

Ku LNB 12.70-15.50 GHz 1-4 Band Uplink Monitoring

Key features



- Auto LO ref Ext. 10 MHz, fallback to Internal ref
- Single Band or Multiband
- Input frequency range 12.70–15.50 GHz
- Excellent Phase Noise
- Alarm and Monitoring & Control as standard

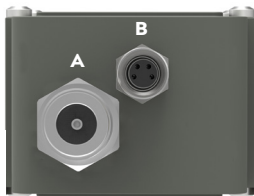


Description

The new professional 12.70–15.50 GHz LNB/TLT from Swedish Microwave is band switchable and ideal for full freedom of sub-bands available. Designed for single sub-band or up to 8 multiple sub-bands. IF range 950-2450 MHz.

Options include customized LO, customized frequency ranges, customized gain, separate DC power input and/or separate input for the external 10 MHz reference. As standard the SMW Monitoring & Control allow you the possibility to cascade multiple devices in the same Modbus network for Alarm and Monitoring & Control functionality.

LNB connectors (standard)



Connector A (standard)

Type: N-f, (option F-f or SMA-f)

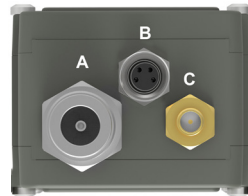
Functions: L-Band out, DC in, External 10 MHz in

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)



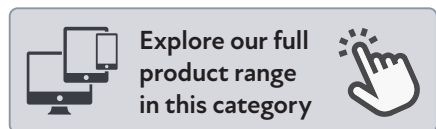
1 = Alarm open collector (max. 200 mA) or optionally DC input.

2 = A pos+ RS485

3 = B neg- RS485

4 = Common (GND)

5 = Shield



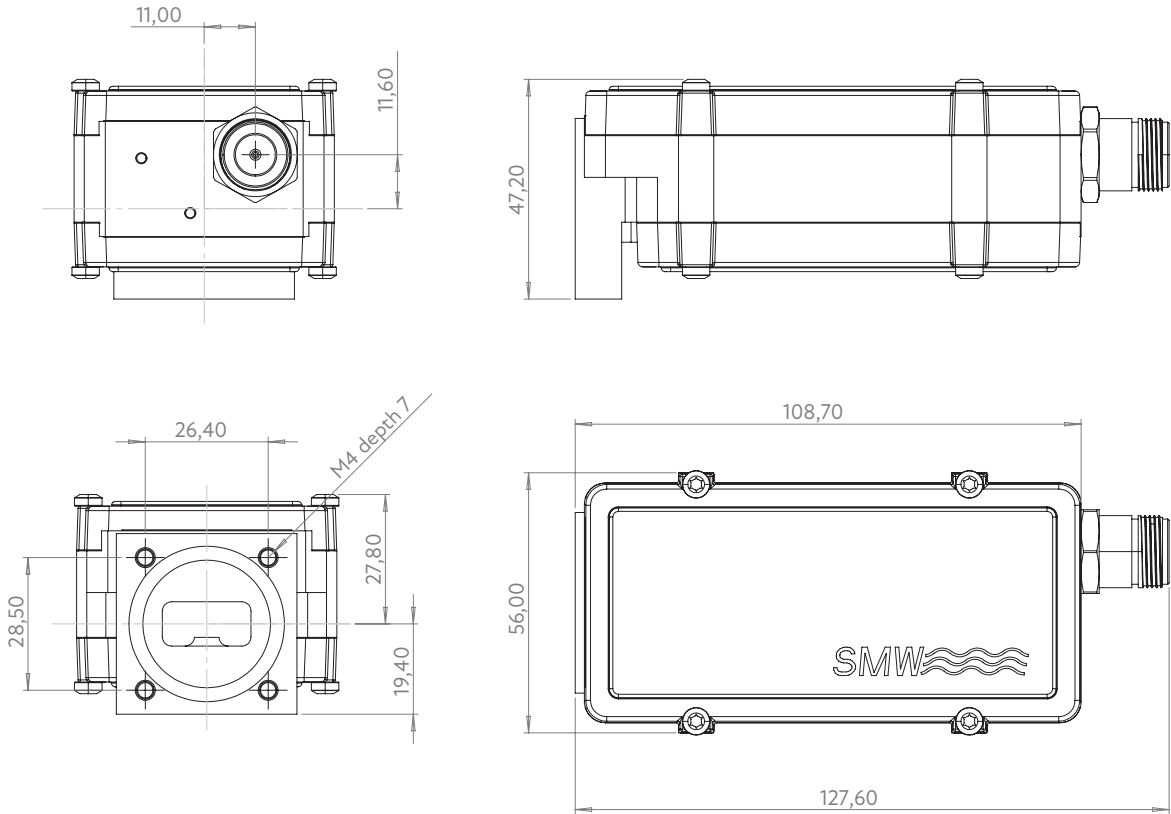
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Technical specifications

