

Dual-Channel Coaxial Rotary Joint with Long Life in Satcom Systems



Key Features:

- This rotary joint provides one DC-18GHz transmit channel featuring a maximum VSWR of 1.8:1 Power handling capability of 200W CW across the full frequency band, together with a second DC-4GHz channel for receive signals.
- Maximum insertion loss is 1.5dB for channel one and 0.2dB for channel two.
- Isolation between the channels is specified as 50dB.

Designed and manufactured by Link Microtek Ltd in the UK, the compact AMCORJD device is ideal for use in small-footprint stabilised VSAT antennas, which are commonly installed on board maritime vessels, in vehicles and in ground-based systems to allow access to broadband communication services. Fabricated in aluminium with an Iridite finish, the rotary joint incorporates a 51mm-diameter bulkhead flange as standard and can also be supplied with an integral slip-ring assembly if required.

New Dual-channel Ku-band Rotary Joint ideal for satellite-on-the-move and Radar Applications



Key Features:

- The central transmit channel delivers a VSWR of 1.3:1, an insertion loss of 0.3dB and power rating of 20W CW,
- The outer receive channel achieves a VSWR of 1.35:1, insertion loss of 0.5dB and a power rating of 10W CW.
- Fabricated from lightweight aluminium with a sealing rating of IP64.
- It has an operating temperature range of -40 to 55°C.
- Specified with a 10 year lifetime of continuous rotation.

Link Microtek's comprehensive range of microwave rotary joints is the AMCORJD-2KU device, which offers a coaxial dual-channel Ku-band capability that makes it ideal for both satellite-on-the-move and radar applications, either military or commercial. This new device features two channels operating in Ku band. Minimising crosstalk is therefore a critical consideration, and the rotary joint achieves an impressive 50dB minimum isolation between the channels with typical figures being better than 70dB. The internal design is based on techniques used in Link Microtek's large, complex S-band rotary joints, which are typically deployed in air-traffic control, weather forecasting and shipborne applications.

Range of In-Line Rotary waveguide Joints Featuring Rugged Construction



Key Features:

- The rotary joints are available in a variety of sizes for applications in the C, X and J frequency bands.
- They can be specified with or without mounting flanges.
- Capable of handling transmitted power in excess of 200W.
- They are precision engineered to ensure a typical maximum insertion loss of only 0.2dB and a typical VSWR of 1.5.

Link Microtek is the specialist waveguide manufacturer based in Basingstoke, England. Introducing the range of in-line rotary waveguide joints designed for use with rotating dish antenna in satellite communication uplink and earth station applications. Its features a rugged construction for long life even in the most demanding installations.

Coaxial Rotary Joint ideal for Portable Satcom Terminals



Key Features:

- Covers the Ku-Band frequency range of 13.75 GHz to 14.5 GHz.
- It can be specified with a choice of connectors. Including SMA and N-type.
- Offers inherent advantages of long life and low loss typically less than 0.3dB.
- It has power handling capability of up to 50W.
- Weighs only 60g, with 56mm in length and offer IP65 protection against the ingress of dust and water.
- Can be custom designed for individual requirements.

Link Microtek Launched a range of coaxial rotary joints primarily designed for antenna positioning applications on suitcase satellite communications terminals. Manufactured from aluminium this rotary joint is light weight and can be specified with a choice of connectors, including SMA and N-type. In addition to standard Ku-band Link Microtek produces custom designs to meet specific customer requirements for frequency, flange style and connectors.

Dual-channel Ka-band Rotary Joint for Airborne Satcom Systems



Key Features:

- Coaxial channel with a VSWR of 1.5:1 and an insertion loss of less than 0.4dB, while isolation between the two channels is better than 65dB.
- Fabricated in either aluminium or brass as standard.
- Can be specified with a variety of different coaxial connectors, including SMA, N-type and TNC.
- The device can also be supplied with an integral slip-ring assembly.
- High power handling capability of 100W CW.

Designed and manufactured by the Engineering Division of Link Microtek the dual-channel rotary joint is specifically aimed at applications in Ka-band satellite communications systems on board aircraft or unmanned aerial vehicles. The AM28RJUD device features a WR28 waveguide channel for transmissions in the 26.5 to 40GHz frequency band at up to 100W CW. The rotary joint complies with the relevant requirements of the RTCA DO-160 [AD/1] specification, which details environmental conditions and test procedures for airborne equipment - covering parameters such as temperature, pressure, humidity, shock and vibration.

