# EXSS-135

## Gimbal System with IR Uncooled Imager and Daylight Camera with 10x Optical Zoom

## Characteristics

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|---|---|
| Gimbal system | 2 axis gimbal with high bandwidth direct torque drive |
| Daylight video camera * | PANASONIC GP-MH310 |
| Daylight camera field of view | horizontal – 50.6° to 5.5°vertical – 29.3° to 3.1° |
| Minimum illumination | 2.0 lx (color), 0.1 lx (B/W) |
| Infrared imager core * | TC 640, uncooled module with shutter |
| Infrared imager lens | 35 or 20 mm atermalized lens |
| Infrared imager field of view | 35 mm – 26° x 20°20 mm – 44° x 33° |
| Pan/Tilt range | Unlimited – slip ring on both axes |
| Maximum slew rate | Up to 300 °/sec |
| Feedback position resolution          * | 0.072° or 1.25 mRad |
| De-stabilization     ** | Less than 250 uRad  (1σ) |
| Control interface | 1x RS232, 1x auxiliary RS232, up to 3x GPIO with 3.3V levels for external devices control, like video switching, gimbal deployment mechanics control, etc. |
| Video output | Daylight camera – 1x component Y Pb Pr up to 1080i or ITU472-3 (PAL)Infrared imager – 1x ITU472-3 (PAL)<br>Both signals (daylight and IR) are available at the same time on the external connector (i.e. no video switching inside gimbal) |
| Weight | 1.9 kg |
| Working voltage | 18-30 V |
| Power | Less than 15 W |
| Control interface | RS232, 115200 bps, 8N1, proprietary binary protocol |
| External connector * | PC10TB, or customized |

*This can be customized according customer specification.
**Better de-stabilization can be set as option, if it is required for operation customized optical sensor set.

**CHALLENGER**
AEROSPACE SYSTEMS

## Description

EXSS -135 is a gyro stabilized gimbal system, containing FULL HD daylight camera with 10x optical zoom, and infrared imager with 640*480 resolutions. 2 axis gyro stabilized gimbal is specially developed for applications on different kind of unmanned aerial vehicles, with fixed or rotary wing. All control electronics, required for gimbal operation, is fit inside the unit shell. Platform is controlled by high bandwidth, purpose built coreless direct torque motors, with gearless drive, which allow to achieve low de-stabilization, required for embedded optical sensors operation, enabling good and stable image quality even at maximum optical zoom value.