

# **PRODUCT OVERVIEW 2025**

Premium manufacturer of LNB and RF Distribution Systems

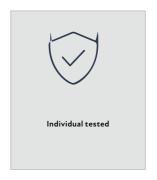














All technical specifications are typical, for specific part number specifications, please contact us. Specifications are subject to change without prior notice. Products from Swedish Microwave AB are made for commercial use.

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SMW.SE





## Swedish Microwaves products and services

Our main target is to deliver products that we are proud of. We are building technology modules that are shared between our various products. The focus is product and services in the market segments LNB and RF Distribution. With over 100'000 devices in daily use worldwide, we have learned that there are no short cuts and the best products wins in the long run. We are proud to have Swedish design, manufacturing, and ownership. Our owner Beijer Tech has an unlimited time horizon with the focus: To make our customers more competitive.

## What to expect from our devices and services:

#### Innovation

We will always strive to improve our products and processes.

## Ruggedized

Deliver products that are design to function many years even under tough environmental conditions.

## Temperature range

Standard -40 to +80°C (-40 to +176°F).

## Test reports

All the products we manufacture are individually tested before shipping. Test reports can be requested free of charge for their specific serial number.

#### Connected

All new products will offer a monitoring and control interface that is optional to use.

#### Customer service

When contacting sales@smw.se, you can expect a first response within 2 working days.

#### Warranty

Standard 36 months warranty from the delivery date.

#### Made in Sweden

We will design, produce, and deliver our devices from Sweden.

#### Summer vacation

In Sweden the few weeks of warm weather are important to recharge. Therefore, we close production, shipment, and have limited support capacity 3 weeks each summer.

We always aim to solve our customers challenges. What can we do for you?

## LNB, LNA, BDC and SYSTEMS

## C-band

Products for downlink 3.40-4.80 GHz. Singleband, Multiband and Wideband.

Products for uplink 5.70-7.25 GHz. Singleband.

## X-band

Products for downlink 7.25-7.90 GHz. Singleband and Multiband.

Products for uplink 7.75-8.50 GHz. Singleband.

## Ku-band

Products for downlink 10.70-12.75 GHz. Singleband, Dual output, Multiband and Wideband. Products for uplink 12.70-15.50 GHz. Singleband and Multiband.

## Ka-band

Products for downlink 17.30-22.30 GHz. Singleband, Multiband and Wideband.

Products for downlink 25.50-27.00 GHz.

Products for uplink 27.00-31.00 GHz. Singleband and Multiband.

## Q-band

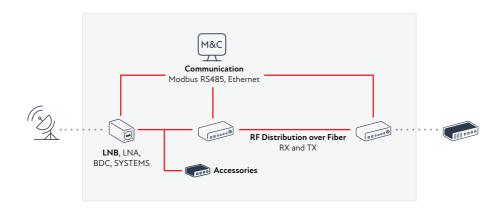
Products for downlink 37.50-42.50 GHz. Singleband and Multiband.

#### RF Distribution

RF over Fiber Transmitters and Receivers

#### Accessories

External reference, Diplexer, Power Supply, Bias Tee, Line Amplifiers, Fiber optic cables etc.





## **About Swedish Microwave**

For a century, our beloved city of Motala has been at the forefront of creating and manufacturing products used for RF communication. This has fostered the curiosity, expertise, heritage, and professional competencies necessary meet the constantly increased market requirements.

Our focus is clear; to be the leading manufacturer of professional Low Noise Blockdown converters LNB and RF distribution systems, serving a global market.

To have R&D, production and all other company functions in the same location is invaluable for us. It creates a productive and innovative environment needed to serve our customers with great products, reliable deliveries, great service and high flexibility.

We have respect for the past. Because if you don't know where you've come from, you don't know where you're going. Swedish Microwaves builds on a RF tradition that has been in Motala for over 100 years. The focus on innovation, shared knowledge and continuously improvement has been key factors for a long-term success.

