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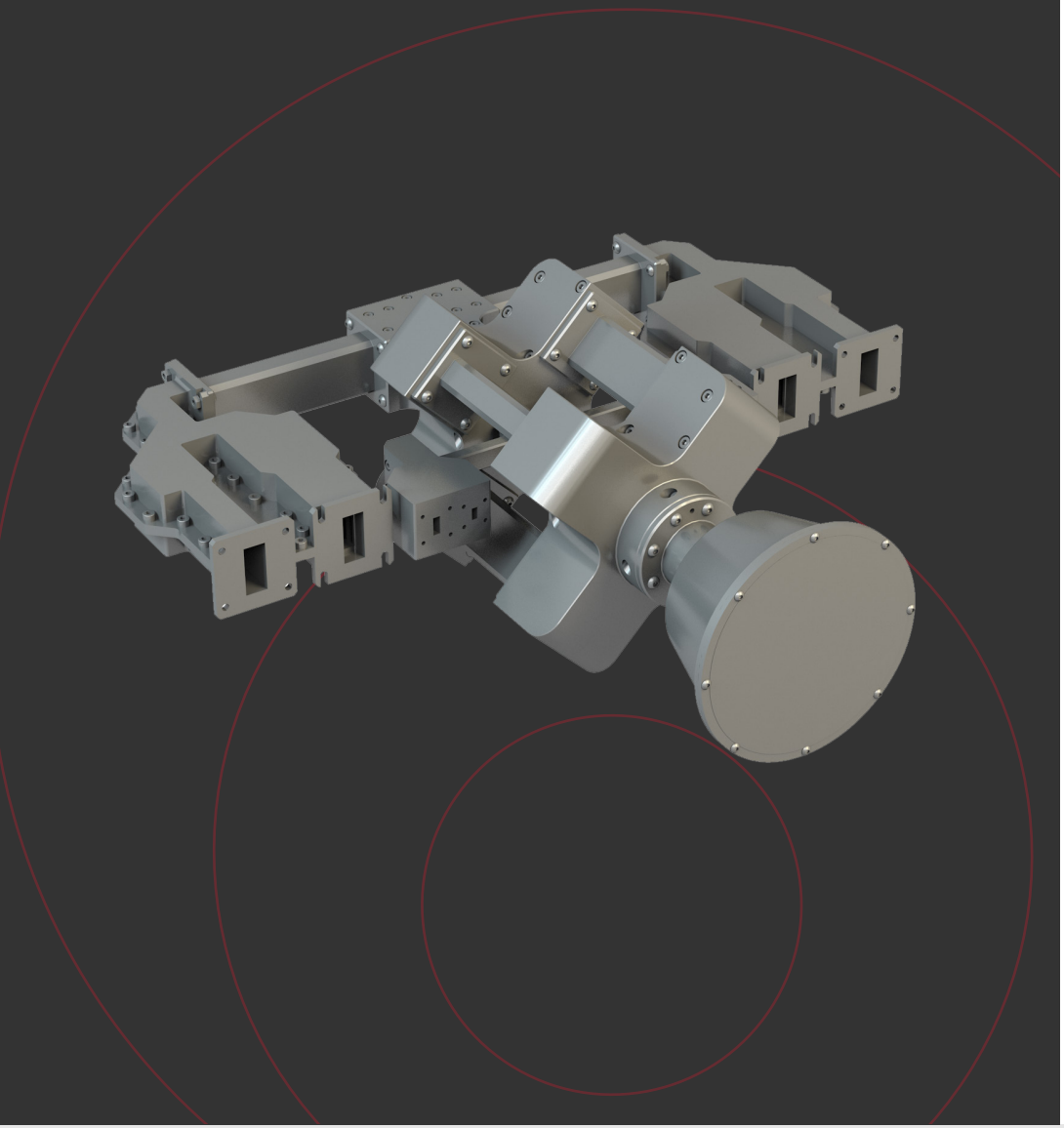

# X/K/Ka-Band GND System

## DESCRIPTION

This high-performance **eight-port** terminal provides the capability of receiving and transmitting data from/to a satellite at **X and K/Ka bands simultaneously** within any specific on-site infrastructure, since it can be easily mounted on a vehicle. It has been designed to **illuminate a 2.4m diameter reflector**.

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It is composed of an antenna which operates in both X and K/Ka bands simultaneously that has been designed to illuminate a 2.4m diameter reflector. Behind that, an orthomode transducer – OMT is responsible of incorporating the signals through different branches. In order to generate the different circular polarizations (RHCP and LHCP) a high-performance polarizer is used while four high-power diplexers provide high isolation between the different sub-bands.

## ELECTRICAL SPECIFICATIONS

### X-BAND

| Parameter | Typical value |
|---|---|
| Frequency band Downlink | 7.25 - 7.75 GHz |
| Frequency band Uplink | 7.9 - 8.4 GHz |
| Polarization | RHCP & LHCP |
| Axial Ratio | 1 dB |
| Gain | 43.5 - 44.2 dBi |
| Crosspolar level | 25 dB |
| Return Loss | 18 dB |
| Isolation RX-TX & TX-RX | 120 dB |

### K/Ka-BAND

| Parameter | Typical value |
|---|---|
| Frequency band Downlink | 20.2 - 21.2 GHz |
| Frequency band Uplink | 30 - 31 GHz |
| Polarization | RHCP & LHCP |
| Axial Ratio | 1 dB |
| Gain | 52.3 - 55.3 dBi |
| Crosspolar level | 25 dB |
| Return Loss | 18 dB |
| Isolation RX-TX & TX-RX | 85 dB |

** Gain value taking into account a 2.4m diameter reflector.*

## MECHANICAL SPECIFICATIONS (FEEDER)

| Parameter | Description |
|---|---|
| X-band Ports (x4) | WR-112 (UBR 84) |
| K-band Ports (x2) | WR-42 (UBR 220) |
| Ka-band Ports (x2) | WR-28 (UG-599/U) |
| Size | 158 x 463 x 412 mm |
| Weight | 8.5 kg |
| Material | Aluminum |

The system also includes a **radome** to protect the antenna and ensure its proper performance under bad weather conditions.

