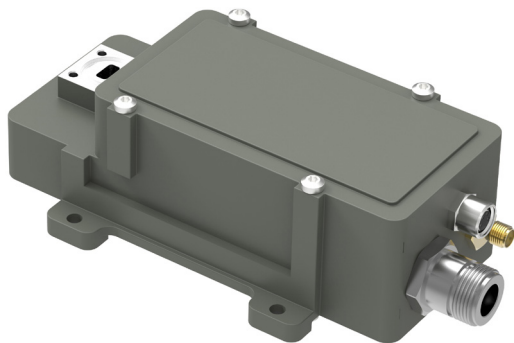


# Ka LNB 27.00-31.00 GHz 2-4 Band Uplink Monitoring

## Key features

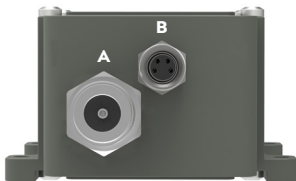


- 
- 2, 3 or 4 switchable LO Bands
  - External reference with fallback to Internal ref.
  - Low power consumption
  - Alarm and Monitoring & Control as standard
  - Automatic temperature gain compensation

### Description

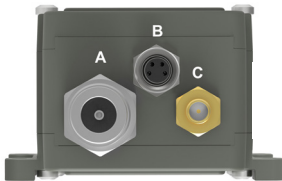
The Swedish Microwave Ka-Band LNB is based on a well proven technology platform. The product is designed to monitor uplink transmissions.

#### LNB connectors standard



- Connector A (standard)**  
 Type: N female, (option F female or SMA female)  
 Functions: L-Band out, DC in, External 10 MHz in
- Connector B (standard)**  
 Type: M8 female, 4 pin, A-coded  
 Functions: Alarm and M&C

#### LNB connector optional



- Connector C (optional)**  
 Type: SMA female only  
 Functions: Ext. 10 MHz in and/or DC input

#### Connector B standard



- 1 = Alarm open collector (max. 200 mA) or optionally DC input.
- 2 = A pos+ RS485
- 3 = B neg- RS485
- 4 = Common (GND)
- 5 = Shield



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# Ka LNB 27.00-31.00 GHz 2-4 Band Uplink Monitoring

## Technical specifications

|          |                        | Band 1                                                                                                                                                                                                                                                       | Band 2      | Band 3      | Band 4      |
|----------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|
| INPUT    | LO (GHz)               | 26.05                                                                                                                                                                                                                                                        | 27.05       | 28.05       | 29.05       |
|          | Input frequency (GHz)  | 27.00-28.50                                                                                                                                                                                                                                                  | 28.00-29.50 | 29.00-30.50 | 30.00-31.00 |
|          | Band switching         | 2-4 Bands of above, 13/18V and 22 kHz tone or via M&C                                                                                                                                                                                                        |             |             |             |
|          | Input WG               | Waveguide WR28. Flange PBR 320                                                                                                                                                                                                                               |             |             |             |
|          | DC Input               | +12 to +24 V nominal through RF output connector or separate connector (SMA). Power consumption 6W max.                                                                                                                                                      |             |             |             |
|          | Input VSWR             | 2.0:1 max.                                                                                                                                                                                                                                                   |             |             |             |
| INTERNAL | LO reference           | External 10 MHz ref. with fallback to Internal $\pm 30$ ppm -40 to +71°C                                                                                                                                                                                     |             |             |             |
|          | Internal LO ref.       | $\pm 30$ ppm max. -40 to +71°C                                                                                                                                                                                                                               |             |             |             |
|          | External 10 MHz ref.   | Sine Wave, Level -10 dBm to +10 dBm. Supplied through output connector or optional separate SMA.                                                                                                                                                             |             |             |             |
|          | LO Leakage             | -60 dBm max. @ waveguide input, -40 dBm max. @ IF output                                                                                                                                                                                                     |             |             |             |
|          | Gain                   | 40 dB typ., custom 0-40 dB via M&C                                                                                                                                                                                                                           |             |             |             |
|          | Gain Flatness          | $\pm 0.4$ dB max. within 30 MHz, $\pm 2$ dB max. over each band @ -40 to +71°C                                                                                                                                                                               |             |             |             |
|          | Gain Stability         | $\pm 1$ dB over 24 hours                                                                                                                                                                                                                                     |             |             |             |
|          | Temp. compensated      | Yes                                                                                                                                                                                                                                                          |             |             |             |
|          | Noise figure @ 23°C    | 4.0 dB / 438 K                                                                                                                                                                                                                                               |             |             |             |
|          | Phase Noise            | -34 dBc @ 10 Hz -64 dBc @ 100 Hz -84 dBc @ 1 kHz -92 dBc @ 10 kHz -96 dBc @ 100 kHz -113 dBc @ 1 MHz<br>-123 dBc @ >10 MHz typ.                                                                                                                              |             |             |             |
| OUTPUT   | Group delay            | $\pm 1$ ns max.                                                                                                                                                                                                                                              |             |             |             |
|          | Image Rejection        | 37 dB min. (LO $\geq$ 28.05 27 dB min.)                                                                                                                                                                                                                      |             |             |             |
|          | Output frequency (MHz) | 950-2450                                                                                                                                                                                                                                                     | 950-2450    | 950-2450    | 950-1950    |
|          | Output P1dB            | +15 dBm min.                                                                                                                                                                                                                                                 |             |             |             |
|          | Output IP3             | +25 dBm min.                                                                                                                                                                                                                                                 |             |             |             |
| GENERAL  | Output VSWR            | 2.0:1 max.                                                                                                                                                                                                                                                   |             |             |             |
|          | Output Connector       | N female 50 $\Omega$ or SMA female 50 $\Omega$                                                                                                                                                                                                               |             |             |             |
|          | Alarm                  | Sum alarm, set via M&C to alarm in any combination of: High/Low current, LO lock (External/Internal), signal power High/Low, supply voltage Low/High. Open collector 3.3 to 28 V, max. 200 mA (pull-up 10 k Ohm at host side), NO/NC, pin 1 in M8 connector. |             |             |             |
|          | Monitoring & Control   | Via MODBUS RTU RS485 electrical interface, see document <a href="#">Monitoring and Control technical interface</a> for details.<br>NOTE! Mates with M8 male connector/Cable, use only shielded cables min CAT5.                                              |             |             |             |
|          | Dimensions             | 144 x 74 x 44 mm (N connector)                                                                                                                                                                                                                               |             |             |             |
| GENERAL  | Weight                 | 430 g (N connector)                                                                                                                                                                                                                                          |             |             |             |
|          | MTBF                   | MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours,<br>Environmental Condition AIC (Airborne, Inhabited, Cargo): >360000 hour,<br>Quality level: Commercial, Temperature used for MTBF calculation: +35°C Ambient  |             |             |             |
|          | Temperature range      | Storage and operating: -40 to +71°C, -40 to +160°F                                                                                                                                                                                                           |             |             |             |
| OPTIONS  | Miscellaneous          | Enclosed conductive O-ring, mounting screws, Allen head M3*0.5, 8mm long, 4 pcs                                                                                                                                                                              |             |             |             |
|          |                        | <ul style="list-style-type: none"> <li>- Customized gain and LO</li> <li>- Separate SMA connector for External ref. and/or power input</li> <li>- Pressurizable 0.1 bar max.</li> </ul>                                                                      |             |             |             |

# Ka LNB 27.00-31.00 GHz 2-4 Band Uplink Monitoring

## Technical drawing

