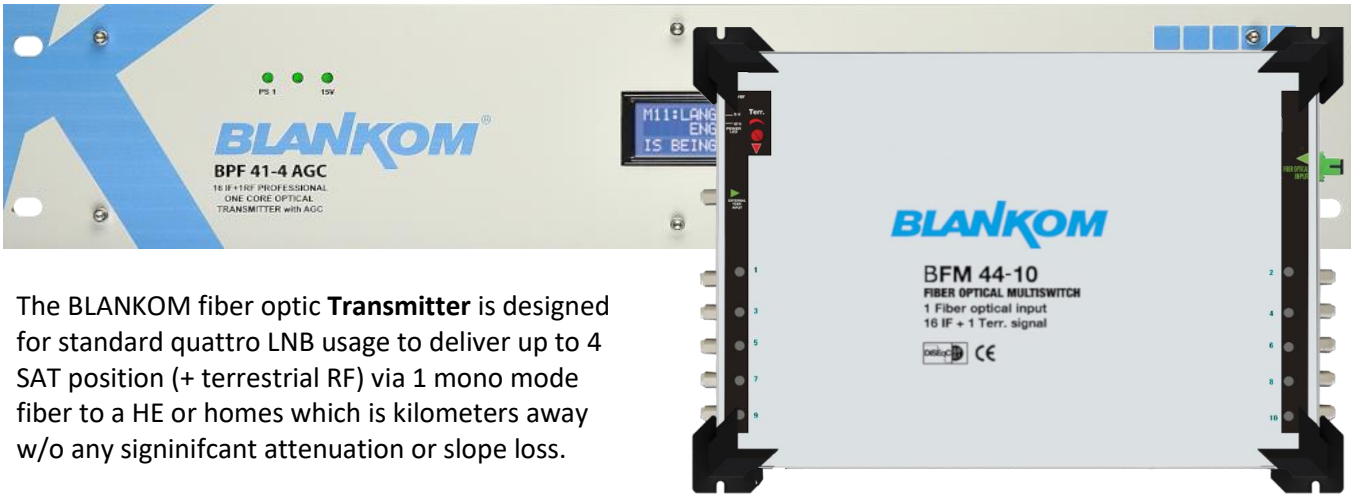
Fiber optic Transmitter and optical Multiswitch for 4x SAT + 1x Terrestrial



The BLANKOM fiber optic **Transmitter** is designed for standard quattro LNB usage to deliver up to 4 SAT position (+ terrestrial RF) via 1 mono mode fiber to a HE or homes which is kilometers away w/o any signinifcant attenuation or slope loss.

The corresponding **Multiswitch BFM-44-10** is a direct optical receiver with an integrated SAT/Terr multiswitch to serve villa-/condo-/residential regions by splitting the fiber into up to 32, 64 or more.

Main Features BPF-41-4* AGC optical Transmitter / opt. Multiswitch BFM

- 3/4 Satellite (3/4x4x Quad or Quattro L/C-band LNB support)
- RF transported over a single fiber optic cable available as 4dBm and 8dBm
- Up to 64 optical signals can be splitted
- Front panel: Gain adjustment for each input
- Voltage LED Indicators
- LNB voltage control enabled with on-off switch and voltage short circuit protection
- Automatic fan cooling system
- Isolated linear DFB laser CWDM standard wave operating range
- 47-870 MHz (Digital Terrestrial)
- 950-2150 MHz (SAT- IF) working bandwidth
- Built-in high linear AGC amplifier BPF 21- 4(mW) or 8mW transmitter (standard)
- BPF 21-8 transmitter with internal tilt level adjustment (standard)
- Electromagnetic resistance by RF over Fiber
- High RF resistance against heavy thunderstorms or similar shock effects
- Easy installation and plug&play application, serving many homes, condos, Villas...
- Integrated optical Receiver and Multiswitch for 10 TV-sets or SAT Receiver

Instead of the long distance fiber 1:1 SAT – Position LNB – Signal Transmission with Transmitter and Receiver BPF-41-4 AGC and BFR-41, the Receiver needs an extra Multiswitch connected for the SAT-IF coax distribution to the Headend receivers. In this system design the multiswitch is directly integrated to serve up to 10 TV-sets or SAT-Receiver. So the BFM-44-10 can be used for houses, small towers or residential aereas as well as for smaller headends to serve SAT-Receiver-Streamer like IGS-900 or IGS-700 or Transmodulators.

