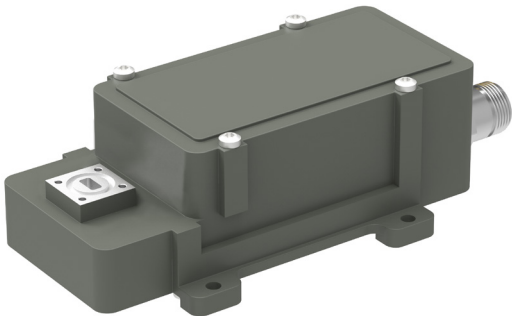


Q LNB 37.50 - 42.50 GHz 2-5 Band

Key features



- Input frequency range 37.50 to 42.50 GHz
- External reference with fallback to Internal ref.
- Low phase noise and noise figure
- Switchable LO frequency
- Standard IF frequency output
- Monitoring & Control interface as standard
- Automatic temperature Gain compensation

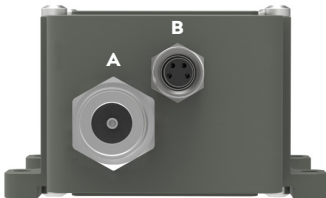


Description

The Q-Band LNB of the future, today. Packed full of our latest technology, our device provides coverage within the full Q-Band satcom downlink frequency range in one unit.

Standard features include Monitoring and Control via Modbus allowing a multitude of unique field configurable features and functions making this device both versatile and future proof.

LNB connectors (standard)



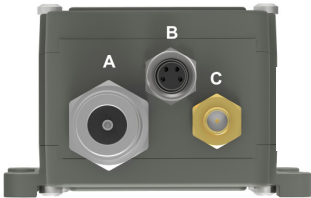
Connector A (standard)

Type: N-female, or SMA-female
Functions: L-Band out, DC in, External ref. in

Connector B (standard)

Type: M8 female, 4 pin, A-coded
Functions: Alarm and M&C

LNB connectors (optional)



Connector C (optional)

Type: SMA-female only
Functions: Ext. ref. 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



Explore our full product range in this category



Q LNB 37.50 - 42.50 GHz 2-5 Band

Technical specifications

Parameter	
MODELS	LO frequencies
	Custom between 36.55 to 40.55 GHz
	Models
INPUT	Band Switching
	2 to 5 sub-bands, max 5 Bands (legacy mode)
	Via M&C (Modbus RTU mode), optionally Voltage 13/15/18/24 Volt (Legacy mode)
INPUT	Input frequency
	2 to 5 sub-bands, custom between 37.50 to 42.50 GHz, overlap possible
	Input WG
INTERNAL	Input VSWR
	Waveguide WR22. Various flanges available on request
	2.3:1 max. w/o isolator
INTERNAL	DC input
	+11 to +26 V through output connector or optional connector (SMA), see switching above. Power consumption 5W max.
	LO reference
INTERNAL	LO Leakage
	Ext. 10 MHz ref, Sine wave, Level -10 to +10 dBm, (Internal ref; ±35 ppm -40 to +80°C, -40 to +176°F)
	-60 dBm max. @ waveguide input, -40dBm max. @ IF output
INTERNAL	Gain
	50 dB as default, adjustable 40-55 dB via M&C
	Gain variation over 24h
INTERNAL	Gain over temperature
	±0.1 dB @ 23°C
	±2 dB max., Automatic temperature Gain compensation
INTERNAL	Flatness each band
	± 2.0 dB @ 950-1950 MHz
	Noise figure
INTERNAL	Ultra Low Phase Noise
	2.8 dB typ., 3.6 dB max. @ 23°C
	1 Hz -22dBc/Hz • 10 Hz -32dBc/Hz • 100 Hz -60dBc/Hz • 1 kHz -75dBc/Hz • 10 kHz -85dBc/Hz • 100kHz -93dBc/Hz • 1MHz -120Bc/Hz • 10MHz -128dBc/Hz max.
INTERNAL	Image Rejection
	23 dB min.
	Max input level
INTERNAL	Desensitization
	-20 dBm survival continuous power in range 25.0-55.0 GHz
	Min. -25 dBm, the absolute level out of band that decreases NF by 0.1 dB in the band 47-52 GHz and 27-31 Ghz (uplink Ka)
INTERNAL	Spurioues in band
	W/o signal -75 dBm max., with -10 dBm output signal -60 dBc max.
	Group delay
OUTPUT	IF output
	Max. +/- 1ns @ 500 MHz bw, max. +/- 2ns @ 1500 MHz bw
	950-1950 MHz, or customized
OUTPUT	Output P1dB
	+15 dBm min.
	Output IP3
OUTPUT	Output VSWR
	+25 dBm min.
	1.7:1 max.
GENERAL	Output Connector
	N-type 50Ω standard, Option: SMA-type 50Ω
	Alarm functions
GENERAL	Monitoring & Control
	Sum alarm, set via M&C to alarm in any combination of: LNA failure, Total current, LO lock (Ext/Int/n/a), signal power high/low, Supply voltage low. Open collector 3.3 to 28 V, max. 200 mA (pull-up 10 k Ohm at host side), pin 1 in M8 connector.
	Via MODBUS RTU RS485 electrical interface, see sep. document for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables ≥CAT5
GENERAL	Dimensions
	144 x 74 x 45 mm (N-connector)
	Weight
OPTIONS	Temperature range
	375 g
	Storage and operating: -40 to +80°C, -40 to +176°F
OPTIONS	Miscellaneous
	Enclosed conductive O-ring, mounting screws (M3 x 8) 4 pcs
	Options
OPTIONS	- Separate SMA connector for External ref. and/or DC input
	- Voltage switching
	- Models with external LO ref. source 50, 100 or 144 MHz
OPTIONS	- Pressurizable 0.1 bar max.