## Part of Beijer Tech

Swedish Microwave is included in the Beijer Tech Group that has 150 years of experience and innovation. Their management philosophy is to have a decentralized business responsibility and to have a long term vision, which fits Swedish Microwave perfectly.

This enables Swedish Microwave to be flexible enough to cope with the ever-changing market requirements and big enough to afford it.

Whatever changes may arise, now or in the future, one thing is certain. We will always put high focus on helping its customers getting products and solutions to increase their competitiveness. Our curiosity inspires us to improve further.

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## **LNB**



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We specialize in professional LNB's for satellite communication and have done so for almost 40 years. Today we can offer our customers premium LNB for various applications. All the parameters that impact the carrier-to-noise ratio has been fine-tuned and improved over the years. Today we provide COTS products that meet the most challenging markets standards.

Our products are well proven for major satellite constellations in the world. With over 3000 active configurations we are very adaptive to our customers' needs. We offer Singel-, Multi-, and Wideband products for C-Band, X-Band, Ku-Band, Ka-band, and Q-band.

## What to focus on, when choosing a down converter:

Low VSWR / Return Loss

This reduces power transmission efficiency in the system to enable higher data throughput. High P1dB & IP3

This mitigates the risk of saturation.

Low phase noise

To enable high Data Rate / Symbol Rate.

#### Select features:

- Autoswitch External or Internal reference
- · Alarm, Monitoring & Control
- Low power consumption
- Automatic temperature gain compensation



STAN	DARD MODELS	Frequency band	RF range
C LNB 3.40-4.80 GHz	1 Band	С	3.40-4.80 GHz
C LNB 3.40-4.80 GHz	2 Band	С	3.40-4.80 GHz
C LNB 3.40-4.80 GHz	Wideband	С	3.40-4.80 GHz
X LNB 7.25-7.75 GHz 1	Band	X	7.25-7.75 GHz
X LNB 7.75-8.50 GHz 1	Band	Χ	7.75-8.50 GHz
X LNB 7.90-8.50 GHz 1	Band	X	7.90-8.50 GHz
X LNB 7.25-8.50 GHz 2	Band	Χ	7.25-8.50 GHz
Ku LNB 10.70-12.75 GF	lz 1 Band	Ku	10.70-12.75 GHz
Ku LNB 10.70-12.75 GF	Iz 2-4 Band	Ku	10.70-12.75 GHz
Ku LNB 10.70-12.75 GF	lz WDL Dual or Quattro	Ku	10.70-12.75 GHz
Ku LNB 10.70-12.75 GF	lz Wideband	Ku	10.70-12.75 GHz
Ku LNB 12.70-15.50 GF	lz 1-4 Band	Ku	12.70-15.50 GHz
Ka LNB 17.30-22.30 GF	Hz 1 Band	Ka	17.30-22.30 GHz
Ka LNB 17.30-22.30 GF	Hz 2 Band	Ka	17.30-22.30 GHz
Ka LNB 17.30-22.30 GF	Hz 3-8 Band	Ka	17.30-22.30 GHz
Ka LNB 17.70-20.20 GF	dz SES O3b mPower 3 Band	Ka	17.70-20.20 GHz
Ka LNB 17.70-21.20 GH	z Wideband	Ka	17.70-21.20 GHz
Ka LNB 25.50-27.00 GI	Hz EO	Ka	25.50-27.00 GHz
Ka LNB 27.00-31.00 G	Hz 1-4 Band	Ka	27.00-31.00 GHz
Q LNB 37.50-42.50 GF	tz 1 Band	Q	37.50-42.50 GHz
Q LNB 37.50-42.50 GF	łz 2-5 Band	Q	37.50-42.50 GHz
Q LNB 37.50-42.50 GF	dz Wideband	Q	37.50-42.50 GHz

## **BDC**

With professional BDC from C-Band to Ka-Band we have world leading products for various satellite communication earth station applications.

