FLYC-300 Series

Low-SWaP AI Mission Computer Powered by
NVIDIA® Jetson Orin™ NX

BRESSNER
A HIPER Global Company

Features

- NVIDIA® Jetson Orin™ NX with up to 100 TOPS AI performance
- Ultra-lightweight design at only 297g
- Dual GMSL2 interfaces for HDR and 3D cameras
- 2x Ethernet and 2x USB 3.2 for sensor integration
- Supports 4S–14S drone battery packs
- Built-in UART and CAN bus for flight controller communication

FLYC-300 Series – Lightweight AI Mission Computer for UAV and UGV Applications

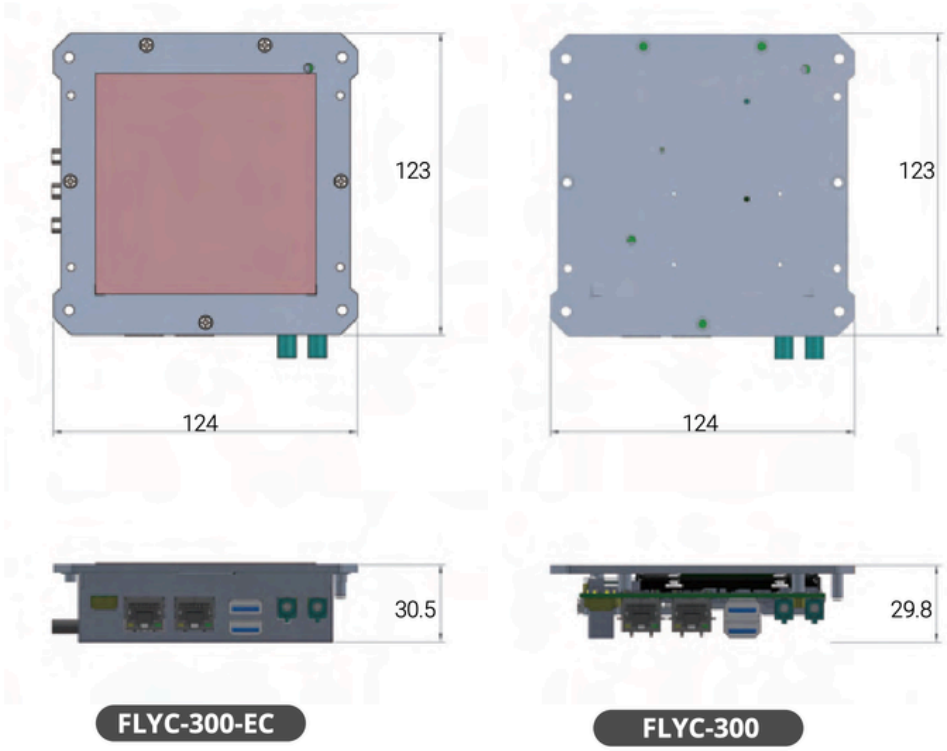
The FLYC-300 Series from BRESSNER Technology is a compact and ultra-lightweight AI mission computer engineered for advanced UAV and UGV deployments. Powered by the NVIDIA® Jetson Orin™ NX platform, the system delivers up to 100 TOPS AI performance while maintaining an exceptionally low size, weight, and power (SWaP) profile of only 297g, making it ideal for drones, autonomous robots, and mobile edge AI systems.

Designed for real-time autonomous applications, the FLYC-300 Series supports a wide range of sensors and cameras including RGB, infrared, hyperspectral, LiDAR, and 3D imaging devices. With dual GMSL2 interfaces, dual Ethernet ports, USB 3.2 connectivity, CAN bus, and UART interfaces, the platform integrates seamlessly with flight controllers and advanced sensor ecosystems.

The system supports NVIDIA® Jetson Orin™ NX 8GB and 16GB modules and enables high-speed NVMe storage through an M.2 Gen4 interface. Expansion options for 4G/5G communication modules allow real-time transmission of telemetry, video, and AI data.

With support for 4S–14S drone battery packs, rugged environmental specifications, and optional thermal enhancements, the FLYC-300 Series provides a reliable embedded AI platform for autonomous navigation, obstacle avoidance, inspection, monitoring, and intelligent mission-critical edge applications.

