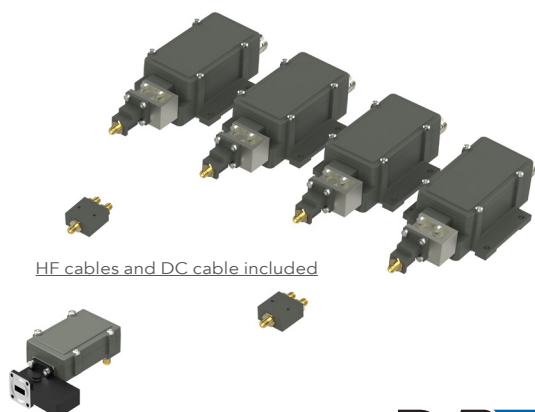


# Quad PLL System

Receives four Ka-Bands simultaneously



HF cables and DC cable included

**DVB-S2X**

The Ka-Band Systems consists of Ka LNA Wideband with Low Loss Waveguide Isolator, Ka splitters, Ka BDCs with Waveguide Isolators and matched Ka Cables. Comes standard with Low Phase Noise to meet DVB-S2X Professional Services Profile.

Options include customized LO, customized frequency ranges, customized gain, separate DC power input and separate input for the external 10 MHz reference.

## Features

- Wide frequency range
- Choose between Internal Ref. or External Ref. input models
- Standard Ultra Low Phase Noise meets all profiles of DVB-S2X
- High P1dB and IP3
- Wide operating temperature range

## TECHNICAL SPECIFICATIONS

MODEL:	Quad Band System 17.30 - 22.10 GHz				Quad Band System 17.30 - 22.30 GHz			
Input Frequency	17.30 - 18.50 GHz	18.50 - 19.70 GHz	19.70 - 20.90 GHz	20.90 - 22.10 GHz	17.30 - 18.55 GHz	18.55 - 19.80 GHz	19.80 - 21.05 GHz	21.05 - 22.30 GHz
LO Frequency	16.35 GHz	17.55 GHz	18.75 GHz	19.95 GHz	16.35 GHz	17.60 GHz	18.85 GHz	20.10 GHz
Output Frequency	950 - 2150 MHz	950 - 2150 MHz	950 - 2150 MHz	950 - 2150 MHz	950 - 2200 MHz	950 - 2200 MHz	950 - 2200 MHz	950 - 2200 MHz
Gain	63 dB typ.							
Flatness	±0.4 dB max. within 30 MHz, ±2 dB max. over each band							
Noise Figure / Noise Temperature	1.8 dB / 149 K typ.							
Phase Noise	-40 dBc @ 10 Hz -65 dBc @ 100 Hz -85 dBc @ 1 kHz -90 dBc @ 10 kHz -95 dBc @ 100 kHz -112 dBc @ ≥1 MHz typ.							
Image Rejection	30 dB min.							
Output P1dB	+15 dBm typ.							
Output IP3	+25 dBm typ.							
Output VSWR	2.1:1 typ.							
Output Connector	F-type 75Ω / N-type 50Ω / SMA-type 50Ω							
Input LNA	Waveguide WR 42 / R 220. Flange PBR 220.							
Input BDC	SMA-type 50Ω							
Input VSWR LNA	1.35:1 max. with Low Loss Isolator (included)							
LO Leakage	-60 dBm @ RF input							
MODELS with Internal Reference	±1 ppm -40 to +60°C (±1.5 ppm -40 to +80°C), ±2.5 ppm -40 to +60°C (±3.5 ppm -40 to +80°C)							
MODELS with External 10 MHz Reference	Sine Wave, Level: -15 to +5 dBm. Supplied through output connector (with no ext. 10 MHz ref. present LO shifts -20 ppm)							
DC Input BDC	+15 to +24 V, Supplied through output connector							
Power BDC	5 W typ.							
Dimensions BDC	178 x 80 x 44 mm (F- & SMA-connector), 184 x 80 x 44 mm (N-connector), for drawing, see <a href="http://www.smw.se">www.smw.se</a>							
Weight BDC	399 g (F- & SMA-connector), 418 g (N-connector)							
DC Input LNA	+12 to +24 V / 110 mA typ. Supplied through separate SMA connector (bottom side)							
Power LNA	1.32 W @ 12VDC, 2.64 W @ 24VDC typ.							
Dimensions LNA	103 x 63 x 34 mm inclusive isolator, for drawing, see <a href="http://www.smw.se">www.smw.se</a>							
Weight LNA	160 g, inclusive isolator							
Temperature Range	-40 to +80°C							
Options	Customized LO frequencies, input and IF ranges, gain and variation, separate 10 MHz ref. input., Pressurizable(LNA)							
<b>See the RF over Fiber and L-Band sections for output options</b>								

Rev.06-20-6G

Above parameters are generic product family values. For part number specific min./max. values, please consult us.

