



AIRVOLUTE



DRONECORE 2

# AI BRAINPOWER FOR DRONES



This is a price quote for DroneCore 2.0 and associated products and services.



## PROBLEM

Many drone developers are working on the same challenges independently ▶

...but there is no need to reinvent the wheel



Just like various car manufacturers share a single platform for different upper body variants, many UAS developers can share the same autopilot platform for myriads of use cases.

01—

**HUMAN PILOTS ARE PRONE TO ERRORS & COLLISIONS**

02—

**GPS AND RADIO SIGNAL ARE OFTEN UNAVAILABLE**

03—

**DRONES NEED ADVANCED SAFETY FEATURES**



BUILT ON INDUSTRY STANDARDS



# DroneCore is an AI-powered autopilot platform which brings exceptional value to UAS developers

We make UAS development faster, cheaper, and more resilient.



Faster development



Cost reduction



Greater market





## PURPOSE OF OUR UAS ECOSYSTEM

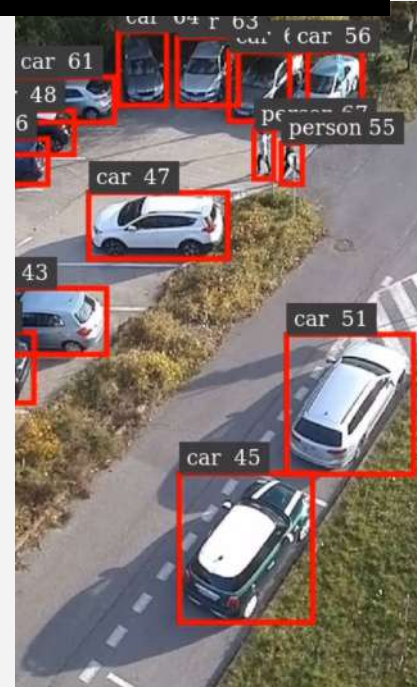
### CONTROL



### AUTONOMY



### ANALYTICS





## SELECTED THIRD PARTY AIRCRAFTS BUILT ON OUR AUTOPILOTS



**Kestrel SUAS**  
Easy Aerial (US)



**Iron Drone - Raider**  
Airobotics-Ondas (US)



**WASP M4-TL tactical UAS**  
ISS Aerospace (UK)



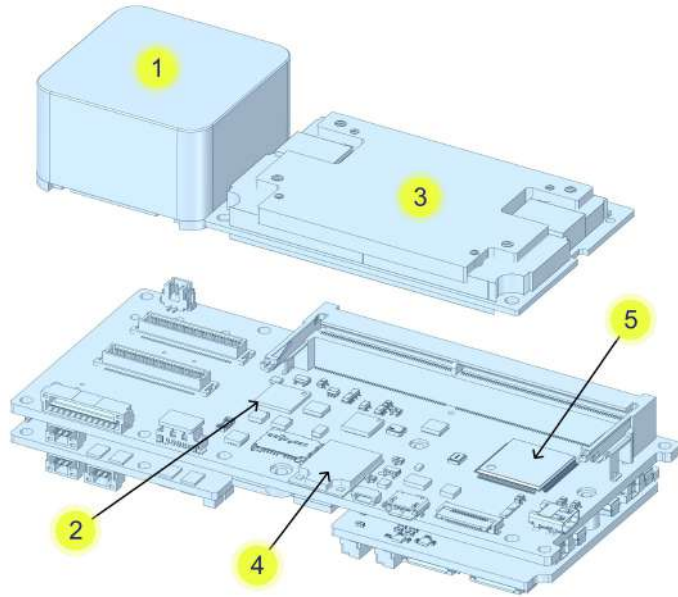
**Twister Short-Range UAS**  
Quantum Systems (Germany)



Iron Drone Raider  
Counter-UAS  
built on DroneCore  
by Airvolute



## TOP VIEW



### 1) Primary FMU Cube

- Triple redundant heated IMU
- Vibration isolation
- Ethernet connection for Cube RED

### 2) Secondary FMU

- STM32H7 480 MHz Arm® Cortex®-M7 CPU
- Ethernet connection to compute module
- Onboard IMU with temperature compensation
- Support for various external IMU
- Redundancy safety element or primary FMU in weight and size sensitive applications

### 3) AI compute module

- NVIDIA® Jetson Orin NX™ 16GB - 100 TOPS
- Running DroneCore.OS for high level of autonomy applications

