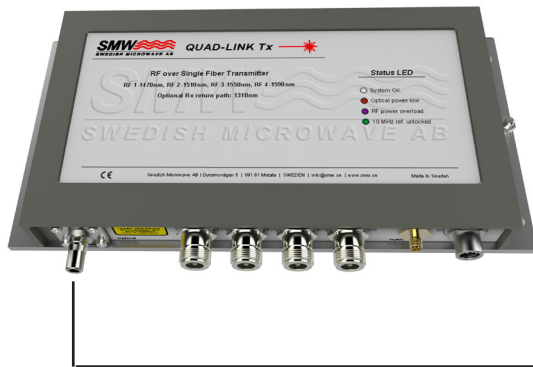


Quad-Link System



Four channel Transmitter / Receiver System



TECHNICAL SPECIFICATIONS

MODEL:	Quad-Link Fiber Transmitter	Quad-Link Fiber Receiver
RF Frequency	290 - 3000 MHz (50 - 2750 MHz as option, w/o 10 MHz ref.)	
Input Level RF / Fiber	-10 to -50 dBm @ 20 transponders	-6 dBm to +5 dBm
Optical Output / Input	Direct modulated DFB lasers, CWDM wavelengths: CH1 1470 nm, CH2 1510 nm, CH3 1550 nm, CH4 1590 nm	
Optical Output Power	8 mW (2 mW / channel)	
Return Channel Wavelength	1310 nm	
System Gain Variation	± 0.20 dB within 30 MHz, ± 1 dB @ 950 - 2150 MHz, ± 3 dB @ 290 - 3000 MHz, ± 3 dB @ 50-2750 MHz max.	
System Noise Figure	15 dB typ.	
10 MHz Phase Noise	-123 dBc@100 Hz, -140 dBc@1kHz, -150 dBc@10kHz, -155 dBc@100 kHz	
10 MHz Ref. Output / Input Level	0 dBm on all RF ports and separate output port.	-10 to + 5 dBm input via separate 10 MHz connector.
IP3 RF Input / IP3 RF output	+25 dBm typ.	+30 dBm typ.
RF Return Loss / VSWR	N / SMA connector: max. -10 dB / 1.9:1, F connector: max. -8 dB / 2.3:1	
System C/N, Single carrier	> 56 dB @ 30 MHz	
System C/N, 40 transponders	> 33 dB @ input level -15 dBm (composite level)	
SFDR	115 dB/Hz	
Fiber Connector	Dual fiber, Single mode Huber & Suhner, Q-ODC	
RF Connectors	F-type 75Ω / N-type 50Ω / SMA-type 50Ω	
Separate 10 MHz Connector	F-type 75Ω / N-type 50Ω / SMA-type 50Ω	
DC Connector	Fischer ® 103 series, Circular IP 68 sealed	
DC Input	+12 to +28 V	
DC LNB Supply	600 mA max. / RF port, Autofused, Shortcircuit protected	
Power Consumption	6 W max. (excl. 600mA / RF Port for LNB Powering)	5 W max.
Temperature Range	Storage and operating: - 40° to + 80° C	
Dimensions	273 (L) x 154.4 (W) x 34.4 (H) mm, for drawing, see www.smw.se	
Weight	1890 g (SMA- & F-connectors), 1950 g (N-connectors)	
Ingress Protection Code	IP 67, Q-ODC connector only IP67 when mated with dust cover or Q-ODC cable connector	
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	AGC off (Beacon), DC connector type, 10 MHz connector type, No LNB DC supply, 50 - 2750 MHz RF freq. range	
Miscellaneous	Enclosed DC cable 15 meters with connector.	
Accessories	Outdoor to Outdoor fiber cables (Q-ODC to Q-ODC), Outdoor to indoor patch cables (different connector type and lengths), External 10 MHz ref. oscillator, Dual DC Inserter, Power Supply Unit (AC to DC), Custom DC cable length.	