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

# Quad PLL System cont.

Example Ka-Band QUAD System configurations					
P/N (x = connector type F, N or SMA)	Frequency range (GHz)	BDC	LO	Ka-band (GHz)	L-band (MHz)
55569x (± 2.5 ppm) 55669x (±1 ppm) 55769x (ext. 10 MHz)	17.20 - 21.20	1	16.25	17.20-18.20	950-1950
		2	18.25	19.20-20.20	950-1950
		3	17.25	18.20-19.20	950-1950
		4	19.25	20.20-21.20	950-1950
55571x (± 2.5 ppm) 55671x (±1 ppm) 55771x (ext. 10 MHz)	17.30 - 22.10	1	16.35	17.30-18.50	950-2150
		2	18.75	19.70-20.90	950-2150
		3	17.55	18.50-19.70	950-2150
		4	19.95	20.90-22.10	950-2150
55572x (± 2.5 ppm) 55672x (±1 ppm) 55772x (ext. 10 MHz)	17.30 - 22.30	1	16.35	17.30-18.55	950-2200
		2	18.85	19.80-21.05	950-2200
		3	17.60	18.55-19.80	950-2200
		4	20.10	21.05-22.30	950-2200
55675x (±1 ppm) 55775x (ext. 10 MHz)	17.70 - 21.20	1	16.75	17.70-18.60	950-1850
		2	17.65	18.60-19.50	950-1850
		3	18.55	19.50-20.40	950-1850
		4	19.45	20.40-21.20	950-1850
55676x (±1 ppm) 55776x (ext. 10 MHz)	17.70 - 21.90	1	16.75	17.70-18.75	950-2000
		2	18.85	19.80-20.85	950-2000
		3	17.80	18.75-19.80	950-2000
		4	19.90	20.85-21.90	950-2000
55773x (ext. 10 MHz)	17.70 - 21.70	1	16.75	17.70-18.90	950-2150
		2	19.15	20.10-20.90	950-1750
		3	17.95	18.90-20.10	950-2150
		4	19.95	20.90-21.70	950-1750
55683x (±1 ppm)	18.20 - 22.00	1	17.25	18.20-19.40	950-2150
		2	19.15	20.10-21.20	950-2050
		3	18.05	19.00-20.20	950-2150
		4	19.95	20.90-22.00	950-2050

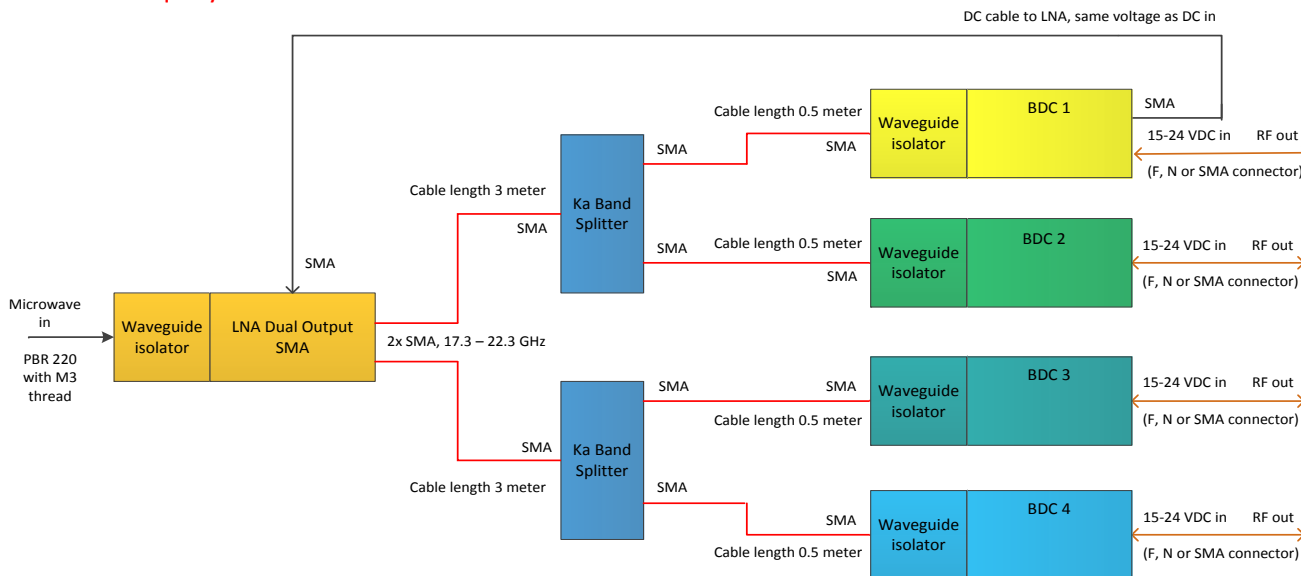
**NOTE:**

- x = 0 for F connector
- x = 5 for N connector
- x = 8 for SMA connector

**Ka Quad Band system**

**NOTE1:** Cable lengths are fixed due to best performance of this system. If other cable lengths are needed, please contact us first. Read our Product catalogue for more technical details.

**NOTE2:** Frequency bands are not in order for BDC 2 & 3.



Rev.04-20-1C