

SAL SPU-100

A Revolution in High Precision Navigation



Technical Specifications SPU-100

Physical Specifications

Dimensions: 143 x 82 x 200mm (WxHxD)

Weight: 2.5 kg

Power requirements: 90-240 VAC 1A

Battery Back-up: > 7.5 hours of operation

GNSS

Tracked systems: multifrequency GPS, QZSS, Galileo, GLONASS, BeiDou

DGPS/RTK capable via RTCMv3 (NTRIP/UHF) and SBAS

Position accuracy: RTK: 0.01m RMS, SBAS: 1m

Heading: HDG Accuracy: < 0.02° (10m baseline, Relative RTK)

Rate of Turn: ROT Accuracy: < 0.1°/min

IMU (Inertial Measurement Unit)

Excellent bias instability (0.8°/hr)

Ultra low noise gyro (0.08°/√hr)

UHF Radio

Pre-configured to 454.325 MHz

Frequency range: 410 – 470 MHz

Modulation type / Protocol: GMSK, Trimtalk 450S (configurable)

Receiver Sensitivity: < -115dBm

Wi-Fi

Access Point: IEEE 802.11 a/b/g/n

Number of clients: 7

Security: WPA2

Output power: 18 EIRP [dBm]

Receiver Sensitivity: < -82dBm

Data formats

Data output (NMEA/AIS): GGA, VTG, HDT, ROT, GSA, GSV, VDM

Data protocol: NMEA-0183 (compatible with Trelleborg SafePilot)

Connectivity: Wi-Fi, Ethernet

Physical antenna connections

GNSS Antennas x2: TNC female

UHF/VHF Antenna: TNC female

Wi-Fi Antenna: SMA female

4G antenna (optional feature): SMA female

Physical data connection

USB - A: Master

USB - C: Slave

Ethernet

Mains power: 3-pin IEC C14 Inlet

Environmental Specifications

Operating Temperature: -20°C to +70°C

Storage Temperature: -30°C to +80°C

Humidity: 95% (non-condensing)

RoHS: Meets the directive for Restriction of Hazardous substances

AIS Receiver

Dual frequency: 161.975 & 162.025 MHz

Receiver Sensitivity: < -107dBm at 20% packet error rate

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