

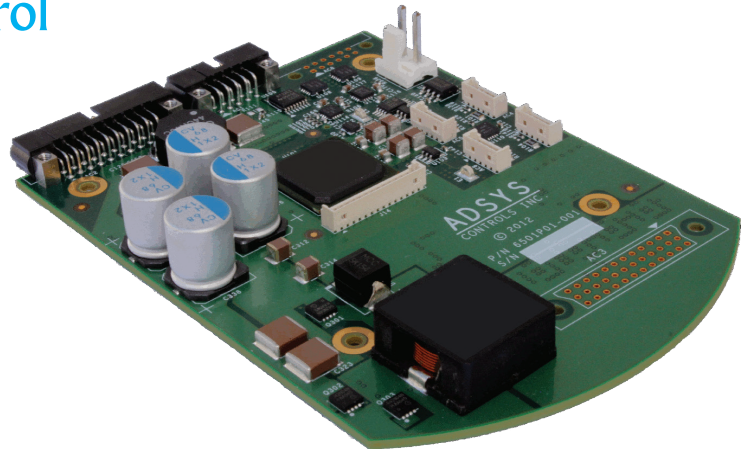
# GCP 6501

## Gimbal Control Processor

**ADSYS**  
CONTROLS INC.

The GCP-6501 combines power distribution, embedded processing, versatile I/O, and precision pointing control to support compact motion control needs in a low SWaP package.

The GCP-6501 provides extensive mode control for both position and inertially controlled gimbals. A modular form factor allows for motor drive of DC, brushless, and/or stepper motors.



### Control Features

- » Position Control on Encoders
- » Rate Control on Encoders
- » Inertial Pointing on IMU/AHRS
- » Inertial Damping Modes
- » Geo-pointing
- » Commanding via CAN or RS-232
- » Motor Braking
- » Motor Current Sensing
- » Supports DC, Brushless, or Stepper Motors

### Main Board Features

- » 300MHz Microcontroller
- » Power Input 12-24V
- » On-board Temperature Sensor
- » CAN Interface
- » RS-232 Interface

### Primary Peripherals

- » 2 PWM Outputs
- » Two RS-232 Channels
- » One SPI Channel
- » Eight Digital Outputs
- » Four Digital Inputs
- » Three Quadrature Decoding Channels
- » Four Photo Interrupter Channels (Supports 4-pin or 5-pin)

### Size, Weight and Power

- » 3" x 4.125" x 0.75" without Motor Drive Card
- » 3" x 4.125" x 1.2" with Motor Drive Card
- » < 2.5 Watts (Processing Only)

### Environmental

- » -40 to 85 degC

### Motor Board I/O

- » 2 Analog Outputs, 0-5V, 12-bit
- » 2 Analog Inputs, 0-5V, 8-bit
- » 4 PWM Outputs
- » 20 GPIO Lines
- » 2 Digital Inputs

### Power Outputs

- » 5V, 12V, and Unregulated Power Busses
- » Two 12V Outputs, 700mA each, Independently Switchable from MCU
- » Two 5V Outputs, 500mA each, Independently Switchable from MCU
- » 5V Output, 2A, Unswitched

### Vision Interface

- » Target Tracking Modes with Video Interface
- » Compatible with Adsys' XSight HD Video Processing Module

Adsys Controls provides solutions for precision control systems, advanced electro-optical systems, laser systems, modeling and simulation, and unmanned aerial systems for military and commercial markets. From electronics design, embedded RT software, and image processing to game-changing laser and electro-optical systems for ISR&T, weapons, communication, and navigation, Adsys Controls provides state-of-the-art solutions for the most challenging problems.

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