All the parameters that impact the carrier-to-noise ratio has been fine-tuned and improved over the years. Today we provide COTS products that meet the most challenging markets standards.

## Select features:

- Gain by request
- Autoswitch External or Internal reference
- Alarm, Monitoring & Control



STANDARD MODELS	Frequency band	RF range
C BDC 3.40-4.80 GHz 1 Band	С	3.40-4.80 GHz
C BDC 5.70-7.25 GHz 1 Band	С	5.70-7.25 GHz
X BDC 7.25-7.75 GHz 1 Band SATCOM	Χ	7.25-7.75 GHz
Ku BDC 10.70-12.75 GHz 1 Band	Ku	10.70-12.75 GHz
Ku BDC 10.70-12.75 GHz 2-4 Band	Ku	10.70-12.75 GHz
Ku BDC 10.70-12.75 GHz WDL	Ku	10.70-12.75 GHz
Ku BDC 10.70-12.75 GHz Wideband	Ku	10.70-12.75 GHz
Ku BDC 12.70-15.50 GHz 1-8 Band	Ku	12.70-15.50 GHz
Ka BDC 17.30-22.30 GHz 1-8 Band AESA	Ka	17.30-22.30 GHz
Ka BDC 17.30-22.30 GHz 1 Band	Ka	17.30-22.30 GHz
Ka BDC 17.30-22.30 GHz 2 Band	Ka	17.30-22.30 GHz
Ka BDC 17.30-22.30 GHz 3-8 Band	Ka	17.30-22.30 GHz
Ka BDC 25.50-27.00 GHz EO	Ka	25.50-27.00 GHz
Ka BDC 27.00-31.00 GHz 1-4 Band Uplink Monitoring	Ka	27.00-31.00 GHz



## LNA and BDC SYSTEMS

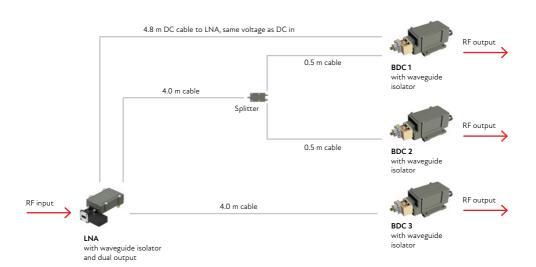
Our world leading products that are well trimmed together created systems that meet the high customer expectations. From Dual system up to Quad system for both Ku-Band and Ka-Band you can simultaneously use the downlink bands you need.

## Select features:

- Autoswitch External or Internal reference
- · Alarm, Monitoring & Control

## **Product range**

STANDARD MODELS	Frequency band	RF range
Ku System 10.70-12.75 GHz Dual	Ku	10.70-12.75 GHz
Ka System 17.30-22.30 GHz Dual	Ka	17.30-22.30 GHz
Ka System 17.30-22.30 GHz Triple	Ka	17.30-22.30 GHz
Ka System 17.30-22.30 GHz Quad	Ka	17.30-22.30 GHz



Ka Triple Band System illustration of setup

## RF Distribution system

Over the years we have put a lot of effort into making products that are ruggedized, easy to use and reliable to give our customers a robust RF distribution. We have aimed to keep it simple without impacting the performance.

