

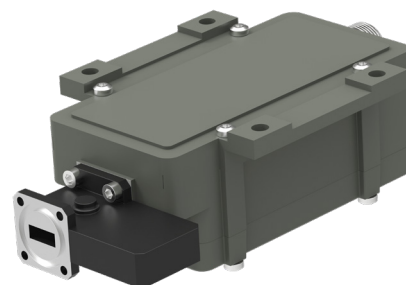
Multiband PLL LNB

2 to 8-Band switchable
LNB, 17.30-22.30 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



Optional enclosure fixing points

DVB-S2X

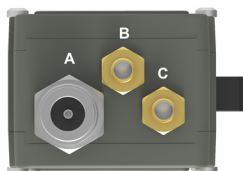
TECHNICAL SPECIFICATIONS

MODEL:	Ka-Band Multiband LNB
Input Frequency	2 to 8 bands, custom between 17.30 to 22.30 GHz, frequency sub-band overlap possible
LO Frequency	Custom between 16.25 to 20.75 GHz
Output Frequency	950-1950 MHz or 1000-2000 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 ± 4 kHz, Amplitude voltage 0.6 ± 0.2 V, Duty cycle 40-60%
Gain	55 dB min. standard
Flatness each band	± 2 dB max.
Noise figure	1.3 dB to 1.7 dB typ., increases with input frequency
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 (optional improved high band image rejection)
Input	Flange PBR220, waveguide WR42
Input VSWR	1.35:1 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 Ω standard, Option: SMA-type 50 Ω or F-type 75 Ω
LO reference	Auto switch External/Internal
Internal LO ref.	± 2.5 ppm -40 to +60 $^{\circ}$ C (± 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, RF power detector outside limits
Alarm interface (option)	Separate SMA-connector (C), 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, Pressurizable
Miscellaneous	Enclosed O-ring, mounting screws (M3 x 8) 4 pcs

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

Rev.10-20-11H

LNB rear connectors



Connector A (standard)

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

Connector B (optional)

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

Connector C (optional)

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

Specifications are subject to change without notice. Products from Swedish Microwave AB are made for commercial use.

Examples Multiband

2-BAND				
Band	Input freq. (GHz)	LO	L-band (MHz)	Switching
1	17.75-18.75	16.80	950-1950	13 V (11.5 to 14.9 V)
2	18.35-19.35	17.40	950-1950	18 V (15.2 to 26.0 V)
1	18.20-19.20	17.25	950-1950	13 V (11.5 to 14.9 V)
2	19.20-20.20	18.25	950-1950	18 V (15.2 to 26.0 V)
1	18.40-19.40	17.45	950-1950	13 V (11.5 to 14.9 V)
2	19.20-20.20	18.25	950-1950	18 V (15.2 to 26.0 V)
1	19.20-20.20	18.25	950-1950	13 V (11.5 to 14.9 V)
2	20.20-21.20	19.25	950-1950	18 V (15.2 to 26.0 V)
1	20.20-21.20	19.25	950-1950	13 V (11.5 to 14.9 V)
2	21.20-22.20	20.25	950-1950	18 V (15.2 to 26.0 V)
1	17.20-18.20	16.25	950-1950	13 V (11.5 to 14.9 V)
2	17.50-18.50	16.55	950-1950	18 V (15.2 to 26.0 V)
1-2	Customized	Cust.	950-1950	Customized

4-BAND				
Band	Input freq. (GHz)	LO	L-band (MHz)	Switching
1	17.20-18.20	16.25	950-1950	13 V (11.5 to 14.9 V)
2	18.20-19.20	17.25	950-1950	13 V + 22 kHz tone
3	19.20-20.20	18.25	950-1950	18 V (15.2 to 26.0 V)
4	20.20-21.20	19.25	950-1950	18 V + 22 kHz tone
1	17.70-18.70	16.75	950-1950	13 V (11.5 to 14.9 V)
2	18.70-19.70	17.75	950-1950	13 V + 22 kHz tone
3	19.70-20.70	18.75	950-1950	18 V (15.2 to 26.0 V)
4	20.70-21.70	19.75	950-1950	18 V + 22 kHz tone
1	18.20-19.20	17.25	950-1950	13 V (11.5 to 14.9 V)
2	19.20-20.20	18.25	950-1950	13 V + 22 kHz tone
3	20.20-21.20	19.25	950-1950	18 V (15.2 to 26.0 V)
4	21.20-22.20	20.25	950-1950	18 V + 22 kHz tone
1-4	Customized	Cust.	950-1950	Customized

