

RFoF Quad-link Fiber System Transmitter & Receiver

Key features



A typical setup includes the following parts:

- Fiber transmitter
- Fiber receiver
- Power supply
- Fiber cable/cables

- High RF and Optical performance
- Fully analog (no field setup)
- Fully outdoor proof (IP 67)
- 4 RF channels in CWDM
- Up to 40 km link distance
- Standard 10 MHz return channel for Ext. ref.

Description

The Quad-Link contains 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 using single mode fiber cables.

- 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

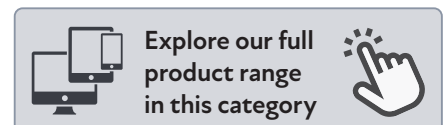
- Both the transmitter and the receiver unit packaged in a compact outdoor rugged aluminium enclosure.
- Ideal to mount on the satellite antenna or structure, without using a bulky separate outdoor enclosure.
- -40° to +80°C fully operating temp. range.
- Highly rugged push on, quick connect, Q-ODC fiber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



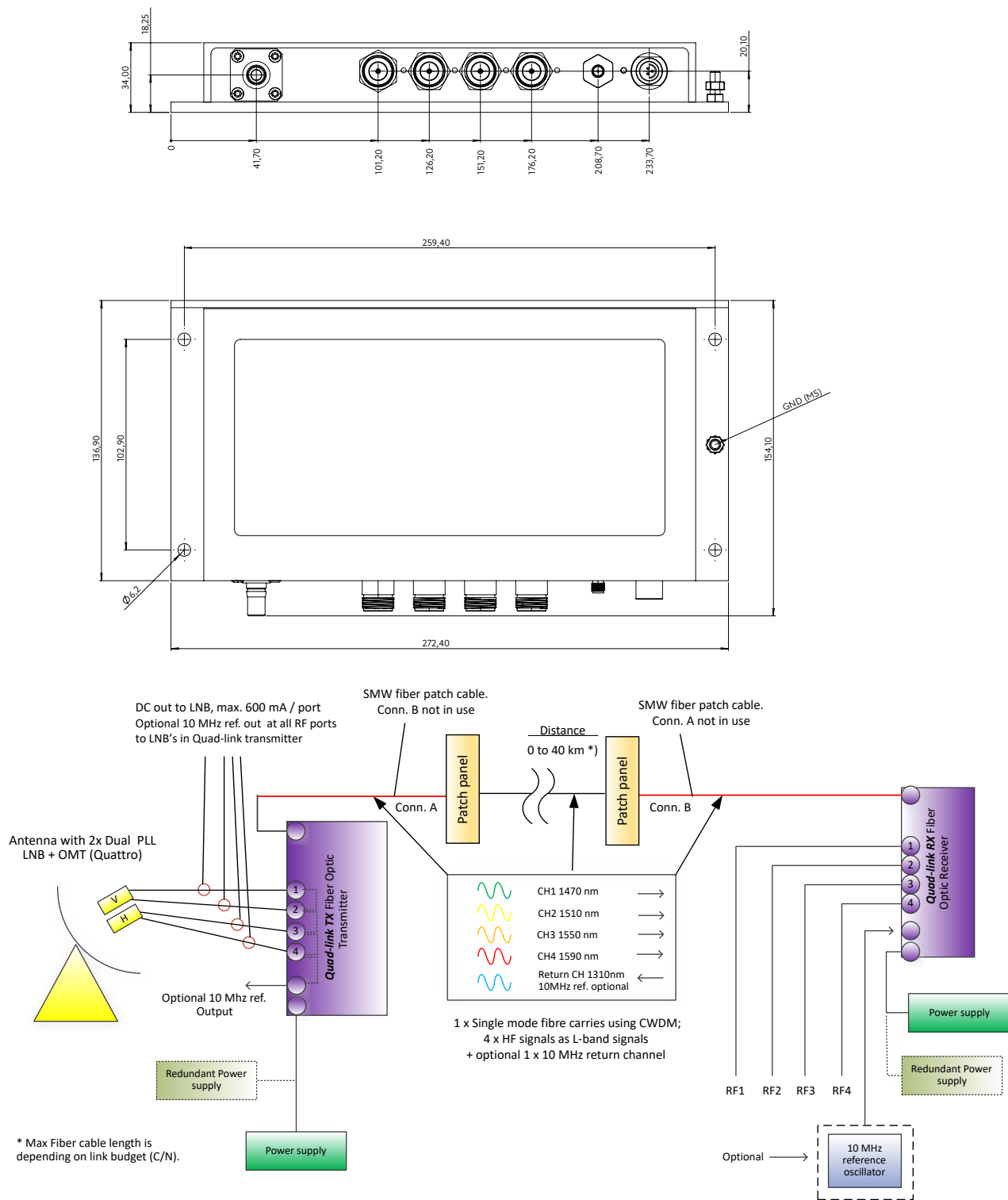
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Technical specifications

	Fiber transmitter	Fiber receiver
GENERAL	RF Frequency	290 - 3000 MHz (50 - 2750 MHz as option w/o 10 MHz ref.)
	DC LNB supply	600mA max. / RF port, Autofused, Shortcircuit protection
	Power consumption	6 W max. (excl. 600mA / RF Port for LNB Powering) 5 W max.
	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)
	Temperature Range	Storage and Operating: -40 to +80°C, -40 to +176°F
	Ingress protection code	IP 67, Q-ODC connector only IP67 when mated with dust cover or Q-ODC cable connector
	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.
	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
	Miscellaneous	Enclosed DC cable 15 meters with Fischer connector.
INPUT	Input level RF / Optical	-10 to -50 dBm @ 20 transponders -6 dBm to +5 dBm
	Input connector RF	F, N or SMA female
	Input connector optical	Dual fiber, Single mode Huber & Suhner, Q-ODC
	IP 3 RF input	+25 dBm typ.
	DC input	+12 to +28 Volt, connector Fischer 103 series, Circular IP 68 sealed.
INTERNAL	10 MHz input	Sinewave, -10 to + 5 dBm input via separate 10 MHz connector (SMA only).
	Optical interface	Direct modulated DFB lasers, CWDM wavelengths: CH1 1470 nm, CH2 1510 nm, CH3 1550 nm, CH4 1590 nm
	Return channel	1310 nm for 10 MHz ref. signal
	System noise figure	15 dB typ.
	10 MHz Phase Noise	-123 dBc@100 Hz, -140 dBc@1kHz, -150 dBc@10kHz, -155 dBc@100 kHz
	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
	RF return loss / VSWR	N / SMA connector: min. 12 dB / 1.7:1, F connector: min. 8 dB / 2.3:1
OUTPUT	10 MHz output	0 dBm on all RF ports and separate output port.
	IP3 RF output	+30 dBm typ.
	Optical output power	8 mW (2 mW / channel)
	Output RF connector	F, N or SMA female
	Output connector optical	Dual fiber, Single mode Huber & Suhner, Q-ODC
OTHER	Cables	Outdoor to Outdoor fiber cables (Q-ODC to Q-ODC), Outdoor to indoor patch cables, Custom DC cable length
	Power supply (AC/DC)	TDK Lambda +15VDC and +24 VDC
	Options	AGC off (Beacon), No LNB DC supply, 50 - 2750 MHz RF freq. range

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Technical Drawing



Professional Satcom Frequency Converters & Components. All products are fully CE and RoHS compliant and every unit includes full documentation of performance tests and quality control. Please contact sales@smw.se to configure or customize the unit to your needs. Visit smw.se or scan QR code to see our full product range and request a quote.

