

Ka LNB 25.50-27.00 GHz Earth Observation

Key features



- Frequency range 25.50-27.00 GHz
- Auto LO ref Ext. 10 MHz, fallback to Internal ref
- High P1dB and IP3
- Wide operating temperature range
- Enclosure fixing points
- Alarm and Monitoring & Control via Modbus RTU RS485



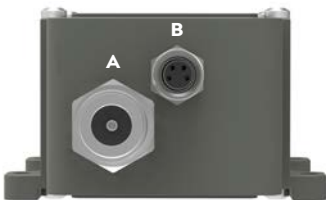
Description

In the era of Earth Observation we have introduced this great LNB.

As a well known manufacturer of high quality, high performance, cost effective Professional Sat-com Block Downconverter products and related equipment, we wanted to apply our knowledge and experience to develop this LNB for remote sensing (SRS) covering 1500 MHz IF.

This LNB has Alarm and Monitoring & Control as standard via Modbus RTU RS 485 that allows surveillance from a PC.

LNB connectors (standard)



- Connector A (standard)**
 Type: N-f, (option F-f or SMA-f)
 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 connectors (optional)



- Connector C (optional)**
 Type: SMA-f 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

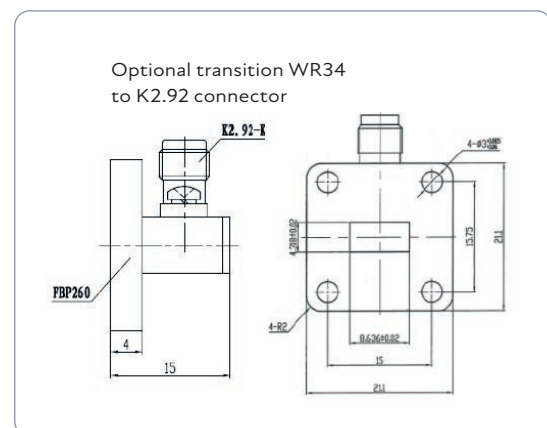
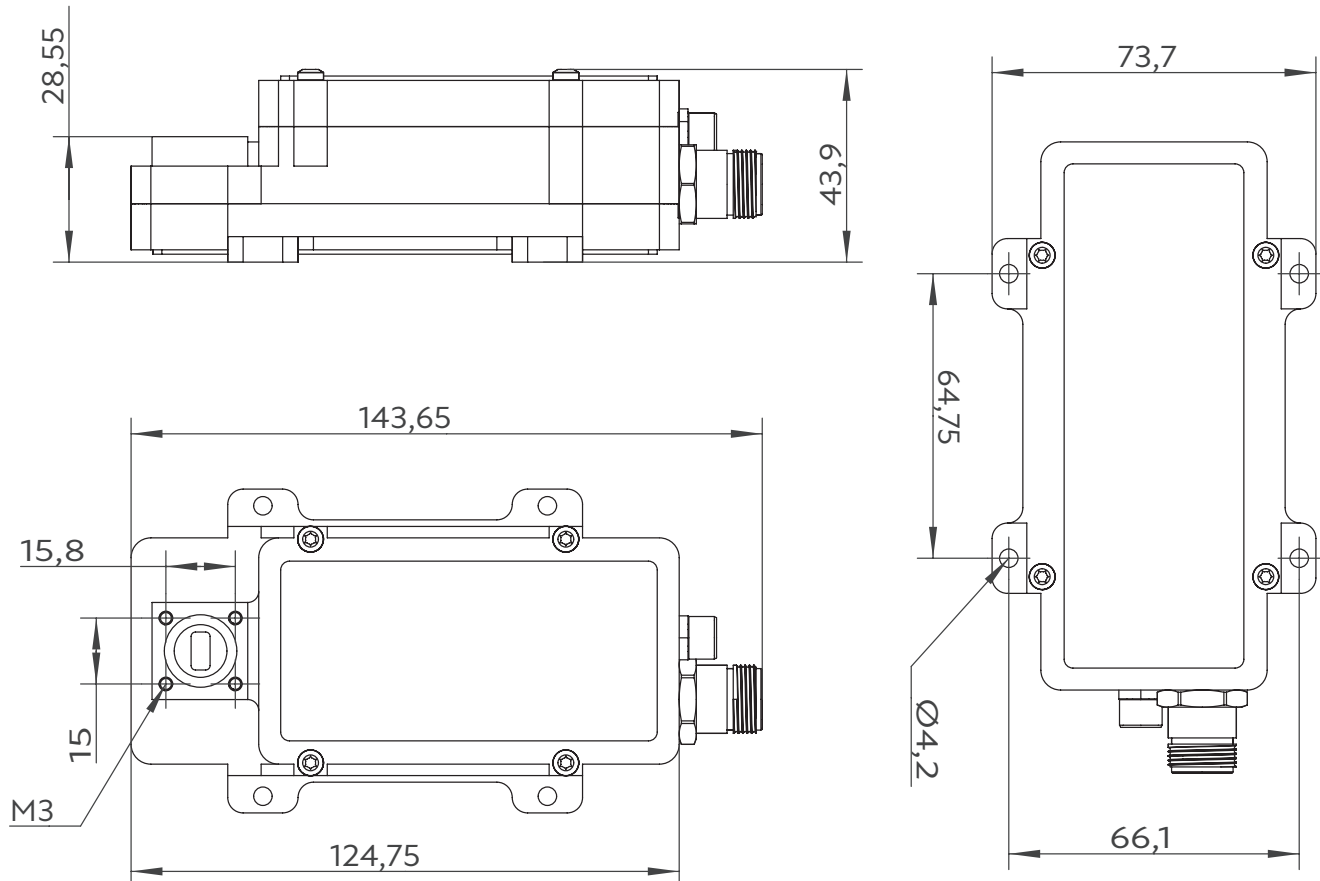
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Technical specifications