Instead of 2 devices: Optical 1 fiber Receiver + Multiswitch = optical Multiswitch

Technical Specifications Transmitter BPF-41*:

*) BPF-31-4/8 might be skipped from production, use BPF-41-14/8 instead

Input	17 F-female connectors (4 IF+1RF) (75 Ohm)
Output	1 SC/APC (Full Band) Optic connector
SAT Frequency Range	950-2150 MHz
TERR Frequency Range	47-870 MHz
SAT Gain	23dB ± 2
TERR Gain (DVB-C/DVB-T)	15dB ± 1
Gain Settings	0..15dB (LCD-Keypad)
Optical Output Power	4 mW (6dBm) (or 8mW versions for longer distances upon request)
Optical Wavelength Range	1270… max. 1570nm (CWDM) steps: 20nm
Max. TERR Signal Input	90 dB ±3
Max. SAT Signal Input	80 dB ±3
Power Supply	100-240 VAC 50W
Operating Temperature	-40+85°C
Dimensions	480x285x90mm
Weight	3900 g

Optic Multiswitch: BFM-44-10

Technical Specifications optical Multiswitch BFM-44-10:

Input	1x SC/APC optic connector, mono mode
Output	10x F-female connectors (16 SAT-IF + 1RF) (75 Ohm)
SAT Frequency Range	950-2150 MHz , DiSEqC support
TERR Frequency Range	47-870 MHz with adjustment 0…20dB
SAT-SAT Isolation	>35dB
SAT-TERR Isolation	>40dB
Receiver Output Isolation	>36dB
Max. optical Input Power	2 mW
Optical Wavelength Range	1270…1570nm (CWDM) (1270 contains Terr+ VL)
Power Supply	External 100-240VAC to 12VDC 3A
Operating Temperature	-15…+40°C
Dimensions	225x180x60mm
Weight	850g

BPF-41 & BFM-44-10

Examples for optical splitter types SC/APC:

1/64 Optical splitter

If more SAT Receiver /TV set ports are needed in a house, just use an optical splitter and install 2 (or more) BFM-units

1:32 optical Splitter

1:4-Splitter

Corresponding Products for multiple SAT-positions:

1-SAT-Positions with Transmitter- Multiswitch- couple **BPF-11-4 AGC** and **BFM-41-10** ***(might be renamed to BFM-11-10)***
2-SAT-Positions with Transmitter- Multiswitch- couple **BPF-21-4 AGC** and **BFM-21-10**
3-SAT-Positions with Transmitter- Multiswitch- couple **BPF-41-4 AGC** and **BFM-31-10** ***(BPF-31-4/8 might be skipped)***

For the optical 1-fiber transmitters (1-4 SAT positions + terrestrial) BLANKOM optical SAT-systems are using the following wavelengths: The transmission is carried out in CWDM with 20nm spacing.
The first SAT-LNB polarization Vertical Low including the terrestrial part in the range 47-870 MHz is transmitter on 1270nm. All other SAT - LNB wavelengths result from this: 1270...1570nm (CWDM):

1270	1290	1310	1330	1350	1370	1390	1410	1430	1450	1470	1490	1510	1530	1550	1570
SAT-Pos. A				SAT-Pos. B				SAT-Pos. C				SAT-Pos. D			
VL+terr	HL	VH	HH	VL	HL	VH	HH	VL	HL	VH	HH	VL	HL	VH	HH

Remark:The 4-SAT BFM-41 can be used as general Transmitter for all optical Multiswitches... 1, 2 , 3 or 4 SAT Versions