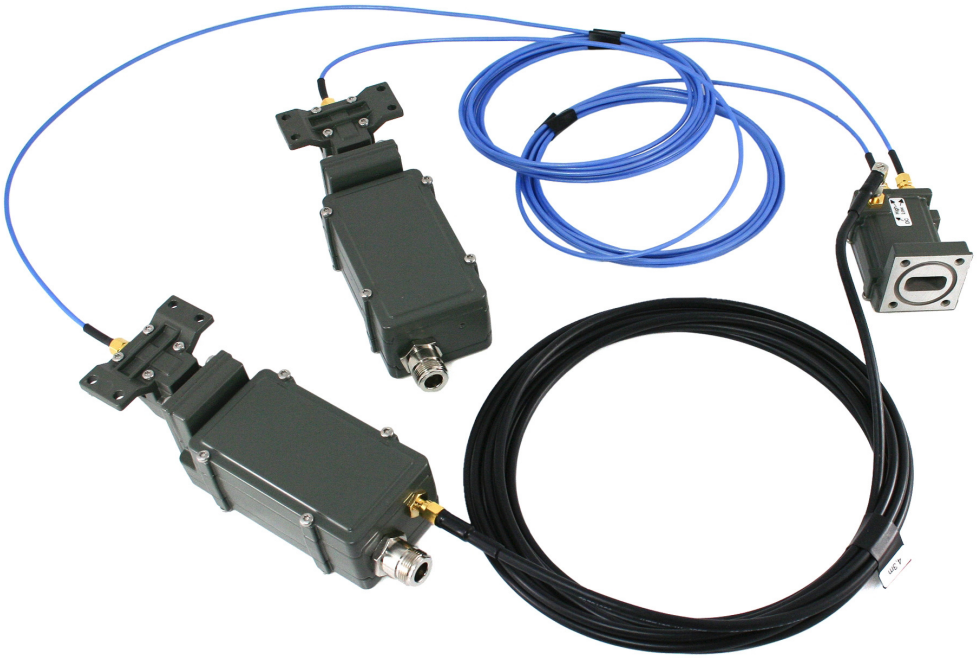
SMW
SWEDISH MICROWAVE AB

SMW Dual Output PLL-LNB



The optimized system to receive two bands

The Dual Output PLL-LNB is the commercial solution to receive the two band simultaneously with a very high LO-stability. Either with internal LO stability ±25 kHz or ±10 kHz, or with external 10 MHz reference.

The standard solution consists of one LNA with dual SMA-outputs powered by low band BDC (via cable), 3 m SMA-cables and two Block Downconverters. One for each band. All parts are optimized, adjusted and tested as a complete matched unit. High IP3 +25 dBm is standard.

All units are individually hand tuned to get the very best performance available for each. Quality and long term reliability are also essential. Therefore all units are tested according to a very extensive test program, which includes heating, cooling, waterproof testing and rigorous electrical testing.

Swedish Microwave (SMW) was founded 1986 and is today a leading manufacturer of professional LNBs (Low Noise Blockdownconverters). The company is located in Motala Sweden, and to date the products are installed in more than 80 countries.

All work is in-house allowing custom-design products, short delivery times, high flexibility, quick service and support.

Specification SMW Dual Output PLL-LNB System

SMW	***Dual PLL***
Standard frequency range low band	10.7 - 11.8 / 10.95 - 12.1 / 11.2 - 11.7 / 11.45 - 11.95 / 11.7 - 12.25 GHz
Standard frequency range high band	11.7 - 12.75 / 12.2 - 12.75 / 12.25 - 12.75 GHz
Standard LO frequency low band	9.75, 10.0, 10.25, 10.5, 10.6 and 10.75 GHz
Standard LO frequency high band	10.6, 10.75, 11.2, 11.25 and 11.3 GHz
Output frequency	Depends on Frequency range and LO
Noise figure, typical	1.0 dB
Spurious signals	-60 dBm typ. at the first spurious (e.g. 850 MHz with LO 9.75 & 10.6 GHz)
Gain typ.	60 dB (55 dB min.)
Gain variation typ	±4 dB within each band (See option) ±0.4 dB within 30 MHz
LO stability	±10 kHz* or ±25 kHz ext. 10 MHz reference (External reference input power -5 to +10 dBm)
LO Phase noise typ.	-75 dBc @ 1 kHz -85 dBc @ 5 kHz -85 dBc @ 10 kHz -100 dBc @ 100 kHz -120 dBc @ >1 MHz
LO radiation	-60 dBm
Image rejection	40 dB min.
1 dB gain compression point	+15 dBm
IP3	+25 dBm
DC power LNA (sep.)	12-24 V / 40 mA typ
DC power for each BDC	12-24 V / 280 mA typ
Operating temperature	-40 to +80°C
Storage temperature	-40 to +80°C
Input flange LNA	WR-75 waveguide
Output LNA (waterproof)	SMA-connectors
Input BDC (waterproof)	SMA-connector
Output connector BDC (waterproof)	F-connector 75 ohm or N-connector 50 ohm
Input VSWR	2.3:1 max
Output VSWR	2.0:1 max
Weight and dimension LNA	124 g, 81 x 40x 40 mm (Drawing see separate LNA sheet)
Weight and dimension BDC	174.3 (N 179.3 mm) x 60 x 48.8 mm (Drawing see separate BDC sheet

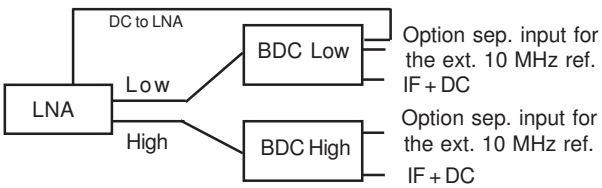
Options	Ext. 10 MHz reference via separate input connector Customized gain (e.g. 60 dB gain) Sep. DC power input for the BDC´s Customized LO´s Shorter or longer SMA cables

The standard system consists of:
1 pc LNA Dual Output SMA
2 pcs SMA-cables lengh 3 m
2 pcs Block downconverters (BDC)
1 pc DC cable from Low band BDC to LNA

* temp. range -10° to +70°C

SMW
SWEDISH MICROWAVE AB
Box 230
591 23 MOTALA, SWEDEN
Tel. +46 141 21 61 35
Fax. +46 141 21 52 24
e-mail: info@smw.se
Website: http://www.smw.se

Block Diagram



2009-04-24