**Additional notes**

All values are typical. Actual values could vary slightly. The complete performance will be checked before delivery to fulfill specifications.

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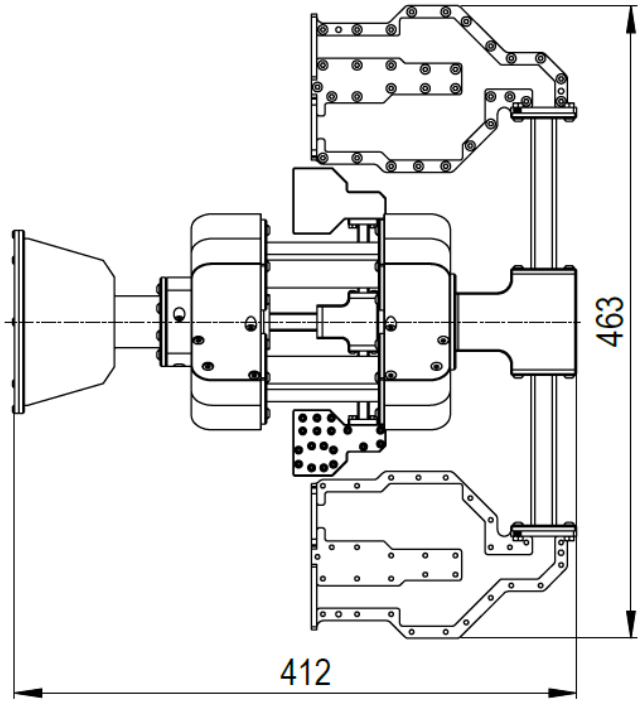
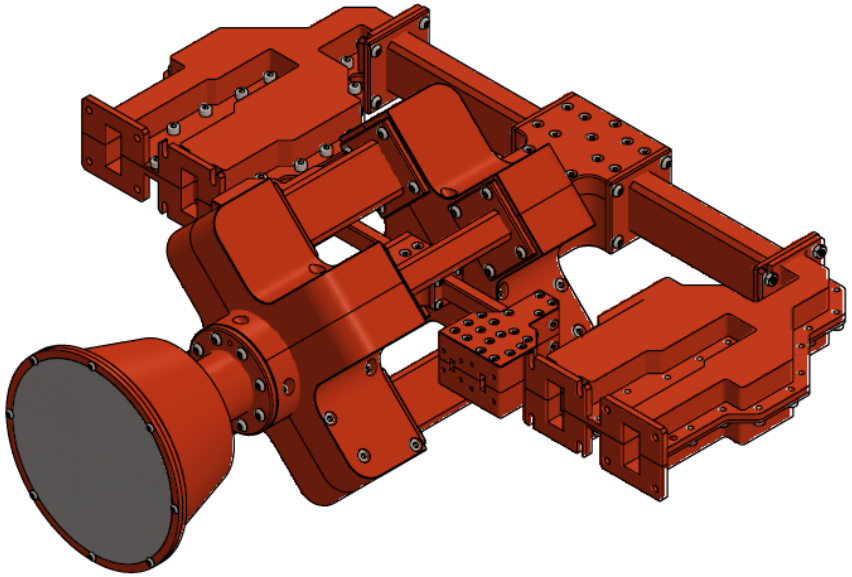
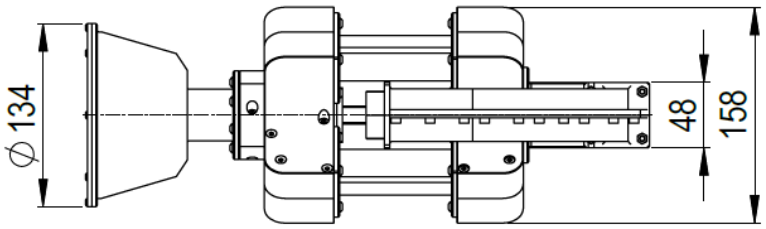
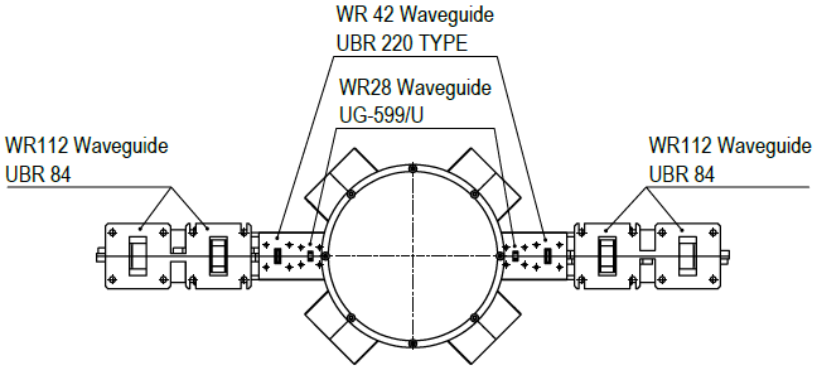
## MECHANICAL OUTLINE





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