

## WDL Dual output PLL LNB

Dual band professional LNB for simultaneous reception of Low & High Ku-Band



### Features

- Full Ku-Band coverage, simultaneous Low and High band outputs
- Low phase noise, optional ultra-low phase noise model meets all profiles of DVB-S2X
- Low gain versions for larger antennas
- Choose between Internal Ref. or External Ref. input models

The Ultra Low Phase Noise "ULPN" option is recommended\* for:

- DVB-S2: - Narrowband 8PSK 8/9 and 9/10 FEC  
 - 16 APSK or higher modulation type (any bandwidth)  
 - All applications with "Pilot Off"
- DVB-S2X: All "MODCODS" and symbol rates  
 NS3/NS4: All "MODCODS" and symbol rates

\* Please note that these are general recommendations and that all other system components also will influence system performance.

### TECHNICAL SPECIFICATIONS

MODEL:	WDL-PLL LNB type E		WDL-PLL LNB type B			
Frequency Band	Low band	High band	Low band	High band		
Input Frequency	10.70 - 11.70 GHz	11.70 - 12.75 GHz	10.95 - 11.70 GHz	11.70 - 12.75 GHz		
LO Frequency	9.75 GHz	10.60 GHz	10.00 GHz	10.75 GHz		
Output Frequency	950 - 1950 MHz	1100 - 2150 MHz	950 - 1700 MHz	950 - 2000 MHz		
Spurious	-60 dBm @ 1700 MHz typ.	-70 dBm @ 1700 MHz typ.	-60 dBm @ 1500 MHz typ.	-70 dBm @ 1500 MHz typ.		
Gain	60dB typ. (55 dB min.)					
Flatness	±0.25 dB max. within 30 MHz, ±2 dB max. each band					
Noise Figure / Noise Temperature	0.8 dB / 59 K typ.					
Phase Noise (Std)	-35 dBc @ 10 Hz	-62 dBc @ 100 Hz	-75 dBc @ 1 kHz	-80 dBc @ 10 kHz	-90 dBc @ 100 kHz	-120 dBc @ ≥1MHz, typ.
Phase Noise (Opt ULP)	-35 dBc @ 10 Hz	-65 dBc @ 100 Hz	-82 dBc @ 1 kHz	-94 dBc @ 10 kHz	-98 dBc @ 100 kHz	-120 dBc @ ≥1MHz, typ.
Image Rejection	40 dB min.					
Output P1dB	+15 dBm typ.					
Output IP3	+25 dBm typ.					
Output VSWR	1.7:1 typ.					
Output Connectors	2 pcs F-type 75Ω / N-type 50Ω	Option SMA-type 50Ω	2 pcs F-type 75Ω / N-type 50Ω	Option SMA-type 50Ω		
Input Waveguide	WR 75 / R 120. Flange PBR 120					
Input VSWR	2.3:1 max., with optional isolator 1.25:1 max.					
LO Leakage	-60 dBm @ waveguide input					
MODELS with Internal Reference	±10 kHz -20 to +70°C (±15 kHz -40 to +80°C)					
MODELS with External 10 MHz Reference	Sine Wave, Level: -10 to +10 dBm. Supplied through the High band output connector (with no ext. 10 MHz ref. LO shifts -20 ppm)					
DC Input	+12 to +26 V for type E, +15 to +26V for type B and/or with option ULPN (type E and B). Supplied through any or both output connectors (Ext. 10 MHz ref. model: High band output connector)					
Power consumption	5 W typ.					
Temperature Range	Storage and operating: -40 to +80°C					
Dimensions	122 x 57 x 46 mm (F- & SMA-connector), 128 x 57 x 46 mm (N-connector), for drawing, see <a href="http://www.smw.se">www.smw.se</a>					
Weight	335 g (F-connector), 371 g (N-connector)					
Options	Lower gain and variation. Extended low band 10.95-11.8 GHz / 10.95-12.15 GHz (type B), DC input +15 to +26 V, Waveguide Isolator, Fiber optic output (Q-ODC). Ultra Low Phase Noise to meet all DVB-S2X profiles., Pressurizable (n/a with optical output)					
Miscellaneous	Enclosed conductive O-ring, mounting screws (M4 x 10) 4 pcs.					
<b>OPTIONAL RF OVER FIBER OUTPUT</b>						
Optical output	Direct modulated DFB, 2 mW @ 1310 nm, Dual fiber, Single mode Huber & Suhner, Q-ODC					
Phase Noise ULP included	-35 dBc @ 10 Hz	-65 dBc @ 100 Hz	-82 dBc @ 1 kHz	-94 dBc @ 10 kHz	-98 dBc @ 100 kHz	-120 dBc @ ≥1MHz, typ.
RF monitor / DC input	F-type 75Ω / N-type 50Ω / SMA-type 50Ω. RF monitor port 45 dB gain.					
DC Input	Via monitor connector, Voltage see above, 6 W max.					
Dimensions	130 x 57 x 70 mm, for drawing, see <a href="http://www.smw.se">www.smw.se</a>					
Weight	520 g (SMA and F connectors), 560 g (N connector)					
Temperature range	Storage and operating: -40 to +70° C					
Standards compliance	Optical interface: EIA/TIA 568, ITU std. G694.2; EMC: EN 55013:2013, EN 55020, EN 300 386; Safety: EN 60950-1, EN 60950-22, EN 60065:2002					
Options	Fixed gain (Beacon), 1550 nm fiber transmitter					

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

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