

NEWSPACE MARKET · COMPANY PROFILE



Innoflight

United States · founded 2004 · innoflight.com

14

PRODUCTS

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as of 20 August 2026



Innoflight

Innoflight is a veteran-owned, non-traditional defense contractor headquartered in San Diego, California, founded in 2004, that designs compact, radiation-tolerant-by-design, cyber-secure avionics for space vehicles — spanning software-defined compact radios (SCR family), cryptographic systems (End Cryptographic Units, CyberDog™), and processing/networking/data-storage avionics including compact flight computers, Ethernet switches/routers, and solid-state recorders. Its flight-proven SCR radios and KI-series cryptographic units have flown on missions across LEO, MEO, and GEO for customers including Lockheed Martin, Northrop Grumman, L3Harris, BAE Systems, RTX, Boeing, General Atomics, NASA, U.S. Space Force, DARPA, and the Missile Defense Agency — including support for NASA's Artemis II and the Space Development Agency's Proliferated Warfighter Space Architecture. Innoflight employs roughly 200 people, received strategic investment from The Jordan Company in 2020, celebrated its 20th anniversary in 2024, and holds AS9100D and ISO 9001:2015 certifications.

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.

Product catalogue



INNOFLIGHT

CFC-400XS Compact Flight Computer

CubeSat compact flight computer with defense-grade Xilinx UltraScale+ MPSoC, CyberDog software suite and Linux reference design, flying since 2021.

Processor board	Defense-grade Xilinx UltraScale+ MPSoC (GPP + FPGA)
Supervisor board	Radiation tolerant, implementing radiation mitigation techniques
Daughter card interfaces	Low + medium + high speed serial; 3x-8x 1000Base-T (GbE) Ethernet
Software	CyberDog Software Suite, Linux reference design; on-orbit re-programmable
Applications	C&DH, payload interface and data processing, BMC3
Form factor	CubeSat 82 x 82 x 27-43 mm / 239-350 g / 6-25 W
TRL / MRL	9 / 10

flight proven · TRL 9 price on request



INNOFLIGHT

CFC-405XP / CFC-450XP Compact Flight Computer

3U VPX compact flight computer with defense-grade Xilinx UltraScale+ MPSoC, five gigabit Ethernet ports and serial interfaces, flying since 2025.

Processor board	Defense-grade Xilinx UltraScale+ MPSoC (GPP + FPGA)
Supervisor board	Radiation tolerant, implementing radiation mitigation techniques
Interfaces	Ethernet 5x 1000Base-T (GbE); serial RS-422, LVDS, UART
Software	CyberDog Software Suite, Linux reference design; on-orbit re-programmable
Form factor	3U VPX module 171 x 100 x 25 mm
Mass	547 g
Power	18-25 W

flight proven · TRL 9 price on request



INNOFLIGHT

CFC-510P Compact Flight Computer

GPU-based 3U VPX flight computer on AMD Ryzen with CUDA runtime environment, 539 g and 40 W max, flying since 2025.

Processor board	AMD Ryzen GPU
Supervisor board	Radiation tolerant, implementing radiation mitigation techniques
Software	CyberDog Software Suite, Linux reference design, CUDA runtime environment
Heritage platform	CFC-500S / CFC-500P (NVIDIA Tegra K1 GPU)
Form factor	3U VPX module 171 x 100 x 25 mm
Mass	539 g
Power	40 W max

flight proven • TRL 9 price on request



INNOFLIGHT

CFC-600P Compact Flight Computer (AI/ML)

AI/ML flight computer on defense-grade AMD Versal AI Edge adaptive SoC, 3U VPX, 500 g, 70 W max.

Processor board	Defense-grade AMD Versal AI Edge adaptive SoC
Supervisor board	Radiation tolerant, implementing radiation mitigation techniques
Software	CyberDog Software Suite, Linux reference design; on-orbit re-programmable
Applications	AI/ML, C&DH, mission data processor, payload interface electronics, BMC3
Form factor	3U VPX module 172 x 100 x 25 mm
Mass	500 g
Power	70 W max

TRL 5 price on request



INNOFLIGHT

IOI-8 Input/Output Interfaces Module

3U VPX Ethernet I/O module with four 2.5GBase-T and four 1000Base-T ports, 501 g and 7 W.

Interfaces	4x 2.5GBase-T (2.5 GbE), 4x 1000Base-T (GbE)
Form factor	3U VPX module 171 x 100 x 24 mm
Mass	501 g
Power	7 W
TRL / MRL	9 / 10
Flight heritage	Since 2025

flight proven · TRL 9 price on request



INNOFLIGHT

KI-103 (Gnome) End Cryptographic Unit

Top Secret and Below certified bulk encryptor for TT&C or mission data links, up to 40 Mbps in a 165 g CubeSat module, flying since 2019.

Certification	Top Secret and Below (TSAB) certified bulk encryptor
Data rate	Up to 40 Mbps
Key management	Customer re-programmable keys; Over-the-Air Rekey (OTAR) support
Integration	Works with Innoflight SCR-104, SCR-106, SCR-106HDR, SCR-108
Dimensions	CubeSat 83 x 84 x 15 mm
Mass	165 g
Power	2.0 W max; 0.9 W low-power mode

flight proven · TRL 9 price on request



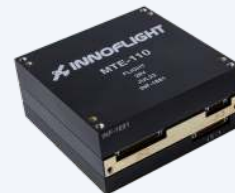
INNOFLIGHT

MNE-405 / MNE-410 Mission Networking Electronics

Two-slot 3U VPX chassis with Ethernet switch or IP/MPLS router personality, combining a CFC processing module with the IOI-8 interface card.