Parameter		11.75	11.80	12.00	12.50	12.55	12.80	13.00	13.05	13.10	13.20	13.50
MODELS	Model	11.75	11.80	12.00	12.50	12.55	12.80	13.00	13.05	13.10	13.20	13.50
	Input freq. GHz	12.70-14.20	12.75-14.25	13.00-14.50	13.45-14.95	13.50-15.00	13.75-15.25	13.95-15.45	14.00-15.50	14.05-15.50	14.90-15.50	14.50-15.50
	LO freq. GHz	11.75	11.80	12.00	12.50	12.55	12.80	13.00	13.05	13.10	13.20	13.50
	Multiband	Any combination of above LOs or customized, max 8 Bands										
INPUT		Legacy 13/15/18/24 V and 22 kHz tone, optionally via RS485 Modbus RTU										
	Input WG	WR75 / R120. PBR120 flange.										
	Pressurizable	0.1 bar max.										
	Input VSWR	1.9:1 max. 12.75 - 15.00 GHz, 2.6:1 max 15.00 - 15.50 GHz										
INTERNAL	Input max power	0 dBm instantaneous (not continuous)										
	LO ref.	Auto LO ref. External 10 MHz ref / Internal ±2.5 ppm -40 to +80°C										
	External LO ref.	Sine wave, Level -10 to +10 dBm. Supplied through output connector.										
	LO Leakage	-60 dBm max. @ waveguide input										
	Gain	Factory programmable 0-55 dB nom., in 5 dB steps										
	Flatness each band	±1.5 dB typ., ± 2 dB max.										
	Noise figure	1.2 dB / 92 K max. @ gain 40 to 55 dB (higher NF at lower gain)										
	Phase Noise	10 Hz -35dBc/Hz • 100 Hz -63dBc/Hz • 1 kHz -83dBc/Hz • 10 kHz -93dBc/Hz • 100kHz -96dBc/Hz • 1MHz -118dBc/Hz • >10MHz -120dBc/Hz (max).										
	Image Rejection	40 dB min. @ LO ≤ 12.50 GHz, 30 dB min. @ LO ≤ 13.05 GHz, 25 dB min. @ LO > 13.05 GHz										
	Spurioues in band	W/o signal -70 dBm max., with -10 dBm output signal -65 dBc max.										
DC and OUTPUT	Out of band rejection	20 dB min.										
	Group delay	+/- 0.25ns max. @ 50 MHz bw, +/- 2ns max @ each band										
	DC Input	+11 to +26 V through output connector or separate connector (SMA). 6W max.										
	IF output	950-2450 MHz										
	Output P1dB	+15 dBm min.										
GENERAL	Output IP3	+25 dBm min.										
	Output VSWR	1.7:1 max.										
	Output Connector	N-type 50Ω standard, Option: SMA-type 50Ω or F-type 75Ω										
	Alarm functions	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.										
	M & C functions	Via MODBUS RTU RS485 electrical interface, see sep. document for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables ≥CAT 5										
OPTIONS	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >360000 hours, Quality level: Commercial, Temp used for MTBF calculation: +35 C Ambient										
	Dimensions	128 x 56 x 47 mm (with N-connector)										
	Weight	360 g										
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176° F										
OPTIONS	Miscellaneous	Enclosed conductive O-ring, mounting screws (M4 x 10) 4 pcs (for LNB)										
	Options	Separate SMA connector for DC input Custom number of bands (2 to 8 bands) Custom LOs Custom input frequencies										

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Technical Drawing



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

