

Shaper P5

Integrated Plug-and-Fly UAV Payload

delivering unmatched accuracy, sharpest resolution and exceptional performance

Shaper P5 is an integrated solution based on Phase One P5 128MP medium format camera and SV Geo GNSS / JNS technology.

While Phase One P5 provides outstanding image quality, the SV Geo technology allows to determine the position and attitude (roll, pitch and azimuth) of images with the highest accuracy, enabling to generate orthophotos with sub-pixel accuracy without the use of GCPs in post-processing.

Key features

- camera trigger by an external signal
- camera trigger at a specified distance or time interval
- registration triggering moments
- registration of position and orientation angles of the device
- real-time output on camera position and attitude (roll, pitch and azimuth)

Main advantages:

- Plug-and-Fly
- lightweight
- compact size
- fully autonomous (does not require external control)
- data recording into internal storage
- easy-to-use software for setting up communication via wired and wireless interfaces







GNSS Performance

555 hardware channels for simultaneous tracking of

- GPS: L1 C/A, L1C, L2C, L2P, L5
- GLONASS: L1 C/A, L2 C/A, L2P, L3, L5
- Galileo: E1, E5 AltBOC, E5a, E5b, E6
- BeiDou: B1I, B1C, B2I, B2a, B2b, B3I
- QZSS: L1 C/A, L1C, L1S, L2C, L5, L6
- NavIC (IRNSS): L5
- **SBAS: L1, L5**
- L-Band: up to 5 channels

GNSS Accuracy (RMS)

Single point position:

Single point 1.2 m **SBAS** 60 cm **DGPS** 40 cm TerraStar-C PRO 2 cm

PPK combined

with INS measurements:

Horizontal 0.2 cm + 0.5 ppmVertical 0.3 cm + 1 ppm

Attitude Accuracy (RMS)

Real Time

Roll / Pitch 0.013° Heading 0.070°

Post-Processing

Roll / Pitch 0.005° 0.010° Heading

Maximum data rate

GNSS measurements up to 20 Hz **GNSS** position up to 20 Hz **INS** solution up to 200 Hz IMU raw data rate 200 Hz

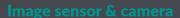
IMU performance

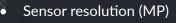
Gyroscope performance:

Technology MEMS 450 °/s Dynamic range 0 0.8 °/hr Bias instability 0 0.06 °/√hr Angular random walk

Accelerometer performance:

Technology MEMS Dynamic range 10 g Bias instability 0.012 mg Velocity random walk 0.025 m/s/√hr





128 RGB Sensor type **CMOS**

Shutter type Electronic global shutter

13.468x9.564 Frame size, pixel

Pixel size (u) 3.45 Dynamic range (dB) 80

200 - 6,400 Light sensitivity (ISO) Max. shutter speed (sec) 1/16,000

Max. frame rate (fps)

Lens focal length 35 mm or 80 mm

Angle of view in long side (°) 66 or 32 Minimum focusing range 60 m



