

Fiber Optic Mini Cell Enhancer



Applications: Extended Coverage in long Tunnels, large Underground spaces and In-Buildings for

- TETRA Trunked Radio System
- TETRAPOL Trunked Radio System

The Fiber Optic Mini Cell Enhancer is an outdoor rated (IP65 and IP66 versions available) and natural air cooled bi-directional Radio Frequency (RF) signal booster in the 380~490Mhz UHF frequency band

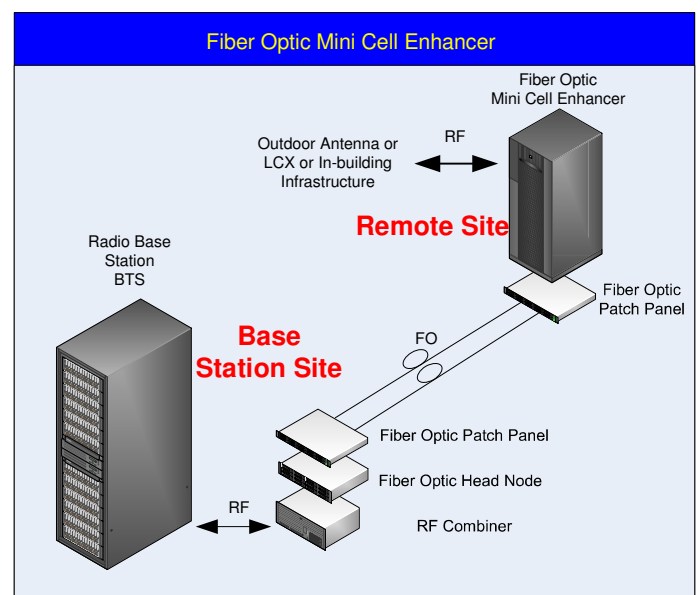
Typical application of the Fiber Optic Cell Enhancer is to improve RF signal coverage in areas such as underground tunnels, in-building car parks, offices and shopping malls for TETRA and TETRAPOL Radio System in the 380~430Mhz TETRA band and 470~490Mhz TETRAPOL band. *This product is customisable to support other radio systems with a bandwidth up to 3Ghz.*

The Fiber Optic Cell Enhancer features long distance (up to 25km) RF signal coverage away from the TETRA and TETRAPOL Base Stations, that conventional off-air repeater and signal booster cannot support.

Fiber Optic Cell Enhancer comes in various models, Low Power Model is designed for low output power of 5, 10 or 20 Watts (37dBm, 40dBm or 43dBm respectively, single carrier), suitable for small coverage areas.

Medium and High Power Model is designed for high output power of 50 or 100 Watts per carrier (47dBm or 50dBm, single carrier) suitable for wide coverage areas.

The Fiber Optic Head Node converts signal between RF and Optical at the Base Station Site. The Head Node comes in 4 models, with 1, 2, 4 or 8 FO channels. Note that models supporting more than 2 channels operate together with a RF combiner to distribute RF signals from multiple Radio Base Stations.





Fiber Optic Mini Cell Enhancer

Specifications:

FMC Electrical Specifications:

Models	FMC-380-1	FMC-380-5	FMC-380-10	FMC-380-20	FMC-380-50	FMC-380-100
Frequency Ranges	380~490 Mhz					
Nominal Impedance	50 ohm					
Minimum Return Loss	-18 dB					
Maximum Output Power (per channel)	1 Watt	5 Watts	10 Watts	20 Watts	50 Watts	100 Watts
Gain	50~90 dB (specified before order)					
Connector Type	N/SMA/UHF (specified before order)					
Power	110/230 AC, 5A max.					

FMC Mechanical Specifications:

Dimension (LxBxH)	760mm x 650mm x 400mm or 18U, Standard 19" Rack
Weight	60 kg

FMC Environmental Specifications:

Operating Temperature	0 ~ +55 degree C
Humidity	95% non-condensing

Head Node Electrical Specifications:

Models	HN-1	HN-2	HN-4	HN-8
No of FO Channel	1	2	4	8
No of RF Tx/Rx Port	1/1	2/2	4/4	8/8
LED Wavelength	1310nm			
LED Output Power	>1mW (0dBm)			
Max LED Input Power	2mW			
Optic Receiver Sensitivity	-22dBm (Typ.)			
Fiber Connector	FC/APC			
Combiner Input Level	0~-20Bm	3~-17dBm	6~-14dBm	9~-11dBm
Combiner Return Loss	< -18dB			
Combiner Connector	N/SMA/UHF (specified before order)			
Power	110/230 AC, 2A max.			

Head Node Mechanical Specifications:

Dimension (LxBxH)Standard 19" Rack	3U	6U	6U	9U
Weight	25 kg max			

Head Node Environmental Specifications:

Operating Temperature	0 ~ +55 degree C
Humidity	95% non-condensing

- Network Management:**
1. Standard IBM compatible PC with Windows Operating System.
 2. System Monitoring Via GSM SMS messages.

