

# Multiband PLL LNB

**SMW**  
SWEDISH MICROWAVE AB

2 to 8-Band switchable  
LNB, 17.20-22.30 GHz

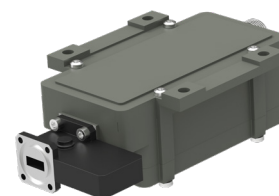
**NEW!**

## Features

- Alarm output as option
- Auto Ext/Int 10 MHz ref. switching
- Low phase noise to meet the VSAT profile of DVB-S2X
- High P1dB and IP3
- Wide operating temperature range
- Customizable switching, Voltage/Tone/TTL



**DVB-S2X**



Optional enclosure fixing points

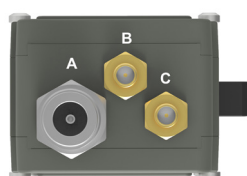
## TECHNICAL SPECIFICATIONS

MODEL:	Ka-Band Multiband
Input Frequency	2 to 8 bands, custom between 17.20 to 22.30 GHz, overlap possible
LO Frequency	Custom between 16.25 to 20.75 GHz
Output Frequency	950-1950 MHz
Band switching choice	+12 to 24 V nom. & 22 kHz, TTL or 0/12V as option via sep. SMA, (example 13/15/18/24 V & 22 kHz tone for 8 Bands)
22 kHz tone	Switching No tone/22 kHz $\pm 4$ kHz, Amplitude voltage 0.6 $\pm 0.2$ V, Duty cycle 40-60%
Gain	55 dB min. standard
Flatness each band	$\pm 2$ dB max.
Noise figure	1.3 dB @ LO 16.25 typ., 1.7 dB @ LO 20.25 typ.
Phase Noise	-35 dBc @ 10 Hz -65 dBc @ 100 Hz -80 dBc @ 1 kHz -85 dBc @ 10 kHz -95 dBc @ 100 kHz -112 dBc @ >1 MHz max.
Image Rejection	45 dB @ LO 16.25, 20 dB @ LO 20.25
Input	Flange PBR220, waveguide WR42
Pressurizable	0.1 bar max.
Input VSWR	1.25:1 max. with Low Loss Isolator (included)
Output P1dB	+15 dBm min.
Output IP3	+25 dBm min.
Output VSWR	1.7:1 typ.
Output Connector	N-type 50 $\Omega$ standard, Option: SMA-type 50 $\Omega$ or F-type 75 $\Omega$
LO reference	Auto switch External/Internal
Internal LO ref.	$\pm 2.5$ ppm -40 to +60 $^{\circ}$ C ( $\pm 3.5$ ppm -40 to +80 $^{\circ}$ C)
External 10 MHz Ref.	Sine Wave, Level -10 dBm to +5 dBm. Supplied through output connector.
LO Leakage	-60 dBm max.
DC Input	+12 to +28 V through output connector or separate connector (SMA)
Power consumption	5W max.
Dimensions	153 x 68 x 45 mm, including isolator
Weight	375 g (SMA-connector) including isolator
Operating Temperature	-40 to +80 $^{\circ}$ C
Optional Monitoring & Alarms	LO not locked, Total current consumption, LNA failure, Power detector outside limits
Alarm interface (option)	SMA-connector, Open collector, Open on fault, 3.3-24 V, max. 50mA
Other Options	Customized LO frequencies (up to 8 LOs), Separate DC (SMA), Separate 10 MHz ref. input (SMA), Separate TTL switch input (SMA), Separate 0/12V input (SMA), Customized gain, Fiber optic output
Miscellaneous	Enclosed O-ring, mounting screws (M3 x 8) 4 pcs

See the RF over Fiber and L-Band sections for output options

Rev.02-20-5F

## LNB rear connectors



### Connector A (standard)

Type: F-, N- or SMA  
Functions: L-Band out, DC in, External 10 MHz in, Band switching 13/15/18/24 V & 22 kHz

### Connector B (optional)

Type: SMA only  
Functions: DC input &/or External 10 MHz in, or TTL switching or 0/12V switching

### Connector C (optional)

Type: SMA only  
Functions: Alarm & Monitoring or External 10 MHz in

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