BTC 3EX 3-axis gimbal stabilization system with

External IMU and Joystick control

The BTC 3AEX 3-axis stabilization system is a complete solution for controlling and stabilizing a camera gimbal. It features a Vectornav IMU and a microcontroller based inertial stabilization system. Closed loop control with a hand held joystick allows for simple plug and play installation on manned platforms and RS-232 serial control for unmanned systems.

- Drive and motion stabilize 1, 2 or 3 axis (pan, tilt and roll) gimbals using standard PWM servos, Serial, CAN Bus, SPI bus or analog gimbal systems

- Versatile Inputs include: Analog, PWM, serial data (TTL or RS232), CAN or USB control systems

- Support for rotary encoders and home point based systems (ie. hall effect sensor)

The system functions by driving the gimbal in response to two inputs - movement commanded by the user, and reaction to external motion detected by the IMU, resulting in a steady view of the desired target regardless of chassis rotation. In velocity mode a command is interpreted as a rotation speed proportional to the distance from center. The system can also accept serial commands in "position mode" for greater compatibility with autopilots or other control systems.

The BTC 3AEX 3-axis stabilization system works with all BTC gimbals. System can be customized to work with many non-BTC gimbals as well.

Specifications:

Joystick Control box (LxWxH)	6" x 2.75" x 1"
IMU (LxWxH)	1.4" x 1.3" x 0.35"
Weight of installed system	1 lb
Max Power draw:	160mA @ 5-30VDC

Comparison Chart:

BTC 3 Axis Single Board		**BTC 3EX System – VectorNav IMU**
Sample rate	125 Hz	300 Hz
Precision	16 bit	32 bit
Accuracy	Pan and Roll - 1° Yaw - 4°	Pan and Roll - 0.5° Yaw - 2°

Custom Harnessing available – Contact for more details.