## Select features:

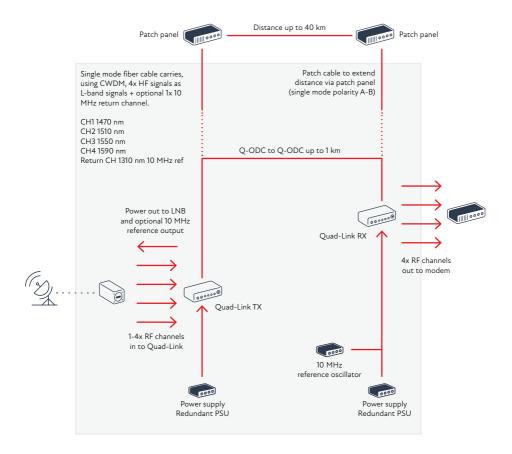
- Fully analog (no field setup)
- -40° to +80°C fully operating temperature range
- Up to 40 km link distance
- AGC Automatic Gain Control or Fixed Gain





STANDARD MODELS	RF Channels	RF range	
QUAD-LINK SYSTEM Transmitter	4	290-3000 Mhz	
QUAD-LINK SYSTEM Receiver	4	50-3000 Mhz	
VERSA-LINK SYSTEM Transmitter	1	290-2500 Mhz	
VERSA-LINK SYSTEM Receiver	1 10-2500 Mhz		
Power Supply Unit	DIN rail mounting. Models for 15 V DC or 24 V DC.		
Fiber Cleaning Tool	Fiber Connector Cleaning Tool or "Click pen"		
Fiber Optic Cables	Q-ODC to Q-ODC cables or patch cable to xx-APC		

## RF Distribution overview



## **LNA**

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## Select features:

- Low power consumption
- Alarm output
- Temperature compensated gain variation



STANDARD MODELS	Frequency band	RF range
Ku LNA 10.70-12.75 GHz	Ku	10.70-12.75 GHz
Ku LNA 10.70-12.75 GHz High Gain	Ku	10.70-12.75 GHz
Ka LNA 17.30-22.30 GHz	Ka	17.30-22.30 GHz



## Accessories

All our components are well proven and designed to be highly customizable to fit well into our customers satellite communication ground infrastructure.

## Select features:

- Components for RF products
- L-Band products
- Low power consumption
- Low Loss Isolators
- Diplexers, Reference oscillators
- Transitions



STANDARD MODELS
10 MHz Reference Oscillator and Diplexer / DC inserter
10 MHz Recovery Oscillator / DC inserter
Amplifier Adjustable Gain Line
Amplifier AGC Line
Bias Tee DC inserter
Diplexer 10 MHz and L-Band
Diplexer 10 MHz and L-Band with DC Inserter
CPR 112G adapter X-Band
Depolarizer Ku-Band
OMT Ku-Band
Waveguide Isolator 10.70-12.75 GHz Ku-Band
Waveguide Isolator 17.30-22.30 GHz Ka-Band
Transition 2.92 to WR28 27.00-31.00 GHz
Transition 2.92 to WR34 25.50-27.00 GHz
Startkit for Monitoring & Control
M8 Alarm breakout
M8 DC input



## A global leader in Satcom 1)

Founded in 1986, Swedish Microwave develops, manufactures, and sells satellite reception components, leading the industry with products delivered to 139 countries. Based in Motala, their technology supports Earth observation, TV distribution, and remote communication, essential where terrestrial networks fail or as a backup for critical communication.

Their products endure extreme conditions, from -40°C to 80°C. Proud of their heritage, Swedish Microwave highlights Motala's history in radio and satellite communication, evolving from Luxor to Nokia, and now to their own high-tech operations.

Unique in the industry, they manage the entire process in-house, from development to quality control, ensuring top-notch products. "We handle everything from prototype development to final production on-site", says the Production Manager.

## Independent and Innovative

Swedish Microwave owns all its technical solutions, allowing them to make long-term decisions without external pressure. This autonomy shortens lead times for new products and fosters a creative, enjoyable work environment. Engineers influence both hardware and software development, enhancing their work experience and technical choices.

"Challenging concepts and trying new things provide fresh perspectives and continuous growth", says the Chief Technology Officer. Swedish Microwave aims to stay at the forefront of technology, always pushing to improve and enjoy the journey.

The Head of Sales at Swedish Microwave concludes: "We strive to be the best and keep challenging ourselves".







