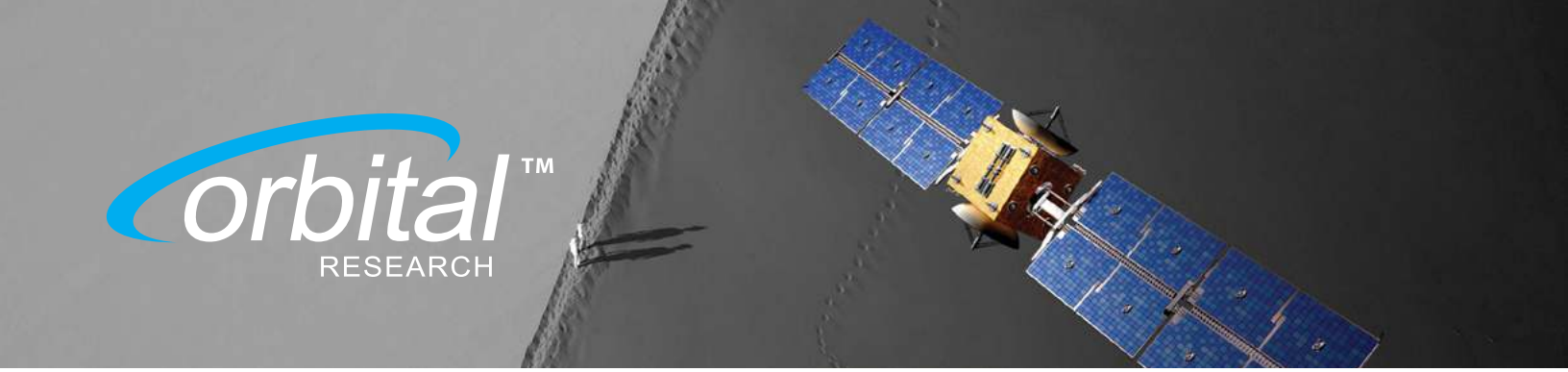


# Orbital 26 GHz Space-Based SmallSat Receiver

The 26 GHz space-based small satellite receiver from Orbital Research delivers high performance for big-bandwidth LEO missions and earth observation (EO) systems. This agile frequency converter is a perfect front-end for software defined radios (SDRs) and on-board processors in the K-band SmallSat market.

When paired with a Tethers International SWIFT SDR, our SmallSat receiver is a complete turn-key communications payload system – or it can be customized to suit your form factor. The device can be used for LEO, MEO, sun synchronous or polar orbit missions and allows for in-orbit changes to mission profiles.

To be used in space-to-space crosslinks, earth-to-space telemetry, tracking and control (TT&C), and earth-to-space communications uplinks/downlinks, among others.

- Low noise figure
- Ultra-low phase noise
- Phase locked frequency synthesized local oscillator (LO)
- DVB-S2X compliant
- CubeSat form factor 4 x 4 inches

**A companion ground terminal K-band EO LNB is also available.**

# MODEL NUMBER: LNBKASQ

| SPECIFICATIONS | |
|---|---|
| RF Frequency Band | From 24 to 27 GHz |
| IF Frequency Band | 4000 to 4500 MHz |
| Bandwidth | 500 MHz bands |
| Local Oscillator | Frequency synthesized |
| Noise Figure | 2.5 dB |
| Gain | 50 dB ± 2 dB |
| Max Ripple 10 MHz | ± 0.5 dB |
| In Band Spurs Signal | -65 dBc |
| Image Rejection | -35 dBc |
| LO Leakage Input | -60 dBm |
| LO Leakage Output | -45 dBm |
| P1DB Output | 10 dBm |
| OIP3 | 20 dBm |
| **MECHANICAL** | |
| Weight | 142 g |
| Length | 82 mm |
| Width | 93 mm |
| Height | 19 mm |
| Input Connector | K-Connector |
| Output Connector | SMP Connector |
| **VSWR** | |
| Input | 2.0 : 1 |
| Output | 2.0 : 1 |
| **POWER** | |
| DC Input Voltage Range | 6 to 8 VDC |
| DC Current | 600 mA (@ 6 VDC) |

| PHASE NOISE | |
|---|---|
| 10 Hz | -32 dBc/Hz |
| 100 Hz | -62 dBc/Hz |
| 1 kHz | -72 dBc/Hz |
| 10 kHz | -82 dBc/Hz |
| 100 kHz | -92 dBc/Hz |
| 1000 kHz | -102 dBc/Hz |

| K-BANDS COVERED | |
|---|---|
| 22.55 to 23.15 GHz* | Earth to Space |
| 24.65 to 24.75 GHz | Earth to Space, Inter-Satellite |
| 24.75 to 25.25 GHz | Earth to Space |
| 25.25 to 25.50 GHz | Inter-Satellite |
| 25.50 to 27.00 GHz | EO Space to Earth, Inter-Satellite |
| * Customizable to frequency band required | |

For more information to order or a full technical report, please contact us at **sales@orbitalresearch.net**