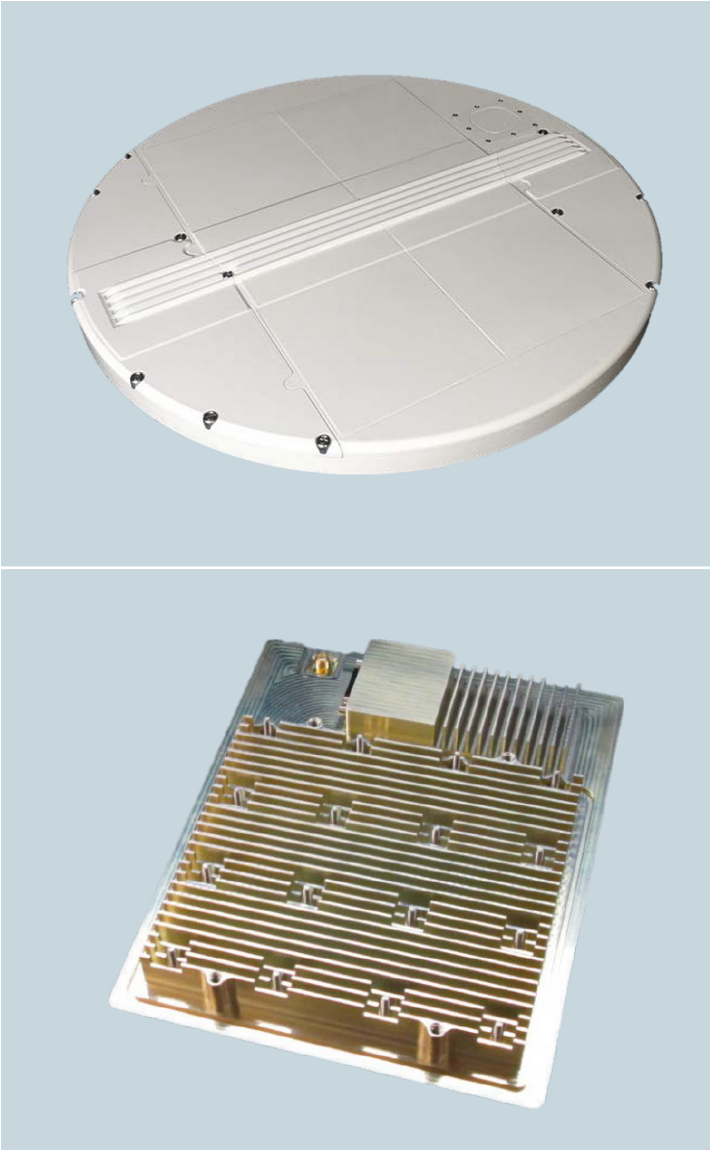


AIRLINK[®] X-1



GO BEYOND WITH BALL.[®]

Ball Aerospace has developed an industry-leading, low-profile, modular and scalable phased array architecture to reliably and affordably provide high data rate X-band SATCOM solutions. This is accomplished by using Ball's unique "sub-array" building blocks to configure an aperture size that meets the desired airborne, maritime or ground platform's size, weight, power and throughput requirements. AIRLINK[®] X-1 is a complete X-band SATCOM on the move (OTM) terminal which leverages this modular architecture into a C-130 hatch-mount configuration.

OVERVIEW

Configured for the C-130 hatch, the AIRLINK® X-1 antenna maintains usage of the hatch for an emergency exit and does not require aircraft modification. With only an adapter plate change, the antenna can be used with other airborne, maritime or ground platforms.

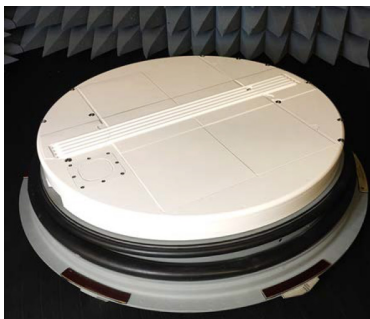
Internal to the craft is an integrated Inertial Reference Unit (IRU) for accurate satellite tracking in harsh dynamic environments which can be mounted to the hatch or elsewhere within the craft. Also internal to the craft is a 2U 19" rack-mount RF electronics unit which performs frequency conversion and provides the interface for power, Ethernet and any L-band modem. Minimal system components results in a lightweight terminal with roll on/off capability to support any C-130 mission.

The AIRLINK® X-1 terminal supports operation with Wideband Global SATCOM (WGS) and commercial X-band satellites providing operational flexibility. Performance has been demonstrated with XTAR-LANT and has received certification for operation.

ADVANTAGES

Electronically steered phased arrays have numerous advantages over mechanically steered antennas.

- No moving antenna parts or motors provides higher reliability
- Faster satellite tracking and acquisition
- Distributed amplification allows for graceful degradation
- Lower profile
- Lighter weight
- Lower power



C-130 Hatch Mount Configuration

SYSTEM PERFORMANCE

• Frequency		
Transmit		8.20 to 8.40 GHz
Receive		7.25 to 7.70 GHz
• Data Rate		
Transmit		Up to 8 Mbps
Receive		Up to 3 Mbps
• EIRP (Linear)		35 to 39.5 dBW
• G/T		0 to 2 dB/K
• Polarization		CP, Switchable LH/RH
• Axial Ratio		<2 dB
• Antenna Size		
Diameter		21.25 in
Height		1.3 in.
• System Total Weight		99 lbs (45 kg)
• Supply Voltage		18 to 31 VDC
• Peak Power		378 W
• Data/Control Interface		Ethernet
• Modem Interface		RS232/OpenAMIP

SYSTEM COMPONENTS