 $^{9} \, {\sf Selected \, parts \, from \, article \, publ. \, 7 \, okt \, 2024 \, by \, Tillväxt \, Motala \, https://tillvaxtmotala.se/swedish-microwave-en-doldis-i-motala-som-har-hela-varlden-under-sina-fotter/}$ 

QR LINK TO MORE INFO AT SMW.SE

## **Monitoring & Control**

With remote monitoring and control features, operators can access real-time diagnostics, performance metrics from a central location, significantly reducing maintenance costs and downtime – making them superior to traditional troubleshooting. Enabling satcom operators to install, configure, and monitor devices with ease.

## Control examples

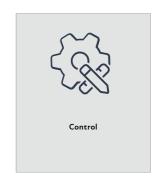
Band switching, Gain offset, Alarm trigger, Persistent alarm, Alarm output, Temp °C or F, GPO output, Modbus rtu parity mode.

## Monitoring examples

Alarm, Persistent alarm, Selected band, IF output level, LNA current, Total current, Input voltage, Temperature, LO locked, External 10 MHz detected, External 10 MHz locked, Active reference internal or 10 MHz, 22 kHz detect, Days of operation, Serial number, Software version.









## SMW M&C Evaluation Tool

QR LINK TO DOWNLOAD

This freeware is a simple and easy user interface to read/write Monitoring and Control parameters and an easy way to setup and getting started with M&C functions. This software is provided for the purpose of testing and evaluating M&C enabled products from SMW.

## Prerequisites:

- Monitoring & Control function is enabled on select products.
- Hardware connecting host (RTU) and M8 cable (RS-485) and/or USB Transceiver.
- Register Map for available (R/W) parameters, please note that the Register Maps are specific to each product model. Download the latest Register Map from the website.
- Modbus software or driver is not included, but for purposes of testing or troubleshooting there is SMW Monitoring & Control (M&C) Evaluation Tool available on request.









## **Future and innovation**

Hard work and curiosity. The two key elements that has made Swedish Microwave a key player on the market since 1986.

New products and function are under development, to make sure we can give our customers a competitive edge for future projects. Currently we have four major focus areas, where our customer can expect results the upcoming years.

## Improved LNB.

Upgrading our LNB platform modules will enable further functional growth and improved performance.

## New RF distribution system.

A scalable system that will be legacy compatible with existing infrastructure and offer new functions to handle all communication from the antenna to the main equipment room.

#### Communication.

Intelligent LNB's with internal and external communication for improved product and system performance. Flexible communication with Ethernet and Modbus RS485.

## External reference, L-band products and accessories.

All our components are well proven and designed to be highly customizable to fit well into our customers satellite communication ground infrastructure.

Do you want more details of the ongoing projects?

Please contact sales@smw.se or your Swedish Microwave representative.



For further details about each products technical specifications, please scan QR-code link to product website complete with Documentation, Technical Specifications, Manual and Specific Register Maps. Find your product at https://smw.se/findproduct



Warranty and Legal information

General Terms & Conditions: ORGALIM S 2022 and Appendices.

https://smw.se/terms/

Standard Warranty 36 Months.

Products from Swedish Microwave AB are made for commercial satcom use.

All products from Swedish Microwave are CE compliant with the following EU Directives as applicable, depending on when placed on the market:

Low Voltage Directive (LVD) 2014/35/EU
Electromagnetic Compatibility (EMC) Directive 2014/30/EU
Radio Equipment Directive (RED) Directive 2014/53/EC
Reduction of Hazardous Substances (RoHS 2) Directive 2011/65/EC
Regulation (EC) No 1907/2006 (REACH Regulation)

Declaration of Conformity is available on request.

Swedish Microwave is Assessed and Certified for: SS-EN ISO 9001:2015 Quality management SS-EN ISO 14001:2015 Environmental management SS-EN ISO 45001:2018 Occupational health and safety management



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Feedback

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