6-BAND				
Band	Input freq. (GHz)	LO	L-band (MHz)	Switching
1	17.30-18.30	16.35	950-1950	13 V (11.5 to 14.9 V)
2	18.00-19.00	17.05	950-1950	13 V + 22 kHz tone
3	18.70-19.70	17.75	950-1950	18 V (15.2 to 26.0 V)
4	19.40-20.40	18.45	950-1950	18 V + 22 kHz tone
5	20.10-21.10	19.15	950-1950	24 V (20.3-26.0 V)
6	20.80-21.30	19.85	950-1450	24 V + 22 kHz tone
1-6	Customized	Cust.	950-1950	Customized

3-BAND				
Band	Input freq. (GHz)	LO	L-band (MHz)	Switching
1	17.70-18.70	16.75	950-1950	13 V (11.5 to 14.9 V)
2	18.45-19.45	17.50	950-1950	13 V + 22 kHz tone
3	19.20-20.20	18.25	950-1950	18 V (15.2 to 26.0 V)
1	17.70-18.70	16.75	950-1950	13 V (11.5 to 14.9 V)
2	18.70-19.70	17.75	950-1950	13 V + 22 kHz tone
3	19.70-20.70	18.75	950-1950	18 V (15.2 to 26.0 V)
1	17.30-18.30	16.35	950-1950	13 V (11.5 to 14.9 V)
2	18.30-19.30	17.35	950-1950	13 V + 22 kHz tone
3	19.30-20.30	18.35	950-1950	18 V (15.2 to 26.0 V)
1	18.20-19.20	17.25	950-1950	13 V (11.5 to 14.9 V)
2	19.20-20.20	18.25	950-1950	13 V + 22 kHz tone
3	20.20-21.20	19.25	950-1950	18 V (15.2 to 26.0 V)
1	19.20-20.20	18.25	950-1950	13 V (11.5 to 14.9 V)
2	20.20-21.20	19.25	950-1950	13 V + 22 kHz tone
3	21.20-22.20	20.25	950-1950	18 V (15.2 to 26.0 V)
1	17.50-18.50	16.55	950-1950	13 V (11.5 to 14.9 V)
2	18.20-19.20	17.25	950-1950	13 V + 22 kHz tone
3	19.20-20.20	18.25	950-1950	18 V (15.2 to 26.0 V)
1-3	Customized	Cust.	950-1950	Customized

5-BAND				
Band	Input freq. (GHz)	LO	L-band (MHz)	Switching
1	17.20-18.20	16.25	950-1950	13 V (11.5 to 14.9 V)
2	18.20-19.20	17.25	950-1950	13 V + 22 kHz tone
3	19.20-20.20	18.25	950-1950	18 V (15.2 to 26.0 V)
4	20.20-21.20	19.25	950-1950	18 V + 22 kHz tone
5	21.20-22.20	20.25	950-1950	24 V (20.3-26.0 V)
1	17.50-18.50	16.55	950-1950	13 V (11.5 to 13.9 V)
2	18.40-19.40	17.45	950-1950	13 V + 22 kHz tone
3	19.30-20.30	18.35	950-1950	15 V (14.2 to 16.3 V)
4	20.20-21.20	19.25	950-1950	15 V + 22 kHz tone
5	21.10-22.10	20.15	950-1950	18 V (16.6 to 26.0 V)
1-5	Customized	Cust.	950-1950	Customized

8-BAND				
Band	Input freq. (GHz)	LO	L-band (MHz)	Switching
1	17.20-18.20	16.25	950-1950	13 V (11.5 to 13.9 V)
2	17.85-18.85	16.90	950-1950	13 V + 22 kHz tone
3	18.50-19.50	17.55	950-1950	15 V (14.2 to 16.3 V)
4	19.15-20.15	18.20	950-1950	15 V + 22 kHz tone
5	19.80-20.80	18.85	950-1950	18 V (16.6 to 26.0 V)
6	20.45-21.45	19.50	950-1950	18 V + 22 kHz tone
7	21.10-22.10	20.15	950-1950	24 V (20.3-26.0 V)
8	21.70-22.30	20.75	950-1550	24 V + 22 kHz tone
1-8	Customized	Cust.	950-1950	Customized