Chassis	2-slot 3U VPX
Personalities	Ethernet switch (MNE-405) or IP / MPLS router (MNE-410)
Processing module	CFC-405XP (MNE-405) or CFC-450XP (MNE-410)
Interface module	IOI-8: 4x 2.5GbE + 4x 1GbE
Dimensions	197 x 150 x 82 mm
Mass	2.7 kg
Power	40 W

flight proven · TRL 9 price on request



INNOFLIGHT

MTE-110 Mission Timing Electronics

CubeSat timing unit with embedded chip scale atomic clock (CSAC) and radiation-tolerant IA design, 250 g at 3 W.

Clock	Embedded Chip Scale Atomic Clock (CSAC)
Design	Radiation tolerant Information Assurance (IA)
Control	2x RS-422 UART
Inputs	2x RS-422 PPS (Red), typically GPS receivers
Outputs	3x LVDS PPS (Red), 8x LVDS PPS (Black), 2x RS-422 PPS (Black), 8x LVDS 10 MHz (Black)
Form factor	CubeSat 82 x 82 x 38 mm
Mass	250 g

flight proven · TRL 9 price on request



INNOFLIGHT

RTR-400XS IP / MPLS Router

CubeSat-form-factor networking IP / MPLS router on the CFC-400XS platform with eight gigabit Ethernet ports, flight heritage since 2023.

Function	Networking IP / MPLS router
Hardware platform	CFC-400XS with IP / MPLS router personality
Processor board	Defense-grade Xilinx UltraScale+ MPSoC
Supervisor board	Radiation tolerant, implementing radiation mitigation techniques
Interfaces	8x 100/1000 Base-T (GbE) Ethernet ports
Software	CyberDog Software Suite; on-orbit re-programmable
Form factor	CubeSat 82 x 82 x 43 mm / 310 g / 20 W max

flight proven · TRL 9 price on request



INNOFLIGHT

SCR-104 S-Band Software-defined Compact Radio

On-orbit configurable S-band software-defined radio for CubeSat and SmallSat, 4.5+ Mbps downlink, USB and AFSCN SGLS support, flight heritage since 2019.

Uplink frequency	L-Band / S-Band
Downlink frequency	S-Band
RF power	Up to 2 W
Downlink data rate	4.5+ Mbps
Modulation	BPSK, QPSK, OQPSK
CubeSat form factor	82 x 82 x 25 mm / 230 g / 3-15 W
SmallSat form factor	98 x 82 x 33 mm / 290 g / 3-15 W

flight proven · TRL 9 price on request



INNOFLIGHT

SCR-106 / SCR-106HDR X-Band Software-defined Compact Radio

X-band software-defined radio with up to 20 Mbps downlink (SCR-106) or 100 Mbps (SCR-106HDR), on-orbit configurable, flight heritage since 2022.

Uplink frequency	L-Band / S-Band
Downlink frequency	X-Band
RF power	Up to 2 W
Downlink data rate (SCR-106)	Up to 20 Mbps
Downlink data rate (SCR-106HDR)	Up to 100 Mbps
Modulation	BPSK, QPSK, OQPSK, 8PSK
CubeSat form factor	82 x 82 x 25 mm / 230 g / 3.5-30 W

flight proven · TRL 9 price on request



INNOFLIGHT

SCR-208 Medusa Ka-Band Software-defined Compact Radio

4th generation Ka-band software-defined radio with multi-channel RF wide band modem on AMD Zynq UltraScale+ RFSoc, supporting DVB-S2 at 400 Msps.

Uplink frequency	Ka-Band
Downlink frequency	Ka-Band
Modulation	DVB-S2 (400 Msps) and tactical datalink waveforms
Modem	Multi-channel RF Wide Band Modem on AMD Zynq UltraScale+ RFSoc
Dimensions	197 x 150 x 82 mm
Mass	2.72 kg
Power	80 W max

TRL 5 price on request



INNOFLIGHT

SSD-2000 Solid-State Drive

3U VPX solid-state storage module with up to 2 TB, dual PCIe m.2 SSDs at 1300 MB/s read and 500 MB/s write.

Capacity	Up to 2 TB
Drives	2x PCIe m.2 SSDs
Read speed	1,300 MB/s
Write speed	500 MB/s
I/O	Through VPX backplane
Form factor	3U VPX module 171 x 100 x 25 mm
Mass	469 g

flight proven · TRL 9 price on request



INNOFLIGHT

SWC-400XS Networking Ethernet Switch

CubeSat-form-factor networking Ethernet switch on the CFC-400XS platform with eight gigabit Ethernet ports, flight heritage since 2023.

Function	Networking Ethernet switch
Hardware platform	CFC-400XS with Ethernet switch personality
Processor board	Defense-grade Xilinx UltraScale+ MPSoC
Supervisor board	Radiation tolerant, implementing radiation mitigation techniques
Interfaces	8x 100/1000 Base-T (GbE) Ethernet ports
Software	CyberDog Software Suite; on-orbit re-programmable
Form factor	CubeSat 82 x 82 x 43 mm / 310 g / 20 W max

flight proven · TRL 9 price on request

Contact Innoflight

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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