

# Quattro WDL PLL LNB



2x Dual professional LNB's for  
Low / High Ku-Band &  
Vertical / Horizontal pol



**DVB-S2**  
**DVB-S2X**

## Features

- Full Ku-Band and both polarizations, includes OMT, bend and Weather protection cover
- High cross polarization isolation
- Low phase noise to meet the Broadcast profile of DVB-S2, optional ultra-low phase noise model meets all profiles of DVB-S2X
- High P1dB and IP3
- 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:	Quattro-PLL LNB type E		Quattro-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	0.9 dB / 67 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 (Option 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.					
Cross Polarization	31.5 dB min.					
Output P1dB	+15 dBm typ.					
Output IP3	+25 dBm typ.					
Output VSWR	1.7:1 typ.					
Output Connectors	F-type 75Ω / N-type 50Ω Option SMA-type 50Ω					
Input Waveguide	C120 (circular 18 mm)					
Input VSWR	2.3:1 typ.					
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: -15 to +5 dBm. Supplied through each High band output connector (with no ext. 10 MHz ref. LO shifts -20 ppm)					
DC Input / LNB	+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 / LNB	5 W typ.					
Temperature Range	-40 to +80°C					
Dimensions with cover	205 x 152 x 83 mm ( for drawing, see <a href="http://www.smw.se">www.smw.se</a> )					
Weight	1162 g (F-connectors), 1231 g (N-connectors)					
Options	Customized gain and variation. Extended low band 10.95-11.8 GHz / 10.95-12.15 GHz (type B), Fiber optic output (Q-ODC). Model with Ultra Low Phase Noise (ULPN) to meet all DVB-S2X profiles.					
Miscellaneous	Enclosed O-ring, mounting screws (M4 x 10) 4 pcs.					

## OPTIONAL RF OVER FIBER OUTPUT

Optical output	Direct modulated DFB, 2 mW @ 1310 nm, Dual fiber, Single mode Huber & Suhner, Q-ODC
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	205 x 152 x 83 mm, for drawing, see <a href="http://www.smw.se">www.smw.se</a>
Weight	1532 g (SMA and F connectors), 1601 g (N connector)
Temperature range	-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