X-band Microwave Rotary Joint for Satellite Tracking System

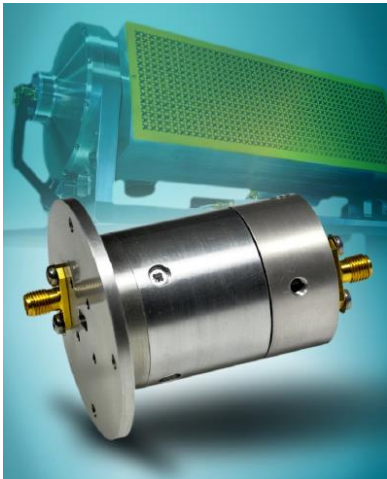


Key Features:

- Designed to transmit and receive at frequencies from 8.5 to 10.5GHz,
- The tracking system uses long runs of WR90 rigid waveguide, with six of the special single-channel rotary joints providing the necessary movement for elevation, azimuth and tilt.
- The rotary joints achieve a low insertion loss of less than 0.2dB and a VSWR of 1.2:1.
- They are manufactured from aluminium and measure 122mm in length with a heatsink diameter of 75mm.

Link Microtek has developed an X-band microwave rotary joint to meet the extremely demanding requirements of a satellite tracking system that transmits at a high pulsed power of 100kW, with a mean power of 4kW, over a wide frequency band of 2GHz. Drawing on years of experience in this field, Link Microtek's engineering team used CST electromagnetic simulation software to model those crucial aspects of the design and eventually came up with a rotary joint that could satisfy the stringent requirements of the customer's specification. As the satellite tracking system is installed in an exposed coastal location, the rotary joints also feature chromium-free passivation for corrosion resistance and IP65 sealing to prevent the ingress of moisture and dust.

Microwave Rotary Joint – the key element of new Ka-band satcom-on-the-move antenna system from ADS International



Key Features:

- Features a low-profile radome that houses a 4-port, wideband flat-panel waveguide-array antenna together with ancillary hardware.
- Operating at 19.2-21.2GHz in Rx and 29-31GHz in Tx,
- Being fully European made, is free from any ITAR/EAR restrictions.
- Isolation between the channels is greater than 35dB.
- Manufactured from aluminium it weighs only 160g and measures 49mm in length with a body diameter of 36mm and a flange diameter of 55mm.

A dual-channel Ka-band microwave rotary joint designed and produced by Link Microtek is playing a crucial role within a new stabilised antenna platform developed by Italian firm ADS International for high-end satcom-on-the-move (SOTM) applications. Key to the operation of the ADS antenna system are two of the Link Microtek rotary joints – one for azimuth and one for elevation – which enable RF signals to be fed from the static side of the system to its rotating side. The central transmit channel of each rotary joint is implemented in WR28 waveguide and delivers up to 50W of microwave power (CW) over the frequency range 29 to 31GHz with an insertion loss of just 0.5dB and a VSWR of 1.3:1. This allows the signal from the BUC, which is connected to the system port, to be transferred through a waveguide transmission line all the way to the antenna, thus minimising losses.

Dual-channel rotary joint for X-band radar systems



Key Features:

- Both channels cover the frequency range 8.0 to 9.5GHz
- Can handle average microwave powers in excess of 100W and peak powers of over 200W.
- Microwave performance is excellent, with a maximum insertion loss of only 1.2dB, maximum VSWR of 1.5:1 and an isolation of 80dB.
- Featuring N-type connectors on the rotating side and SMA-type connectors on the fixed side.

Link Microtek's extensive range of microwave rotary joints featuring two X-band channels, both of which can be used to either transmit or receive signals in radar systems for coastal/border surveillance or critical infrastructure protection. Designed and manufactured at Link Microtek's facility in Basingstoke, UK, the new AMCORJD-ALT1 device enables microwave signals to be fed to or from a compact radar antenna rotating continuously at in excess of 60rpm and typically exposed to harsh environmental conditions such as wind, rain and salt spray.