Rev.11-20-5C

The RF output level from the optical receiver depends on two things with a QuadLink system (with AGC):

1. Optical attenuation between optical transmitter and receiver.
2. Input level on the optical transmitter

The formulas are: $Rx \text{ channel power} = -6\text{dBm} - (2 * \text{optical_attenuation}) - (\log_{10}(\text{number of channels}) * 10)$

If the RF input level is less than -15 dBm on the optical transmitter (sum of all carriers power):

$Rx \text{ channel power} = Tx_input_level + 9 - (2 * \text{optical_attenuation}) - (\log_{10}(\text{number of channels}) * 10)$

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-Link System

High RF and Optical performance

- 4x L-band forward channels + 10MHz return channel over a single fiber using a direct modulated 1550 nm laser and CWDM - Coarse Wavelength Division Multiplexing forming a high performance IFL - Inter Facility Link.
- AGC - Automatic Gain Control and optional Fixed Gain for large antennas and Beacon applications.
- Up to 40 km link distance, depending on link budget, with very high C/N maintained.
- SMW Fiberoptics are compatible with many other manufacturer's corresponding indoor devices.
- Free Link budget calculation support available on request.

Fully Outdoor Proof, IP67

- Both the transmitter and the receiver unit packaged in a compact outdoor rugged aluminium enclosure.
- Ideal to mount on the satellite antenna or structure, without using a bulky separate outdoor enclosure.
- -40° to +80°C fully operating temp. range.
- Highly rugged push on, quick connect, Q-ODC fiber connector on both units.

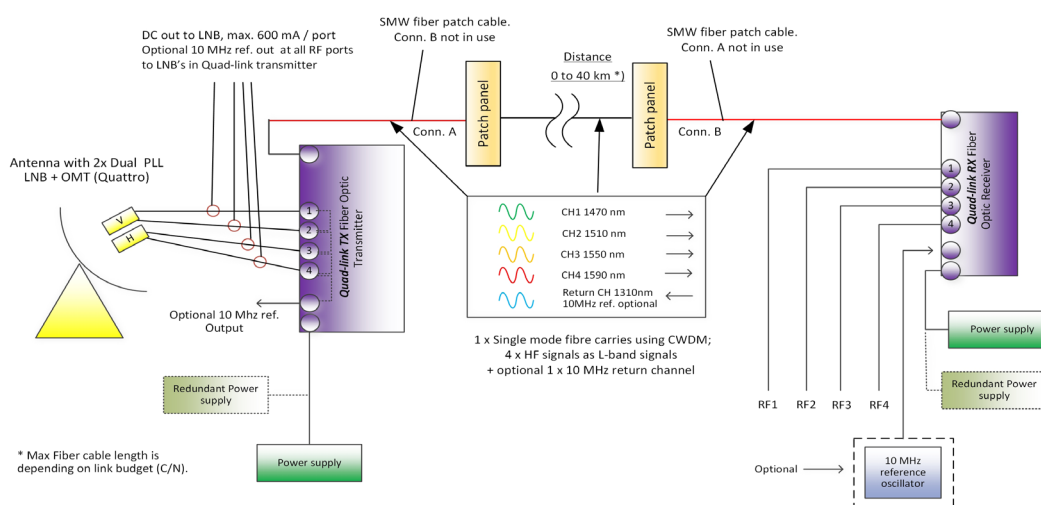
Versatility

- 4 x L-band fiber link in any direction simply by swapping location of the receiver/transmitter pair.
- Carries any 290 - 3000 MHz (Opt. 50 - 2750 MHz) RF signal - Satcom, Terrestrial TV, GPS, FM etc.
- Built in Bias-tees and 10MHz ref. diplexer.
- Available with custom options.

Applications

- Single fiber connection to one Quattro LNB equipped Satcom antenna.
- Single fiber connection to 4 separate single or multiband LNB's.
- Single fiber connection to multiband or multiple BUC's.

Quadlink system



NOTE: Fiber cables can be ordered as patch cables or Q-ODC to Q-ODC cable