Dimensions (mm)



FLYC-300 Series

Low-SWaP AI Mission Computer Powered by
NVIDIA® Jetson Orin™ NX

BRESSNER
A HIPER Global Company

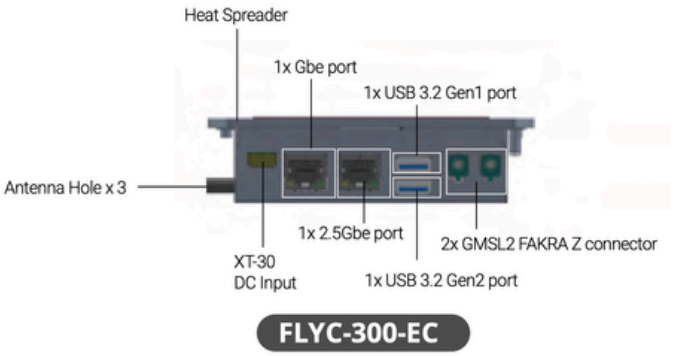
Specifications	FLYC-300 Series
SYSTEM CORE	
Processor	NVIDIA® Jetson Orin™ NX system-on-module (SOM), comprising NVIDIA® Ampere GPU and ARM Cortex CPU
Memory	8GB / 16GB LPDDR5 @ 3200 MHz on SOM
AI Performance	Up to 100 TOPS
EXTERNAL I/O INTERFACE	
GMSL2	2x GMSL2 FAKRA Z connector, supporting 2x 1920x1080 @ 60 FPS or 2x 2880x1860 @ 30 FPS camera input
Ethernet	1x Gb Ethernet port by NVIDIA® 1x 2.5Gb Ethernet port by Intel® I226-IT / I225-IT
USB	1x USB 3.2 Gen2 (10 Gbps) port 1x USB 3.2 Gen1 (5 Gbps) port
SD Card	1x Micro SD Card Slot
Native Video Port	1x DisplayPort connector
INTERNAL I/O INTERFACE	
USB Type-C	1x USB Type-C (for debug only)
USB	1x USB 2.0
CAN Bus	1x CAN bus 2.0
I2C	I2C
GPIO	Isolated 2x DI, 4x DO
UART	1x UART
STORAGE INTERFACE	
M.2 Storage	1x M.2 2230 M key socket NVMe interface (Gen4 x4)
EXPANSION BUS	
M.2 Expansion	1x M.2 3042/3052 B key with internal micro SIM socket
POWER SUPPLY	
DC Input	XT-30 for 12V to 60V DC input Supports 4S-14S battery pack
MECHANICAL	
Dimensions	124mm x 123mm x 29.8mm (Excluded enclosure) 124mm x 123mm x 30.5mm (Included enclosure)
Weight	297g (Excluding enclosure) 345g (Including enclosure)
Mounting	Wall Mount
Cooling	Optional external-accessible 65mm x 65mm fan for system heat dissipation
ENVIRONMENTAL	
Operating Temperature	-25°C to 40°C (No heat spreader required, 4S-14S) -25°C to 60°C (Heat spreader required, 4S-14S) -25°C to 70°C (Heat spreader required, 4S-6S)
Storage Temperature	-40°C to 85°C
Humidity	10%~90%, non-condensing
Vibration	Operating, MIL-STD-810H, Method 514.8, Category 4
Shock	Operating, MIL-STD-810H, Method 516.8, Procedure I
Safety	EN62368-1
EMC	CE/FCC Class A, according to EN 55032 & EN 55035

FLYC-300 Series

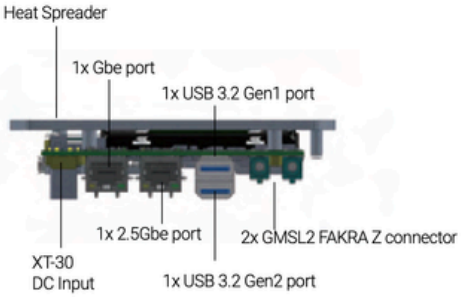
Low-SWaP AI Mission Computer Powered by
NVIDIA® Jetson Orin™ NX

BRESSNER
A HIPER Global Company

Appearance



FLYC-300-EC



FLYC-300

Model No.	Product Description
ORDERING INFORMATION	
FLYC-300-JON8	Lightweight Drone Mission Computer with NVIDIA Orin™ NX 8GB and M.2 2230 Storage
FLYC-300-EC-JON8	Lightweight Drone Mission Computer with NVIDIA Orin™ NX 8GB, M.2 2230 Storage and Enclosure
FLYC-300-JON16	Lightweight Drone Mission Computer with NVIDIA Orin™ NX 16GB and M.2 2230 Storage
FLYC-300-EC-JON16	Lightweight Drone Mission Computer with NVIDIA Orin™ NX 16GB, M.2 2230 Storage and Enclosure
OPTIONAL ACCESSORIES	
AccsyBx-FAN-FLYC-300	Fan assembly for FLYC-300
Cblkit-FLYC-300	Cable kit for FLYC-300
ThermalPad-90-FLYC-300	Thermal pad for FLYC-300, 90x90x0.5mm
PA-60W-FLYC300	60W AC/DC power adapter 12V/5A DC, cord end terminals with 2x splicing connector. Operating temperature: -30°C to 70°C
Model No.	Product Description