

# POWERCUBE VR

High power, advanced features CUBE carrier board



With the **PowerCube VR** PowerBox offers an all-in-one power supply system for the CubePilot flight controller, all the associated sensors, radio system and 24 high-power servos. The two XT60 sockets are designed for the connection of rechargeable batteries or DC generator outputs up to 35V. DC/DC converters of redundant construction provide 5V/8A power to the CUBE and its peripherals, while two additional dual DC/DC circuits supply regulated 8.0V/12.0V (20A) for the servos and 6.0V/7.4V/8.4V (8A) for peripherals or just another voltage range servos. The entire power supply system is of redundant construction throughout.

The **PowerCube VR** comes with an integral ADSB receiver internally connected to the Cube autopilot.

However, the **PowerCube VR** offers a great deal more: all the telemetry data which is gathered by the **PowerCube VR**, such as battery information, GPS or True Airspeed data (if an optional GPS-V or PBS-TAV is connected) are passed via the CAN bus to the CUBE, where the information can be used for flight control, or alternatively simply sent to the ground via the MAV-LINK interface and RC telemetry.

The **PowerCube VR** has two receiver inputs, the system switches to the second one if the first one has no signal. The RC receivers connected to the system (P<sup>2</sup>-BUS/EX-BUS/S.BUS2/SRX12) can be used by the radio control system to activate a bypass, which circumvents the CubePilot control system. In by-pass mode it is possible with a fixed-wing aircraft to revert to proven iGyro technology, which is easy to set up. This enormously reduces the load on the pilot during manual take-off and landing during the set-up and parameter adjustment phases of the CubePilot flight controller.

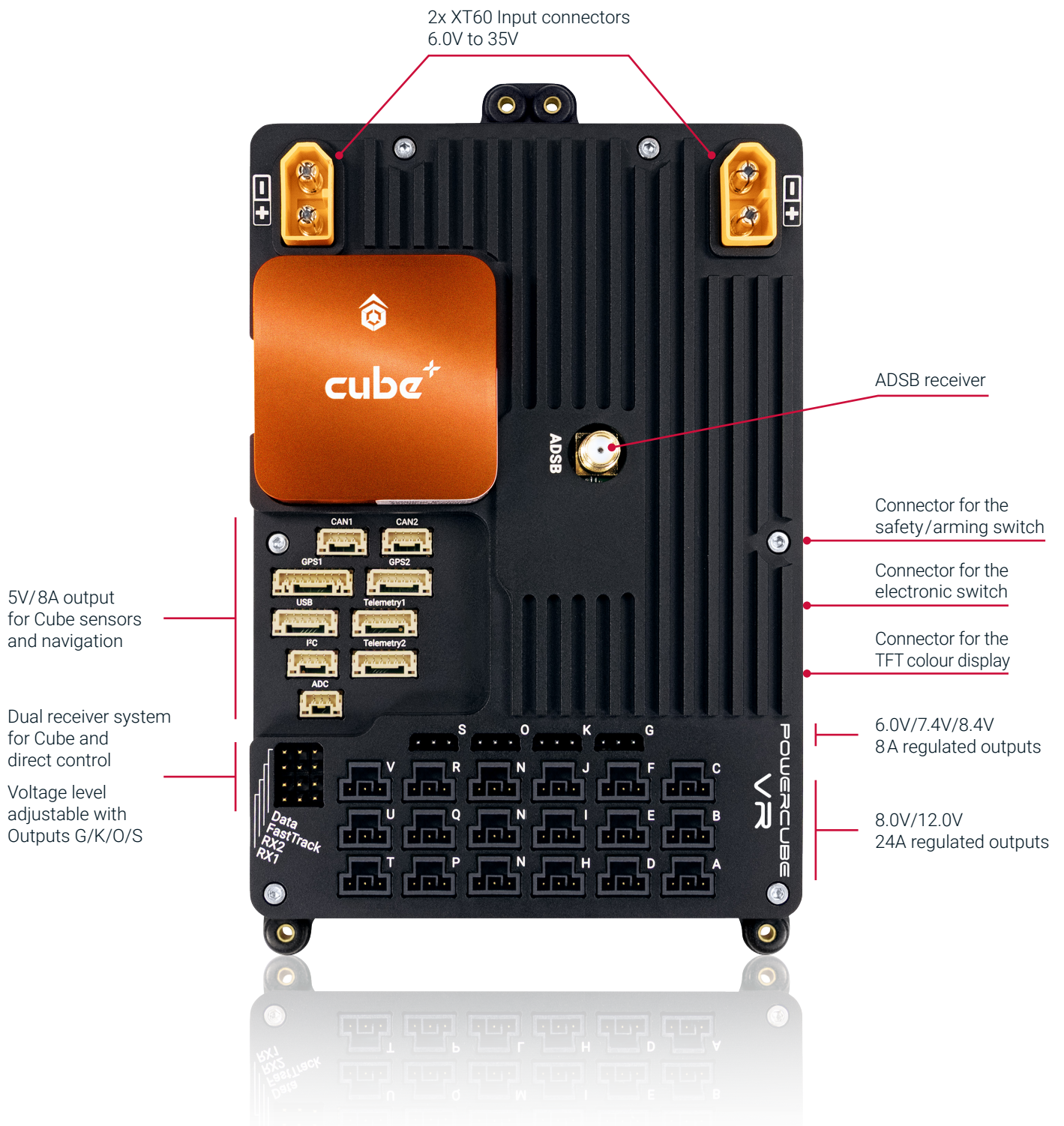
All the servo outputs are freely assignable. If your aircraft features multiple servos actuating one control surface, the **PowerCube VR** offers a unique automatic servo-match function, which allows these servos to be synchronized in just a few seconds. Two door sequencers, operating independently of each other, can be used to control a retractable undercarriage and wheel doors, or other control sequences, using only one channel. Each sequencer can control up to six servos with individual timing. The unit features a full-colour 2.4" monitor which is legible in sunlight. Intuitively designed menus and assistants for initial installation, servo matching or the door sequencer make it a simple task to prepare the system for operation.

