

Shaper X5

Modern **high-performance GNSS receiver** in a compact form factor

Delivering outstanding functionality in a streamlined, compact form factor, the SHAPER-X5 is an ideal solution for space-constrained integrations. As a fully featured multisystem, multifrequency receiver, it ensures high performance where weight and space are critical

Key features:

- Multisystem multifrequency GNSS receiver in a compact, single-board design
- Built-in protection algorithms against jamming and spoofing, as well as support of Galileo OSNMA
- A wide option of data input/output interface
- Auxiliary UART port with enhanced filtering functionality, providing an additional layer of data validation and integrity
- Full compatibility with most mass-market autopilots and digital cameras for aerial mapping
- Low power consumption
- Built-in SMART controller for receiver operations enhancement, as well as raw data and Event Markers logging
- User Friendly WEB interface for system configuration and GNSS receiver's performance monitoring and interference evaluation
- Available in enclosure and as OEM versions



GNSS Performance

Frequency (Tracking & Position):

448 hardware channels for simultaneous tracking of

- **GPS:** L1C/A, L1PY, L2C, L2P, L5
- **BDS:** B1I, B1C, B2a, B2b, B2I, B3
- **GLONASS:** L1CA, L2CA, L2P, L3 CDMA
- **Galileo:** E1, E5a, E5b, E5 AltBoc, E6
- **QZSS:** L1C/A, L1C/B, L2C, L5
- **NavIC:** L5
- **SBAS:** EGNOS, WAAS, GAGAN & MSAS (L1,L5)

GNSS Accuracy (RMS)

Single point position:

- Horizontal: 1.2 m
- Vertical: 1.9 m
- Time Precision: - 5 ns

DGPS:

- Horizontal: 40 cm
- Vertical: 70 cm

RTK:

- Horizontal: 0.6 cm + 0.5 ppm
- Vertical: 1 cm + 1 ppm

PPK:

- Horizontal: 0.6 cm + 0.5 ppm
- Vertical: 1 cm + 1 ppm

Key tracking performance in noisy environment

C/N0 thresholding value:

Signals tracking and retention	less 20 dB-Hz
Signals acquisition	33 dB-Hz

Interfaces:

- Wi-Fi: built-in WEB UI for pre-launch preparation and inspection, including an Interference Tools Kit
- 1 UART (LVTTTL)
- 1 Filtered UART (LVTTTL)
- 1 COM port (RS-232)
- 1 USB device (2.0, HS)
- 1 Event markers input
- Build-in SD card memory (up to 64 GB) for raw data recording

Connectors Type:

- PA FAMILY Connectors for main interfaces and power
- Type C for USB
- ☒ • SMA female for antenna

Physical Characteristics:

OEM

- ☒ Dimension: 83x47x15mm
- ☒ Weight: 30g

Enclosure

- Dimension: 100x55x20mm
- Weight: 85g

