PRODUCT SHEET

TERRAIN SERIES SINGLE AND DUAL INSTALL

RA 7500 RADAR ALTIMETERS

True altitude. True safety. Robust and reliable in demanding environments.

STATE-OF-THE-ART RADAR ALTITUDE AND DIGITAL SIGNAL PROCESSING

Building on systems engineering and integration know-how, FreeFlight Systems effectively implements comprehensive, high-integrity avionics solutions. We are focused on the practical application of NextGen technology to real-world operational needs — OEM, retrofit, platform or infrastructure.

FreeFlight Systems is a community of respected innovators in technologies of positioning, state-sensing, air traffic management datalinks — including rulecompliant ADS-B systems, data, and flight management. An international brand, FreeFlight Systems is a trusted partner as well as a direct-source provider through an established network of relationships.

Designed for military and government platforms, the RA-7500 provides enhanced features like DSP-based RF processing design, and also operates in higher altitudes, across a wider temperature range. The system can also be customized to meet UAS payload requirements.

FreeFlight Systems

FreeFlight Systems designs, manufactures, sells, and supports avionics systems that improve the safety, efficiency and affordability of flying. We specialize in technologies and solutions that bring the benefits of the NextGen airspace transformation to all segments of aerospace. We are known for the quality and reliability of our products, the flexibility and compatibility of our solutions, and our commitment to long-term client satisfaction.

FreeFlight Systems is part of the ACR Group of companies.

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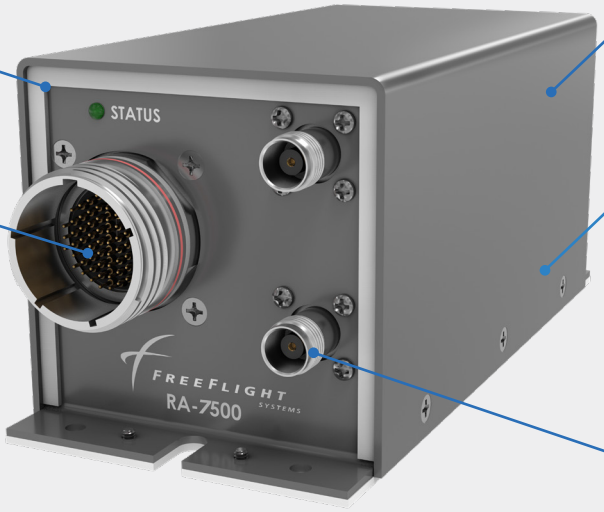
FREEFLIGHT SYSTEMS

RA 7500 PRODUCT SHEET

TERRAIN SERIES



Rugged enclosure allows for use in harsh environments.

Dual install capable and integrates with popular compatible glass displays and legacy analog indicators.

Provides enhanced features such as DSP-based RF processing design.

TSO-certified (TSO-C87a), ETSO-certified (ETSO-2C87), and approved to DO-160G and DO-178 DAL B.

Supports RS 485/422, RS-232, ARINC 429, Ethernet connectivity and USB On the Go (OTG).

TECHNICAL SPECIFICATIONS

FREQUENCY
FMCW at 4.3 GHz center frequency, 200 MHz sweep at 4.2 to 4.4 GHz

ALTITUDE RANGE
-20 to 2500 ft (minimum)

ALTITUDE ACCURACY
0 to 100 ft. ≤ ±3 feet 100 to 500 ft. ≤ 3%
500 to 2500 ft. ≤ 5%

OPERATING TEMPATURE
-55°C to 70°C

TRANSMITTER POWER OUTPUT
100mW nominal, FMCW (typical)

POWER REQUIREMENTS
400 mA Max @ 28 VDC (steady-state)

UPDATE RATE
Minimum 25 times per second (25 Hz)

SELF-TEST
Power-on self-test and recurring built-in test

ANTENNAS
Dual; response angles up to ± 20° pitch, ± 30° roll

SERVICE CEILING
55,000 ft.

SIZE
Width: 3.06 in. (77.7 mm)
Depth: 6.78 in. (172.2 mm)
Height: 3.15 in. (80.0 mm)

WEIGHT
1.90 lb (862 g)

CONNECTORS
2x TNC antenna connectors
1x 66 pin circular connector

ACCESSORIES

RAD-40 DISPLAY INDICATOR

Available as a standard or night vision goggle (NVG) capable display, the RAD-40 offers an LED readout of AGL information and has the ability to activate five trip-point discrete outputs (100-1,000 feet).

RAD-45 DISPLAY INDICATOR

Panel mounted and compliant with European and US Radar Altimeter display requirements, the RAD-45 is available as a standard or night vision goggle (NVG) capable display, offering an accurate and clear LED readout of AGL and trend information.

Specifications subject to change. Contact sales@freeflightsystems.com for latest revision.

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