### 4) Integrated WIFI

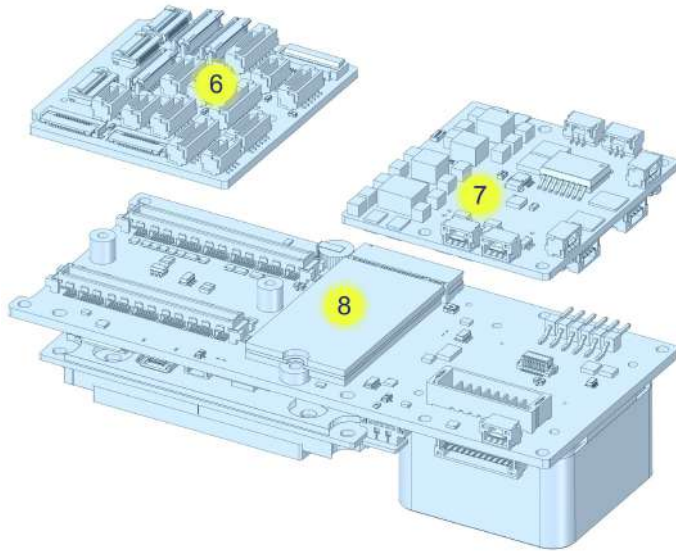
- Close range telemetry
- Configuration interface
- RemoteID ready

### 5) Ethernet switch

- 5x 1Gbit ethernet lines
- 2x reserved for FMU connection
- 3x ready for payload connection



## BOTTOM VIEW



### 6) Interchangeable extension board

- Open source, customizable design

### 7) Power board

- Customizable modular design
- Advanced redundant power design for maximum safety

### 8) M.2 SSD

- Industrial grade storage, default 256GB, up to 1TB
- High R/W speeds



## DEFAULT CONFIGURATION (1/2)

INTERFACE	MOTHERBOARD	DEFAULT EXTENSION BOARD
<b>Jetson interfaces</b>		
PCI Express x1	Integrated internal Wi-Fi module	
PCI Express x1 (to external connector)	Extension board connector	LVDS connector
PCI Express x4	NVME M.2 slot	
5x Ethernet port	2x 100Mbit routed to FMUs, 1x Gbit for payload on ZIF connector 2x extension board connector	2x Gbit for payload on ZIF connector
5x USB 2.0	1x internal bluetooth connection 1x internal multiplexed connection to both FMUs)	
	3x on Extension board connector	3x ZIF connectors coexisting with USB3.2
3xUSB 3.2	Extension board connector	3x LVDS connector
8x CSI line (in possible configurations of 4x2, 2x4, and 2x2 + 1x4)	Extension board connector	4x CSI 2 on 22 pin connector
6 GPIO UAV CAN 2xUART 4x I2C 2xSPI 2x PWM I2S	6x GPIO to extension board connector 1x CAN to extension board connector 1x UART onboard with Cube 1x UART to extension board connector 1x SPI to extension board connector 1xSPI - Onboard IMU BMI088 and barometer BMP390 on SPI 2x PWM to extension board connector 1x I2S to extension board connector	2x GPIO (GH connector) 1x CAN (GH connector) 3x I2C (routed on CSI connectors), 2x PWM (routed on CSI connectors),





## DEFAULT CONFIGURATION (2/2)

INTERFACE	MOTHERBOARD	DEFAULT EXTENSION BOARD
<b>Cube Connections</b>		
PWM output (6 + 8 lines)	Extension board connector	(7 lines ) 1x GH connector
PPM input	3 pin GH connector (shared with sec. FMU) Extension board connector	
Power sensor input, buzzer	Buzzer connector (shared with sec. FMU) Power sensor input to extension board connector	Power sensor input (GH connector)

INTERFACE	MOTHERBOARD	DEFAULT EXTENSION BOARD
<b>Cube Connections</b>		
2x CAN, 2x UART, 1x I2C, 4x PWM output, PPM input, buzzer, SPI	2x UART (GH connector) 4x PWM output (GH connector) PPM input (GH connector- shared ) Buzzer connector (shared with cube) SPI + I2C (BM23 connector)	2xCAN
	Onboard IMU BMI088 and barometer BMP390 for secondary FMU	