C-BAND

X-BAND

KU-BAND

KA-BAND

Q-BAND

RFo FIBER

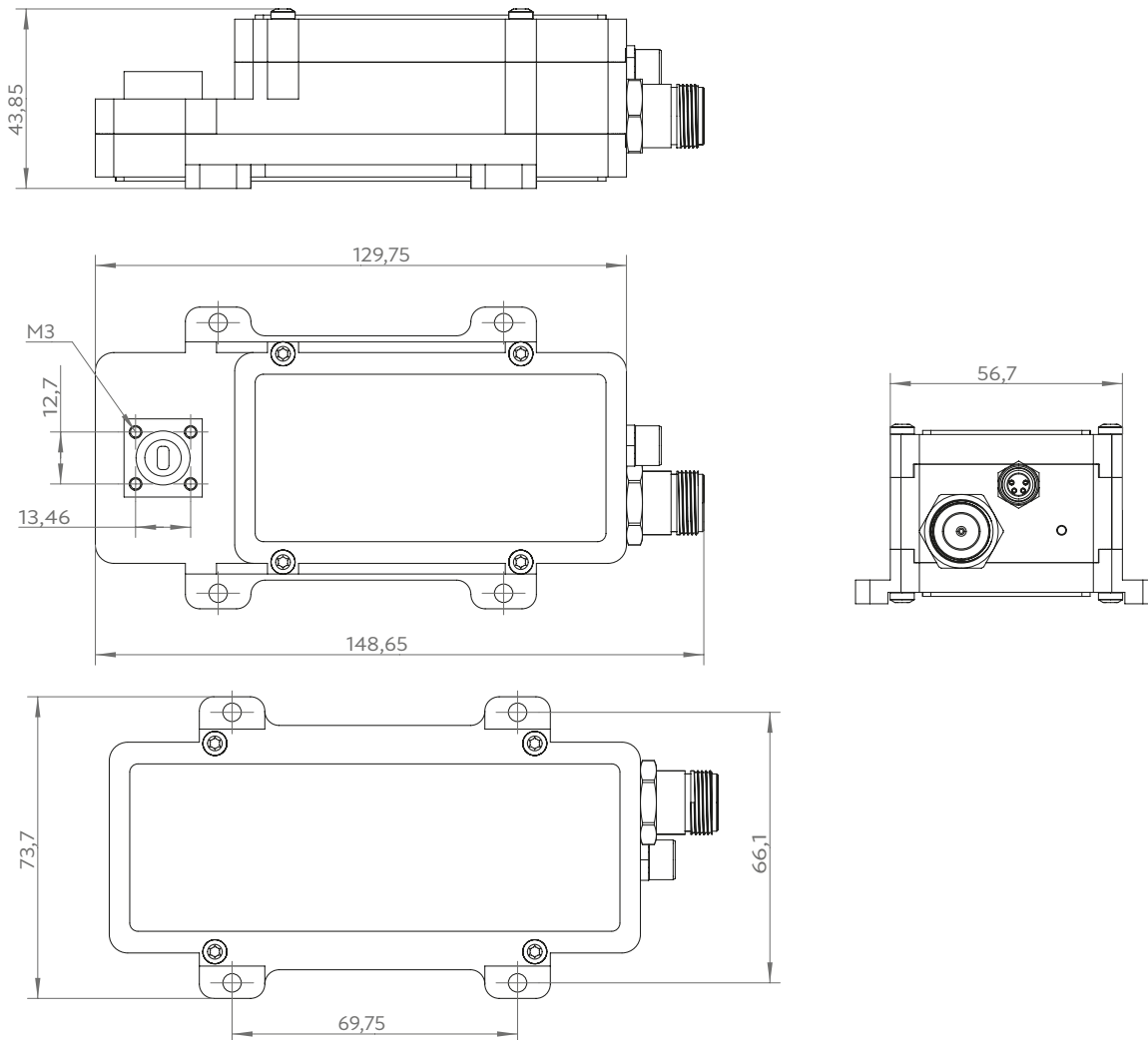
L-BAND

EXT REF

OTHER

Q LNB 37.50 - 42.50 GHz 2-5 Band

Technical Drawing



Professional Satcom Frequency Converters & Components. All products are fully CE and RoHS compliant and every unit includes full documentation of performance tests and quality control. Please contact sales@smw.se to configure or customize the unit to your needs. Visit smw.se or scan QR code to see our full product range and request a quote.