## FEATURES

- + All-in-one power supply system for the CubePilot flight controller
- + High-performance dual power supply with high continuous current delivery
- + Wide input voltage range from 7V\* to 35V
- + Selectable 8.0V/12.0V - 20A continuous power supply for servos connected to the system
- + Selectable 6.0V/7.4V/8.4V - 8A continuous power supply for servos or peripherals
- + 5.0V-8A continuous power supply for Autopilot and peripherals
- + Consistent dual construction of the high-power electronics
- + Dual receiver input for redundancy
- + Redundant electronic switch
- + Integral ADSB receiver
- + 26 channels (S.BUS: limited to 16)
- + 22 freely assignable servo outputs
- + CAN-BUS connection to the Autopilot system
- + Availability of all telemetry data for the Autopilot
- + Telemetry data for the RC system (P<sup>2</sup>-BUS/S.BUS2/SRX12/EX-BUS/HoTT/M-Link)
- + By-pass function for the Autopilot system
- + Servo-matching for all 22 outputs
- + Auto-matching function
- + 2 independent door sequencers with set-up assistant
- + Latest type of integral iGyro technology, with iGyroSAT as gyro sensor
- + 12 independent gyro outputs for: 4x aileron, 4x elevator, 4x rudder
- + All 12 gyro outputs with individual gain control
- + Graphic menu representation for ultra-simple programming
- + Sophisticated assistant for fast initial set-up
- + Optional use with GPS-V or PBS-TAV for speed-dependent gyro compensation (by-pass mode only)
- + Virtually every aspect can be operated from PowerBox and Jeti transmitters
- + User-selectable servo frame rate: 10ms, 12ms, 14ms, 16ms, 18ms
- + Suppression of servo feedback currents
- + 2.4" TFT screen, legible in sunlight
- + Bi-lingual menu system
- + Latest 32-bit micro-processor for precise high-speed signal processing
- + Optimised heat dissipation via high-performance machined metal heat-sink
- + Machined, anodised aluminium switch and screen case
- + Compact dimensions (147 mm x 91 mm x 28 mm)
- + Weight only 234 g (without Cube)

\*Input voltage below output voltage of the DC/DC converters is going through with max.1V loss under load

## CONNECTOR SCHEMATIC



## DIMENSIONS

