PowerBox Systems® Industrial

POWERCUBE ONE

High power, advanced features CUBE carrier board

With the **PowerCube One** PowerBox offers an all-in-one power supply system for the CubePilot Cube 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. DC/DC converters of redundant construction provide 5V power to the CUBE and its peripherals, while an additional DC/DC circuit supplies a regulated 8V supply to the RC receiving system, the optional iGyro, GPS or True Airspeed Vario, and four servo sockets. The input voltage of 6V - 35V is available with minimal losses at all the other servo sockets. The entire power supply system is of redundant construction throughout.

However, the **PowerCube One** offers a great deal more: all the telemetry data which is gathered by the **PowerCube One**, 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.

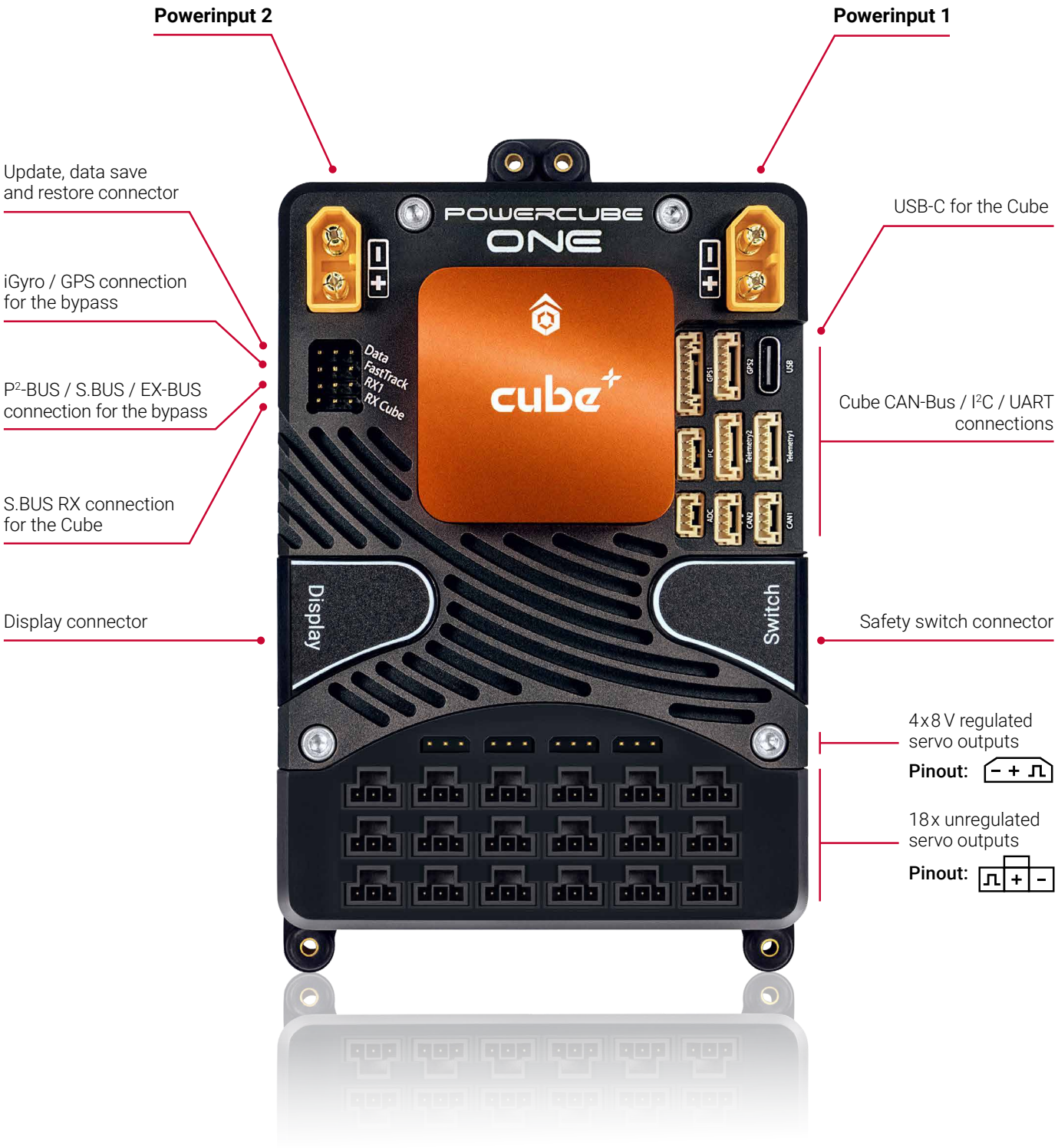
The RC receiver connected to the system (P²-BUS/EX-BUS/S.BUS2/SRXL2) can be used by the radio control system to activate a by-pass, which circumvents the CubePilot control system. In by-pass mode it is possible with a fixed-wing aircraft to revert to proven iGyro technology, which is easy to set up. 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 individual control surfaces, the **PowerCube One** offers a unique automatic servo-match function, which allows these servos to be synchronised 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 Cube flight controller
+ High-performance dual power supply with high continuous current delivery
+ Low-loss 6-35V power supply for servos connected to the system
+ 2x 40A brief maximum current load (10 s)
+ 2x 20A continuous load for the unregulated outputs
+ 8A continuous load for the regulated 8V outputs
+ High-performance 5V/3A power supply for the CubePilot and peripherals
+ Consistent dual construction of the high-power electronics
+ Redundant electronic switch
+ 26 channels (S.BUS: limited to 16)
+ 22 freely assignable servo outputs
+ CAN-BUS connection to the CubePilot system
+ Availability of all telemetry data for the CubePilot
+ Telemetry data for the RC system (P²-BUS / S.BUS2 / SRXLS2 / EX-BUS / HoTT / M-Link)
+ By-pass function for the controller
+ 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: 10 ms, 12 ms, 14 ms, 16 ms, 18 ms
+ 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 (137 mm x 84 mm x 31 mm)
+ Weight only 170 g (without Cube)

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