Processor Core	ARM Cortex-M3 on FPGA
FPU	on FPGA Upon Request
Processor Speed	150 DMIPS @ 128MHz, Max 166MHz
Programming IDE	SoftConsole or Keil
Debug	via JTAG

price on request datasheet

CAVU AEROSPACE

CDH-FS

Main OBC for SmallSat platform

Memory (RAM)	160Mbits MRAM 40 bits width (128Mbits+32Mbits ECC)
Memory (ROM)	96Mbits MRAM (Configurable as Triple 32Mbits)
Memory (Nonvolatile Flash)	Total 24Gbit SLC NAND Flash (Triple 8G), 256K Serial FRAM, 256M Serial NOR
Radiation Hardness (Total Ionizing Dose)	30Krad (Si)/yr
Operating Temperature	-40 C to +85 C
Pressure	10 bar
Shocks	2000g, 2000-10000Hz

price on request

CAVU AEROSPACE

CubeSat Camera- RavenEye16

CubeSat Camera for 2U, 3U & 12U

Resolution	2,448 * 2,048
Form Factor	2U
Mass	1.1 kg
Aperture Size	60mm
EFL	400mm
Pixel size	3.4 µm
GSD @500km orbit	4.25 m/pixel

price on request

CAVU AEROSPACE

FG-1

The FG-1 is a state-of-the-art Cubesat satellite board designed for high-quality image capture from CameraLink cameras, featuring a radiation-hardened FPGA and robust environmental

Input Voltage	Single 12V or 5V and 12V
Power Consumption	<1W for FG-1 Board
Mass	75gr
Dimension	Cubesat standard
Temperature	-40 C to +85 C @ 10 bar
Radiation Hardness	30Krad (Si), SEE @ 60MeV Latch-up Immune
Shocks	ISS CubeSat Deployer Compatible

price on request datasheet

CAVU AEROSPACE

OBC PolarFire VPX

OBC based on PolarFire FPGA SoC in 3U VPX

Processor	Microchip MPFS460T-1FCG1152I / MPFS460TS-1FCG1152I (with security)
RISC-V Cores	Quad 64-bit U54 application cores + 1× E51 monitor core — >4,000 DMIPS total
FPGA Fabric	461k logic elements, 784 DSP blocks — flash-based, no SRAM bitstream
VectorBlox™	Up to 279 GOPs INT8 (V1000 config, no TMR) / 156 GOPs with synthesised TMR
SERDES	20 lanes at up to 12.7 Gbps each
PCIe	Gen2 ×4 hard block (expansion plane)
SEU / TID	ZeroFIT SEU-immune; >30 krad (Si) TID; latch-up immune; SECDED BRAM ECC

`price on request`

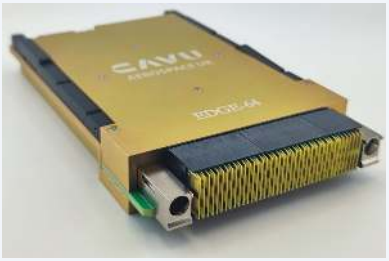
CAVU AEROSPACE

OBC-104

CubeSat OBC based in SmartFusion2

Processor	ARM Cortex-M3 on FPGA
Processor	Microchip/Microsemi SmartFuion2 Flash Based FPGA
Processor	150 DMIPS @ 128MHz
Memory	112Mbits MRAM 40 bits width (96Mbits+16Mbits ECC)
Memory	48Mbits MRAM (Configurable as Triple 16Mbits)
Memory	512KB eNVM
Storage	Upto 192Gbit SLC NAND Flash (Triple 64G)

`price on request`



CAVU AEROSPACE

OBC-64

OBC based on PIC-64 SOSA aligned HPSC

Processor	PIC64-HPSC1000 / PIC64-HPSC1100 family (RISC-V vector compute)
Processor Cores	8× RISC-V SiFive® X280 vector cores + S7 system controller
Performance	~26K DMIPS class; up to 2 TOPS (INT8) / 1 TFLOPS (bf16)
Memory	DDR4 ECC, up to 16 GB
Storage	eMMC / NAND / NOR / QSPI; MRAM/FRAM options
High-Speed I/O	10GbE/TSN, PCIe Gen3 ×8 (CXL-capable at silicon level)
TSN Ethernet Switching Fabric	up to 240 Gbps aggregate switching capability

