Swedish Microwave is a manufacturer of premium Low Noise Blockdownconverters (LNB) and RF distribution systems, for outdoor use. Our main goal is to make our customers more competitive with products that we can be proud of. So, what can we do for you?

X LNB 7.25-8.50 GHz 2 Band

LNB | X-BAND | M&C

Available as engineering sample

This product is based on the 2nd generation of our cross-segment platform and introduces a new critical building block. At its core lies a next-generation internal reference system, designed to deliver outstanding performance and long-term reliability.

Key benefits and improvements

- **Significantly lower phase noise** for superior signal quality
- **Improved internal reference stability:** max. ±0.5 ppm over –40 to +80 °C, maintained for 10 years without recalibration
- **Intelligent redundancy:** seamless auto-switching between internal and external references without compromising performance

Backed by more than 40 years of continuous innovation, this product embodies our commitment to uncompromising quality and technological excellence.

KEY SPECIFICATIONS		
STANDARD MODEL(S)	Band 1:	Band 2:
RF RANGE	7.25-7.75 GHz	7.75-8.50 GHz
LO	6.30 GHz	6.80 GHz
IF RANGE	950-1450 MHz	950-1700 MHz
POWER INPUT	11.5-26.0 V DC @ LNB connector	
GAIN	60 dB typ	
LO REFERENCE	Auto switch external 10 MHz / internal ±0.5 ppm for 10 years @ -40 to +80 °C	
INPUT CONNECTOR	WR 112 flange PBR 84. 4 x M4	

TECHNICAL SPECIFICATIONS		
EXT REFERENCE LEVEL	Sine Wave, level ±10 dBm	
INT REFERENCE STABILITY	±0.5 ppm max, 10 years @ -40 °C to +80 °C ±0.1 ppm typ, 1 years @ -40 °C to +80 °C	
INT REFERENCE OUTPUT	Sine wave, level typ. 0 dBm	
LO LEAKAGE	Input: -60 dBm max Output: -40 dBm max	
PHASE NOISE MAX @ 25 °C	EXT REFERENCE: -45 dBc @ 10 Hz -75 dBc @ 100 Hz -95 dBc @ 1 kHz -100 dBc @ 10 kHz -105 dBc @ 100 kHz -122 dBc @ 1 MHz -126 dBc @ 10 MHz -126 dBc @ ≥100 MHz	INT REFERENCE: -40 dBc @ 10 Hz -70 dBc @ 100 Hz -95 dBc @ 1 kHz -100 dBc @ 10 kHz -105 dBc @ 100 kHz -122 dBc @ 1 MHz -126 dBc @ 10 MHz -126 dBc @ ≥100 MHz
GAIN FLATNESS	Within 30 MHz: ±0.4 dB max, Over RF range: ±1.5 dB max	
STABILITY OVER 24H	±0.5 dB @ 23 °C	
NOISE FIGURE	0.80 dB / 58 K max @ 23 °C	

TECHNICAL SPECIFICATIONS	
GROUP DELAY	±1 ns max
IMAGE REJECTION	40 dB min
POWER CONSUMPTION	4 W typ
MAX POWER INPUT	0 dBm survival
INPUT VSWR / RETURN LOSS	2:1 max / -9.5 dB max
OUTPUT VSWR / RETURN LOSS	1.4:1 max / -16 dB max
OUTPUT P1dB	+15 dBm min
OUTPUT IP3	+26 dBm min
SPURIOUSES	In band: -65 dBc max (950-1700 MHz incl 2nd harmonic) @ -10 dBm output level Out of band: -40 dBm max (10 MHz-949 MHz and 1700-30000 MHz) @ -10 dBm output level
INGRESS PROTECTION RATING	IP67

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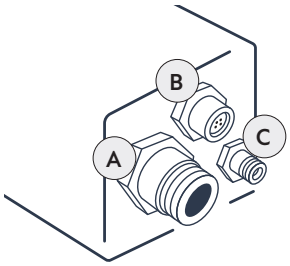

Illustration of connectors

CONNECTORS	
CONNECTOR A (STANDARD)	N (female) - IF output, power input, external reference input or internal refernce output, 22 kHz tone SMA (female) - IF output, power input, external reference input or internal refernce output, 22 kHz tone QMA (female) - IF output, power input, external reference input or internal refernce output, 22 kHz tone
CONNECTOR B (STANDARD)	M8 for Alarm and Monitoring & Control. Optionally power input and/or 22 kHz tone
(OPTIONAL)	SMA (female) - for alarm, or power input and/or 22 kHz tone
CONNECTOR C (OPTIONAL)	SMA (female) for separate external reference input or internal refernce output SMA (female) for separate power input 22 kHz tone SMA (female) for separate external reference and power input and/or 22 kHz tone

GENERAL	
DIMENSIONS	135 x 56 x 51 mm (N-connector) 128 x 56 x 51 mm (SMA-connector)
WEIGHT	381 g (N-connector) 375 g (SMA-connector)
TEMPERATURE RANGE	Storage and operating: -40 to +80 °C, -40 to +176 °F *Maximum surface/case temperature must not exceed +80 °C under worst case solar load
ACCESSORIES	Enclosed conductive O-ring, mounting screws (M4 x 10) 4 pcs
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
MONITOR AND CONTROL	Via MODBUS RTU RS485 electrical interface, see sep. document for details. NOTE! Mates with M8 male connector/Cable, use only shielded CAT 5 cables
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 High/Low. Open collector 3.3 to 26 V, max. 200 mA (pullup 1-10 kOhm at host side), pin 1 in M8 connector.
OPERATING ALTITUDE	Up to 4572 m (15000 ft) above sea level
OPTIONS	- Customized gain - CPR 112 G flange adaptor - Pressurizable waveguide 0.1 bar max. - External 10-200 MHz reference - Internal reference re-calibration - Internal reference output - Fixing points

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