

## BSF 4004

### Band Selective fibre optic repeater

#### Key features:

- High output power +40 dBm with dual MCPA
- Optimized for low noise figure
- Remote supervision and alarm handling in the BSF 4004 is realized through the fibre connection via the OMU unit's modem or optional via built in modem.
- The unique combination of high output power and highly linear power amplifiers ensures large coverage with uniformly excellent signal quality.
- The BSF 4004 can optionally be upgraded with a second optical transceiver module for redundant fibre applications.



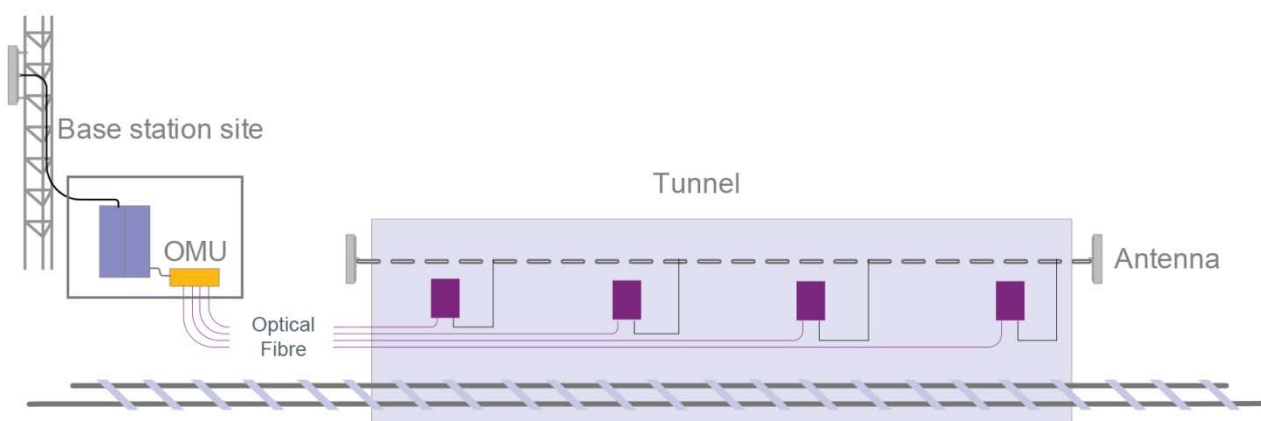
The BSF 4004 is a fibre optic fed TETRA repeater. The repeater is part of a system that is fed from an Optical Master Unit (OMU). The maximum optical loss allowed for is 10 dB of fibre between the

OMU and the most distant last remote unit that the OMU supports. This offers great flexibility when providing RF coverage in areas where it is not possible to rely on off air

transmission. The fibre optic system is easily remotely monitored and controlled by Axell Wireless effective supervision tool, Axell Wireless Element Manager.

#### Automatic optical gain setting

The gain is adjusted in the downlink chain by measuring the level of the pilot carrier sent from the Optical Master Unit (OMU). The level of the received pilot carrier is continuously monitored.



## Technical specifications

Frequency bands available (MHz):	UL	DL
	380-385	390-395
	385-390	395-400
	410-415	420-425
	415-420	425-430
	450-455	460-465
	455-460	465-470
Operator bandwidth	5 MHz	
Duplex distance	10 MHz	
Impedance	50 Ω	
Output power/carrier (DL) (*)	1 carrier: +40 dBm, 2 carriers: +36 dBm, 3-4 carriers: +33 dBm 8 carriers: +30 dBm	
IP3	+ 74 dBm	
Noise figure (UL)	<6dB, 5dB typical at maximum gain	
Group delay	2us max	
Fibre optic loss compensation	Implemented	
Spurious Emissions from RF port	< -36dBm	
Intermodulation Products	< -60dBc or < -36dBm	

Optical Module Electrical Specification	
Maximum optical output power	+3 dBm ±2 dB
Maximum optical input power	+2 dBm
Power Requirements	230 VAC 50Hz, 115 VAC 60Hz, - 48 VDC
Power Consumption	180 W, typical
External connection	
Local Maintenance Terminal	RS232
Server Port	7/16 female
Optical Ports	1 x SC/APC female
Modem antenna connector	SMA
Remote connection	Via OMU or (optional) GSM, GSM-R PSTN modem or Ethernet
Mechanical Specification	
Dimensions	540 X 382 X 198 mm
Enclosure	Aluminium (IP65)
Weight	28 kg
Cooling	Convection
Environmental Specification	
EMC	See compliance below
Operating Temperature	- 25°C to + 55°C
Storage	- 30°C to + 70°C
Humidity	ETSI EN 300 019-2-4 (see compliance below)
Complies with	R&TTE Directive including, EN 301 489-18 ETSI TS 101 789-1, EN 60 950

(\*) Dual MCPA's are used, 6dB degradation is expected in case of failure of one MCPA.

### About Axell Wireless

Axell Wireless is one of the top global providers of wireless coverage solutions and the market leader in the provision of solutions for the public safety market worldwide. Our equipment has been deployed in some of the most technologically challenging environments in the world, providing coverage for tunnels, metros, buildings, stadiums and transportation systems all over the world. With its headquarters in the UK, Axell Wireless has been operating for over 40 years and has an international footprint. A proven track record combined with a reputation for providing innovative and high-quality products has made Axell Wireless a truly global player in the wireless coverage industry.