price on request

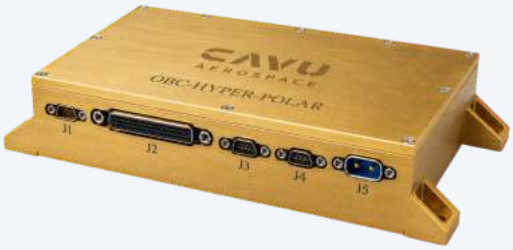
CAVU AEROSPACE

OBC-Cube-Polar

CubeSat OBC based on PolarFire FPGA

Processor	Microchip PolarFire SoC Flash Based FPGA SoC
Processor	Quad 64-bit RISC-V on FPGA + 1 RISC-V Monitoring Core
Memory	RAM: 2GB or 4GB with ECC Protection
Memory	MRAM: Triple 16MB or 32MB MRAM (Total 48MB or 96MB)
Storage	Nonvolatile Storage: 64GB Flash via Dual 32GB eMMC
Interfaces	Digital I/O: 20-60
Interfaces	ADC: 8/16CH with 12-bit or 16-bit resolution

price on request



CAVU AEROSPACE

OBC-Hyper-Polar

OnBoard Computer based on PolarFire FPGA SoC

Processor	RISC-V MSS: 4× 64-bit U54 application cores + 1× E51 monitor core
FPGA Fabric	Microchip PolarFire SoC FPGA — two variants: MPFS250T (254k LE) & MPFS460T (461k LE)
Memory (Fabric)	DDR4 SDRAM 8 GB 72-bit ECC Enabled
Memory (MSS)	LPDDR4 SDRAM 4 GB 32-bit
Storage	Dual 256 GB eMMC
Storage	Dual 512 Mbit QSPI NOR Flash
Storage	4 Mbit SPI MRAM SEU Immune

price on request

CAVU AEROSPACE

Power VPX

800, 1000W Power Module in VPX form factor

Form Factor	3U VPX power module per VITA 62.0 / VITA 48.2, 2.00 inch pitch
Envelope (max)	3.94 in W × 6.63 in L × 2.00 in H
Mass	3.6 lb typical, 3.8 lb maximum
Cooling	Conduction cooled through card edge and wedge-lock path
Operating Temperature	−40 °C to +85 °C card-edge
Storage Temperature	−55 °C to +105 °C
Supply Voltage	16–36 VDC continuous

price on request

CAVU AEROSPACE

RavenEye5

The RavenEye5 is a flight-proven, highly reliable optical payload designed for CubeSats, capable of capturing high-resolution images for Earth observation and atmospheric monitorin

Aperture Size	60 mm
Available in	5, 16 & 51 Mpixel
Data Interface	LVDS + RS422 + Ethernet
Data Transmission Interface	UART RS485 @6.25
Image format	RAW + JPEG
Adjustable parameters	Integration Time , Frame Rate , Gain, Black Level
Dimensions	2U

price on request datasheet

CAVU AEROSPACE

Thermal Control Unit

Smart efficient thermal management for space systems

Dimensions (L×W×H)	160 mm × 170 mm × 38 mm
Mass	1,000 gr (Std. version)
Power Consumption	1.5W ~ 3W
Supply Voltage	28V / 75V ±4V
Interfaces	CAN, RS422 RS485, RS232, GPIO, Debug: JTAG, SoftConsole or Keil
Processor	FPGA and SoC based control
Memory	eMMC

price on request

CAVU AEROSPACE

Typhoon Edge

AI OnBorad Computer- PolarFire FPGA paired with NVIDIA Jetson

Processor	NVIDIA JETSON ORIN AGX Industrial & Microchip PolarFire SoC MPFS460T
AI performance	248 TOPS
Memory	64 GB ECC LPDDR5
Memory Bandwidth	204.8 GB/s
Interfaces	PCIe x8, PCIe x4, CSI-2, Camera Link HS, Camera Link Base/Medium/Full, 10GbE copper, 1GbE,
Storage	1 TB system NVMe, 1.92 TB mission SSD, 64 GB eMMC
Supply Voltage	12 V to 18 V DC

price on request

Contact CAVU Aerospace

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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