

SATELLITE MODEM: A3LA-RS

Key Features

- Low cost
- Small form factor
- Data-only modem capable of SBD, SMS, data switch and RUDICS.
- Does not support voice
- RS-232 interface
- Functionally is the same as the 9522B
- ~70% smaller in volume than the 9522B
- ~70% lighter than the 9522B

Description

The A3LA-RS is a satellite modem comprised of an Iridium 9523 transceiver. It allows SBD, SMS, data switch and RUDICS connectivity to the Iridium satellite network. It does not support voice.



A3LA-RS Specifications

Mechanical

Dimensions:	3.63" x 1.88" x 0.92" (92 mm x 48 mm x 23 mm)
Weight:	~4.3 ounces (122 g)
Data/Power Interface:	15-Pin D-Sub
Antenna Interface:	SMA female connector
Enclosure:	Hard-anodized aluminum (EMI/EMC shielded)

Electrical

Input Voltage Range:	3.5V to 5.4V
Nominal Input:	5VDC
Idle Power:	60mA @ 5V
Transmitted Power:	350mA @ 5V

RF Boards

Iridium Transceiver:	Iridium 9523
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Environmental

Operating Temperature:	-22°F to +158°F (-30°C to +70°C)
Operating Humidity:	< 75% RH



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Flat Mount Antenna Model SYN7391-C

General Description

Model SYN7391-C is a small, inexpensive L-band antenna designed to operate with the NAL Research satellite modems and trackers. It is optimized to operate under various data modes specifically SBD.



Specifications

Mechanical

Dimensions: 1.81" L x 1.71" W x 0.45" H
(4.60 cm x 4.34 cm x 1.14 cm)
Weight: 1.5 oz. without cable
Color: Lusterless Black
Connector: SMA Male with 36" Cable
(Option: TNC, MCX, MMCX or N)
Material: Hard Anodized Aluminum Base
Ground Plane: Requires horizontal, relatively flat, metallic mounting surface with minimum of 2" from all edges, centered for optimal performance

Environmental

Operating Temperature: -40°F to +185°F
(-40°C to +85°C)
Operating Altitude: 20,000 ft (6 km)
Vibration: > 30 G's

Electrical

Frequency: 1610.0 to 1626.5 MHz
Radiation Pattern: Hemispherical
Polarization: Right Hand Circular
VSWR: Less than 1.5 : 1
Gain Free Space (dB): 90° Zenith +5.0
10° Elevation -2.5
20° Elevation -0.5
30° Elevation +1.0
60° to 90° Elevation > +2.7
Axial Ratio: 2 dB
Impedance: 50 Ohms
Power Handling: 30 Watts
Cable: Less than 3dB