



STANDARD
MIL-STD
810F

STANDARD
MIL-STD
464

STANDARD
ITU-R-S
728-1

Size:

0.35m, 0.50m

PAIR SERIES

Advanced Stabilization for Dynamic Platforms

The PALS PAIR Series is a high-performance airborne antenna system, featuring 3-axes stabilization and 4-axes tracking designed for robust connectivity on aircraft, UAVs. Its lightweight, modular design offers high-speed data rates and seamless integration for critical intelligence, surveillance, and reconnaissance missions.

Modular Agility for Critical Missions

Featuring a modular design with a common gimbal and certified RF payloads, the system enables rapid band switching in under five minutes. This agility makes it ideal for extended-duration aerial SATCOM missions, providing critical Beyond Line of Sight (BLOS) communication for real-time data and command.

Precision Tracking for Uninterrupted Links

The PAIR Series combines high-bandwidth stabilization with an integrated tracking receiver to achieve exceptional satellite tracking accuracy. This ensures a stable, secure, and continuous communication link, which is vital for mission success during high-motion operations and intelligence gathering.

Key Features

- Ku, Ka Bands available
- Fast initial satellite pointing time
- High tracking accuracy
- Exceptional tracking stability
- Rapid blockage recovery time
- Fast satellite switching time: <8 seconds
- Easy maintenance
- Dynamic pointing and dynamic satellite switching
- 4-Axes tracking system
- 4 Mbps return link upgradable to 10 Mbps
- Ku and Ka SATCOM operations including Military and Commercial-Ka



TECHNICAL SPECIFICATIONS / PAIR SERIES

Scan the QR code for more information.

GENERAL SPECIFICATIONS

Reflector Diameter
Stabilization Platform
Power Supply
Signal Tracking Accuracy
Blockage recovery time

PAIR-35

0.35m
3-Axes for stability, 4-axes for tracking
18-36 VDC 300W
<0.2° (R.M.S)
≤5s (blockage 20min)

PAIR-50

0.50m
3-Axes for stability, 4-axes for tracking
18-36 VDC 300W
<0.2° (R.M.S)
≤5s (blockage 20min)

RF CHARACTERISTIC

PAIR-35

Frequency (GHz) Tx
Frequency (GHz) Rx
Antenna Gain @ Midband (±0.2 dBi)Tx
Antenna Gain @ Midband (±0.2 dBi)Rx
Polarization
G/T (dB/K)
Antenna Pattern Compliance
Off-axis EIRP Compliance

Ku-Band

13.75~14.50
10.70~12.75
32.40
31.20
2 Port Linear
9
Compliant with ITU-R S.465-6
Compliant with ITU-R S.728-1

Ka-Band

27.50~31.00
17.70~21.20
37.50
34.00
Circular
10
Compliant with ITU-R S.465-6
Compliant with ITU-R S.524-9

RF CHARACTERISTIC

PAIR-50

Frequency (GHz) Tx
Frequency (GHz) Rx
Antenna Gain @ Midband (±0.2 dBi)Tx
Antenna Gain @ Midband (±0.2 dBi)Rx
Polarization
G/T (dB/K)
Antenna Pattern Compliance
Off-axis EIRP Compliance

Ku-Band

13.75~14.50
10.70~12.75
35.60
34.00
2 Port Linear
12.5
Compliant with ITU-R S.465-6
Compliant with ITU-R S.728-1

Ka-Band

27.50~31.00
17.70~21.20
40.90
37.20
Circular
14
Compliant with ITU-R S.465-6
Compliant with ITU-R S.524-9

MECHANICAL SPECIFICATIONS

Motion Range
Antenna Speed
Antenna Acceleration

Azimuth

360° continuous
200°/s
200°/s²

Elevation

-2° - 95°
200°/s
500°/s²

Roll

±14°
200°/s
500°/s²

Polarization

± 90°

ENVIRONMENTAL SPECIFICATIONS

Temperature Range Operational
Temperature Range Survival
Environmental Compliance
Altitude

PAIR SERIES

-55 ~ +70°C
-55 ~ +85°C
RTCA DO-160G / MIL-STD-810F
16.500 ft

Specifications are subject to change.