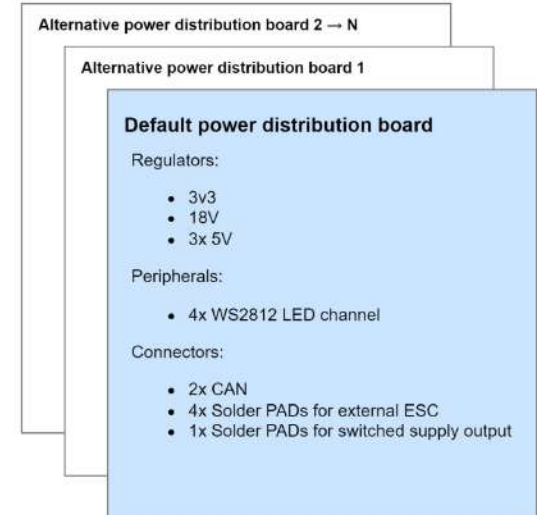
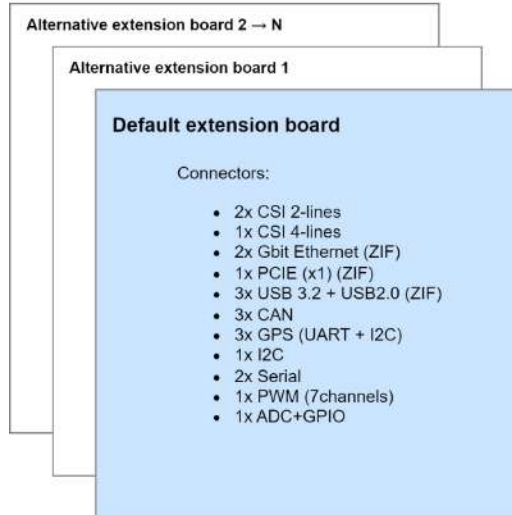
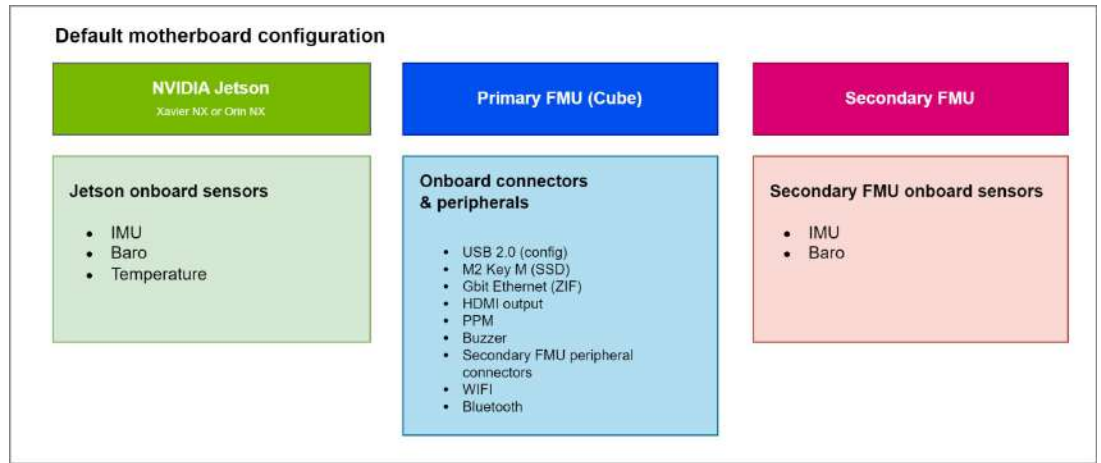


## DEFAULT CONFIGURATION

## RESOURCES

[Docs.airvolute.com](https://docs.airvolute.com)

<https://github.com/airvolute>





## QUOTE

ITEM	UNIT PRICE (EUR)
<b>DroneCore 2 in default configuration</b> Jetson Orin NX, Cube Orange+, SSD 256GB	<b>2,980</b>
Cube Blue instead of Cube Orange+	+450
No Cube*	- 160
No Jetson*	- 600

\*Only applicable for large orders.

QUANTITY	DISCOUNT
3-9 units	5%
10 - 49 units	10%
50 - 100 units	20%
100+ units	30%



Customers get access to STEP files, GitHub repos with tutorials, and to sample Altium projects for powerboard and extension board.



Prices are excl. VAT, shipping and handling. For all orders advance payment in full is required.



AIRVOLUTE

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