Ground Station kit Option Sheet

Customer Contact Information

Contact Name:	
Email Address:	
Phone Nr:	
Organization / Company / Institution	
Address:	
Address (Cont'd):	
Country:	

For ISISPACE Use – Leave Blank –

Order Confirmation:	
Allocated WO:	
Sales responsible:	
Project/Ref.:	

General Configuration

VHF/UHF Station   VHF/UHF/1.9-meter S-Band   3-meter S-Band Standalone

Other, please specify your requirements below:

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

RF Configuration

Frequency band(s) of operation

UHF/VHF Frequency

Amateur ground station: VHF and UHF band

VHF uplink (145.8 – 146 MHz) + UHF downlink (435 – 438 MHz)

and UHF uplink (435 – 438 MHz) + VHF downlink (144 – 146 MHz).

Commercial ground station: VHF and UHF band

VHF uplink (148 to 149.9 MHz) with UHF downlink (400.15 to 402 MHz). For the UHF downlink frequencies, cavity filters are included.

Custom frequency band

In case your requirements do not fall under the above two categories, specify your requirements below.

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

S-band Frequency:

Amateur band (2400 – 2450MHz)

Commercial Band (2200 – 2290MHz)

Custom: –   MHz

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

S-band Antenna polarization

RHCP (Right Hand Circular Polarization)   LHCP (Left Hand Circular Polarization)

Radios

VHF/UHF Transceiver:

ISISPACE VHF/UHF Transceiver (default)

The *ISISPACE VHF/UHF transceiver* is an SDR based transceiver with configurable modulation schemes and data-rates. This transceiver is fully compatible with the ISISPACE on-board radios: *TRXVU* and *TRXUV*.

Default modulation schemes and data-rates:

- BPSK, BPSK-SRRC, BPSK-G3RUH, FSK-G3RUH, AFSK.

Bit-rate:

- Up-to 9600 bps (default)
- Higher data-rates possible on request.

Protocol:

- AX.25
- Raw bits to TCP/IP port.
- Raw received IQ samples to TCP/IP port.

Any additional requests can be specified below:

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

Do not include a transceiver

It is also possible to not include a VHF/UHF transceiver with the ground station, this gives the customer the flexibility to include their own transceiver with the ground station. In this case, the software interface for the custom transceiver will not be developed by ISISPACE Group.

ISISPACE Group
Motorenweg 23
2623 CR, Delft
The Netherlands

www.isispace.nl
sales@isispace.nl
T: +31 15 256 9018
F: +31 15 257 3969

IBAN: NL57 RABO 0118 9535 24
BIC: RABONL2U
Reg. nr.: 27293068
VAT: NL817198611B01

S-band receiver

ISISPACE S-Band receiver (default)

The ISISPACE S-band receiver is a SDR based receiver with configurable modulation schemes and data-rates. This receiver is compatible with ISISPACE on-board S-band transmitter: TXS (low data-rate version).

Default demodulation schemes:

- BPSK, BPSK-G3RUH, FSK, FSK-G3RUH.

Data-rate:

- Up-to 115.2 kbps (default).

Protocol:

- AX.25
- Raw bits to TCP/IP port.
- Raw received IQ samples to TCP/IP port.

Any additional requests can be specified below:

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

Teledyne Qubeflex

This receiver is a 'semi' SDR demodulator that has been designed and tested to support and be fully

compatible with the ISIS high rate S-band transmitter used in missions in low-earth orbit.

Default demodulation schemes:

- BPSK, OQPSK.

Symbol-rate:

- Between 625 and 5000 ksps.

Protocol:

- CCSDS

Any additional requests can be specified below:

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

Do not include a receiver

It is also possible to not include an S-Band receiver with the ground station, this gives the customer the flexibility to include their own transceiver with the ground station. In this case, the software interface for the custom transceiver will not be developed by ISISPACE Group.

ISISPACE Group
Motorenweg 23
2623 CR, Delft
The Netherlands

www.isispace.nl
sales@isispace.nl
T: +31 15 256 9018
F: +31 15 257 3969

IBAN: NL57 RABO 0118 9535 24
BIC: RABONL2U
Reg. nr.: 27293068
VAT: NL817198611B01

Mechanical Configuration

Rotor type:

Weatherized rotor

This is an all-weather rotor that comes with internal heating to operate at very low temperatures (below 0 degC) and the gearbox is completely sealed.

Note: When ordering or upgrading the ground station to include S-band, it is recommended to select double wormgear or the high-speed version.

Wormgear

Single wormgear (Low Speed, 3deg/sec)

Double wormgear (High Speed, 6deg/sec)

Heaters

Included

Not Included

Non-weatherized rotor

This rotor works well at temperatures above 0 deg C. The gearboxes are not sealed completely, but vents are made to drain any water entering the gearbox in such a way that it does not affect the gears. This rotor has a single variant, which is the double wormgear of high speed version.

Cabling

Please fill in the desired length of the RF-coaxial cables between the ground station rack and the Lightning protection box.

Please note that non-standard options need to be evaluated and agreed upon. In some cases, they might incur into additional cost which shall be determined per case.

20 Meters (Default)

35 Meters

Custom: meters (max. 50 meters)

Other

Supply Voltage

230V/50Hz   120V/60Hz

Power Socket

EU standard   USA standard   UK standard

Other, please specify the type below:

NOTE: All alternative connector requests need to be reviewed and approved by ISISPACE and might incur in additional costs.

Shipping

    Included   Not Included

Installation and Training

    Included   Not Included

Additional comments