



## 4 VHF High power Extension system



### Benefits

- **Single fiber use**
- **Dust proof mechanism**, full power with 75% optical degradation.
- **Zero transmit loss circuitry**
- **Advanced amplification**
- **Optional Military field enclosure**
- **High Performance filtering**

### Product Description:

Foxcom's military **Radio Link** fiber extension system is the ideal solution for remote antenna placement for tactical military applications.

This innovative optical solution opens new boundaries by eliminating traditional limits of coax cables allowing the user to place his remote antenna up to 30Km whilst still maintaining signal quality and eliminating lightning damage risks.

System is composed of the **Radio unit** which interface with 2/4 or more radios. The **Antenna unit** outputs upto 50Watt of transmit power to each antenna connected.

The radio units connect to the radio via coax cable and are protected against transmit power overload. The Antenna unit is safe guarded against environmental degradation and can maintain full output power at all time.

With a strong processing power and a **Zero transmit loss** circuitry Foxcom Radio Link supports high speed change rate whilst maintaining narrow band filtering.

The Radio link system can easily be adjusted to support any radio type.

# Radio Fiber Optic Extension System

## Military Radio Fiber Extension System

### RF Spec

Frequency range	30-88MHz
Radio supported / system Channels	4 (optional 2, 6 or more)
Harmonic distortion	> 57dBc
Antenna unit In/Out VSWR	1:1.6
Antenna unit saturation signal PWR [total power]	> +10dBm
Antenna unit to Radio unit Gain	10dB
Antenna unit to Radio unit Noise Figure (Rx)	<5dB
Antenna unit Output Power	47/44/41dBm (50/25/12Watt) Adjustable from Radio unit
Antenna unit output OIP3	+64dBm
Radio unit In/Out VSWR	1:1.6
Radio unit input signal range [total power]	Up to 39dBm (7watt) Operating, 53dBm (200Watt) Survive
Radio unit to Antenna unit Gain	14dB
Radio unit Noise Figure	<20dB
Radio unit Output power	Depends on received signal level
Radio unit output OIP3	+5dBm

### Optical Specifications

fiber type	Dual/Single SMF-28 or better [single mode]
Optical wavelength	CWDM range
RSU/ASU optical power output	+3dBm/2mW (Min)
Optical connector	LC-APC/SC-APC
Supported fiber Length	30Km max (7dB).

### Environmental Specifications (Outdoor Unit)

Temperature (MIL-STD-810G 501.5 / 502.5)	-32°C-49°C (operational), -32°C-71°C (storage)
Humidity (MIL-STD-810G 507.5)	95% @ 35°C NON-CONDENSING
Vibration (MIL-STD-810G 514.6)	0-500Hz 2.2 GRMS (WITH PACKAGE)
Shock (MIL-STD-810G 516-6)	66cm DROP TEST ACCORDING TO TABLE 516.6-IV (WITH PACKAGE)
Sand and Dust	According to MIL-STD-810G 510.5 Proc. I & II
Rain	According to MIL-STD-810G 506.5 Proc. I
Salt Fog	5% SOLUTION, (material samples tested)

### EMC / EMI

	Radio unit	Antenna unit
MIL-STD-461E	CE102, RE102 (Navy Mobile & Army), RS103 @ 2MHz - 10GHz 50V/m	CE102, RE102 (Navy Mobile & Army), RS103 @ 2MHz - 10GHz 50V/m
IEC 61000-4-5	Level 4	-----

### Physical Specifications

	Radio Unit	Antenna Unit
RF Connectors	4 BNC Female	4 BNC Female
Operating voltage/Current consumption	17-32VDC/1.5	24VDC/28A
Dimensions	6U Outdoor Case (2 & 4Ch)	6U Outdoor Case (2 & 4Ch)

All specifications are subject to change without notice

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## Additional Information

### General

Frequency accuracy	Not affected by the optical system
10% Band Pass filtering mode	Auto TX & RX / Auto TX/ externally controlled via a serial port
TX/RX switching delay	<1msec (controlled by Zero loss circuitry)
Receive sensitivity	-115dBm
Max returned power with no damage	+48dBm
Radio receive selectivity	Not affected by the optical system
Image rejection	95dBc
Hopping mode supported	Standard/ Nonstandard/Mil High rate with Zero transmit loss circuitry
Radio input power	2watt directly up to 50Watt using external attenuators
Transmit skirt/Power level	Not affected by the optical system or the fiber loss
Max transmit time	35Min
Transmit harmonic distortion	57dBc for 2 <sup>nd</sup> & 3 <sup>rd</sup> 74dBc on 4 <sup>th</sup> and above
Tactical optional connector	Optional
4 Ch single fiber multiplexing	Optional
Optional supplied fibers	Standard or Tactical on a reel
Enclosure type	6U Rugged outdoor enclosure

Ordering Information	
Model Number	Description
MLNK4-03-08-47-1R-1R-13-ID-00	30-88MHz 4CH Radio fiber extension system
MLNK4-SFM	Single fiber multiplexing
MLNK4-PEL-NC-AC	Military Field enclosure set for Radio Link 4Ch system
MLNK- EW5	5 years extended warranty program

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