	Name	Input frequency (GHz)	LO frequency (GHz)	Output frequency (MHz)
INPUT	Input data	25.50 - 27.00	23.85 or 24.55	2400 MHz ±750 MHz or 950-2450 MHz
	Input WG	Waveguide WR34. Flange PBR 260, optional transition WG34 to 2.92 /K female		
	Pressurizable	0.1 bar max.		
	DC input	+12 to +24 V nominal through RF output connector or separate connector (SMA). Power consumption 6.5W max.		
	Input VSWR	2.0:1 max.		
INTERNAL	LO reference	Auto LO ref. External 10 MHz ref / Internal ±2.5 ppm		
	Internal LO ref.	±2.5 ppm max. -40 to +80°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		
	Gain	50 dB typ., 48 dB min., 52 dB max.		
	Gain Flatness	± 1.5 dB max.		
	Gain Stability	± 1 dB over 24 hours		
	Noise figure	2.2 dB / 169 K typ. 2.5 dB / 226 K max. @ 23°C		
	Phase Noise	-35 dBc @ 10 Hz -60 dBc @ 100 Hz -78 dBc @ 1 kHz -84 dBc @ 10 kHz -93 dBc @ 100 kHz -112 dBc @ 1 MHz -122 dB @ 10 MHz max.		
	Group delay	± 1ns max.		
OUTPUT	Image Rejection	40 dB min.		
	Output P1dB	+15 dBm min.		
	Output IP3	+25 dBm min.		
	Output VSWR	2.0:1 max.		
	Output Connector	N female 50Ω standard, Option: SMA female 50Ω		
GENERAL	Alarm	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.		
	Monitoring & Control	Via MODBUS RTU RS485 electrical interface, see document Monitoring and Control technical interface for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables min CAT5.		
	Dimensions	144 x 74 x 45 mm		
	Weight	430 g (N connector)		
	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >360000 hour, Quality level: Commercial, Temperature used for MTBF calculation: +35°C Ambient		
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176°F		
OPTIONS	Miscellaneous	Enclosed conductive O-ring, mounting screws, Allen head M3*0.5, 8mm long, 4 pcs		
		- Customized gain - Transition WR34 to K2.92 connector - Separate SMA connector for Ext. 10 MHz LO ref. & DC input - Pressurizable 0.1 bar max.		

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Technical Drawings



Designed and
Manufactured



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