

SCM - Z020 - xx - V1.0

GROUND STATION TT&C MODEM FOR LEO SATELLITE COMMUNICATION

RF Features

- Adjustable RX and TX frequency in 100 to 500 MHz
- Two transmitter port for R/L polarization antenna
- Two receiver port for R/L polarization antenna
- Adjustable TX power up to +15 dBm
- Adjustable fixed RX gain and AGC
- Frequency reference with accuracy and stability <1 PPM

Processing Features

- Two simultaneously transmitter ports
- Two simultaneously receiver ports
- CCSDS compatible framing and channel coding
- Selective BFSK and BPSK modulation
- FSK modulation with selectable frequency deviation
- ± 15 KHz Doppler compensation ability
- CW Morse beacon detection and playing
- Satellite Doppler simulation for TX port
- Carrier transmit mode

Interface Features

- Four SMA connector
- Switchable 12V DC for LNA supply on RX ports
- Front panel OLED + four arrow key for full settings menu
- Save last setting in Non-volatile memory by user
- Single 10/100/1000 Mbps Ethernet Interface
- Two separate TCP/IP port connections for TX/RX pairs
- An independent TCP/IP port connection for settings
- GUI for modem settings and send/receive test data

Mechanical and Environmental Features

- Operation temperature $-10^{\circ} \sim 50^{\circ} \text{C}$
- Standard 1U 19" sub-rack form factor with 30 cm depth
- Net weight about 3.4 Kg

BEST IN CLASS

RX Frequency: 100~500MHz

RX Eb/N0 @BER=10e-6
<10dB

RX Sensitivity LNA NF=2dB:
-121dBm @10 Kbps

Tolerable Doppler Shift:
 ± 15 KHz

Tolerable Doppler Rate:
 $> \pm 1$ KHz/Sec

Switchable LNA DC Supply:
12V/500mA

Receiver Dynamic Range:
100dB

Frequency Stability:
<1PPM

Transmitter Power:
-60~15dBm (0.5dB step)

TCP/IP Connections:
Up to 8

Operation temperature:
 $-10 \sim 50^{\circ} \text{C}$

Arman Saman Sepehr Co.
Ten years of experience in
Satellite Communication

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