Pointing Control

Pointing Control...........................Fully 3D pointing control

Attitude Estimation & control.............1000Hz update rate

Pan-Tilt Pointing...Yes

Rates Pointing...Yes

Stow Mode(Protected Lens).........................Yes

Pilot Mode(Look Forward)..............................Yes

Supported Platforms..................Fixed Wing / Rotary Wing

Mechanical (Gimbal)

Dimensions (DxH).........................90x148 mm[1]

Weight...498 g

Main connector..................................High Density DB-26

Motors..Brushless

Mechanical (Electric Board)

Dimensions (WxHxL)...............................50x21x106 mm[2]

Weight..80 g

Main connector..................................High Density DB-26

GPS Connector...UFL female

Electrical

Supply Voltage.................................... 9V – 28V[3]

Power Consumption......................................8 W

Maximum Temperature Range...................-30°C to +85°C

Recommended Temperature Rating.........+10°C to +60°C

Sensor Suite

3 axis accelerometer ....±10 g

3-axis gyroscope ....± 300°/s

Temperature Sensor.....................On-Board -55 to +125°C

Encoders..Yes

GPS Sensor....................................... Avoids interference[4]

ADC..............................…......4 Channels for Voltage Monitoring

Video Module

Sensor......................................1/4-type EXview HAD CCD

Zoom Ratio...10X

Angle of View...........................46.0° (Wide) to 4.6° (Tele)

Video Output...PAL

Available Output for Video Tx Supply...........................12V

Horizontal Resolution....................................530 TV Lines

Command Interface

Interface Type...RS-232

RS-232 Speed...115200 bps

GPS Positioning

Channels..12

Satellite Based Augmentation System ....Global coverage

Positioning from Command Interface.............Configurable

Hardware Architecture

Technology..................Based in Altera® FPGA technology

Access to peripherals.......................Dedicated hardware.

CPUs...............................Two NIOS II soft-cores at 50MHz

Bus access...........................Non blocking sensors access

CPU1.....Flight computer, State Estimator & Control loops

CPU2.............................Mission control, Payload & Comm

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1   Excluding connectors in front panel.
2   Excluding connectors in front panel.
3   Input voltage can reach up to 36V under certain circumstances.
4   Magnetometer occupies one RS-232 Port.