

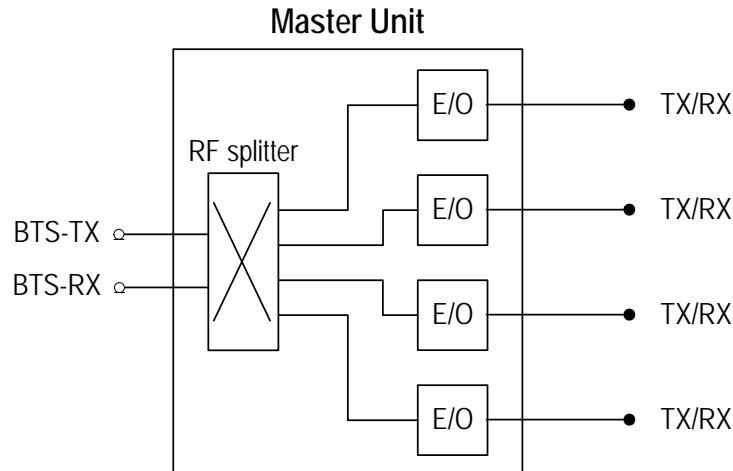
# Tetra Fiber Optic Repeater Specification

## - Master Unit -

### RF Specifications

Specification	Down Link	Uplink
Frequency	420 - 430MHz	410 - 420MHz
Band Width	5M	5M
Gain	0dB	10dB
Pass Band Ripple	+/- 1 dB	+/- 1 dB
Power O/P	N/A	- 10dBm
Spurious Emission (in band)	N/A	9KHz~1GHz: ≤-36dBm/ kHz 1GHz~12.75GHz: ≤-34dBm/ kHz
IM3	N/A	> 60dBc (at 2 x -13dBm carriers at MU uplink output).
Input power(max)	- 10dBm	N/A
VSWR	≤1.5	
Operating Temperature Range	-20 ~ +60 °C	
RF Port	N female	
Power Supply	220V AC, 48V DC optional	
Power Consumption	<20W @ Full power output	
Communication Port	RS232	
Dimensions (H x W x D)	130mm*440mm*435mm	
Weight	5Kg	
MTBF	100,000 Hours	
Fiber Connector	FC / APC	
Fiber Type	Single Mode	
Optical Operational Wavelength (at 25degree)	Downlink:1550 nm Uplink: 1310 nm	
Output Power of Optical Sources	0.5 - 5mW	

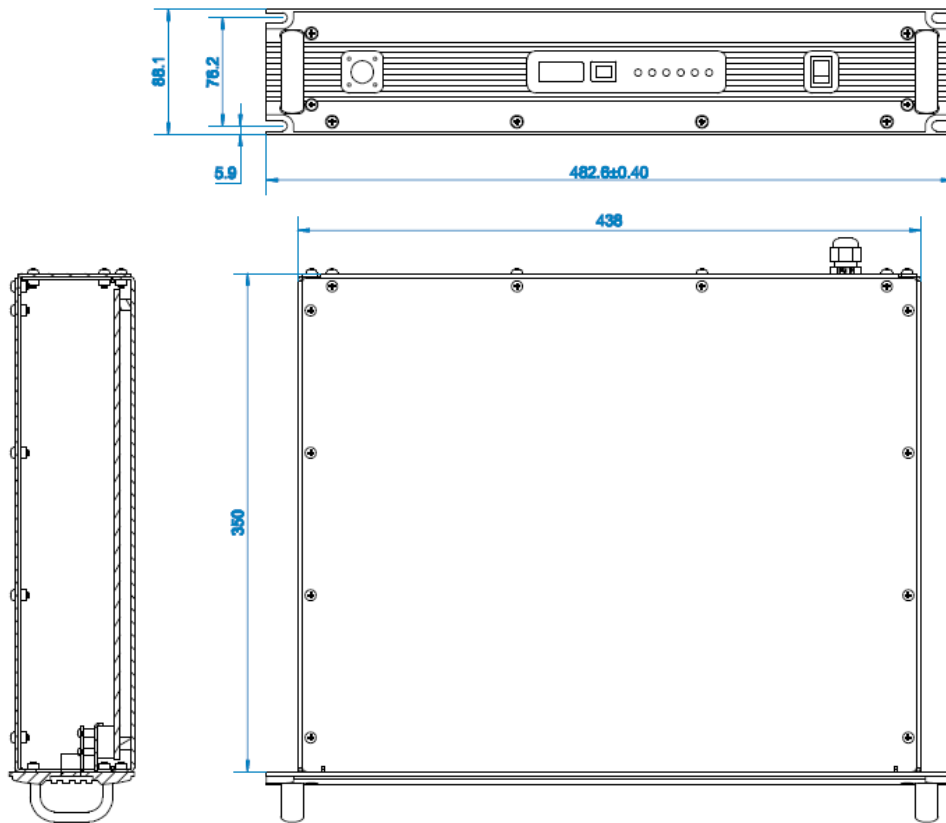
### System Block Diagram



### Product Picture



### Outline Drawing



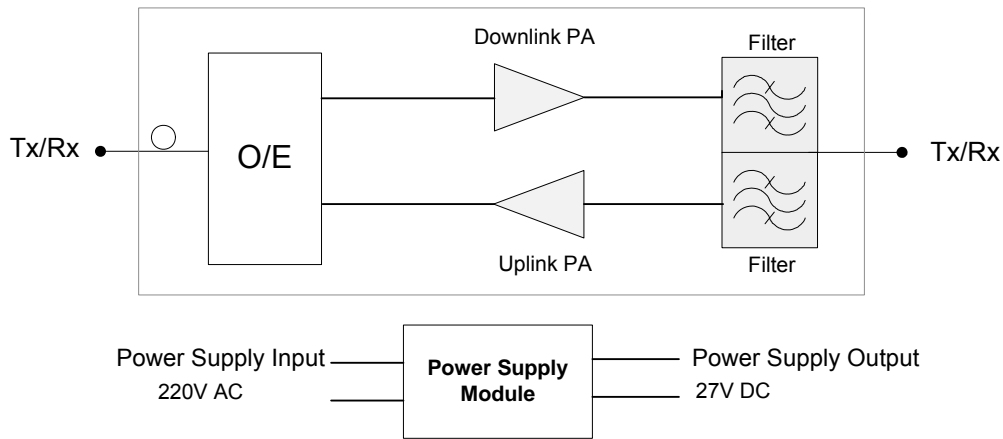
## - Remote Unit

### RF Specifications

Specification	Down Link	Uplink
Frequency	420 - 430MHz	410 - 420MHz
Band Width	5MHz	5MHz
Gain	50dB	40dB
Adjustable Gain Range	30 dB at 1dB Step	30 dB at 1dB Step
Spurious Emission (in band)	9KHz~1GHz: $\leq -36\text{dBm/ kHz}$ 1GHz~12.75GHz: $\leq -34\text{dBm/ kHz}$	N/A
Pass Band Ripple	+/- 1dB	+/- 1dB
Power O/P	43dBm	N/A
IM3	$\geq 60\text{dBc}$ (at 2 x 40dBm carriers at RU downlink output)	N/A
AGC	15dB	15dB
Noise Figure	< 5 dB	< 5 dB
AC Surge Protection	Standard (Max. 7KA (8/20us), limiting voltage < 750V)	
VSWR	$\leq 1.5$	
Remote Control and Alarm Monitoring through modem	Remote parameter setting, function control, status inquiring. If there has alarm, the system will report to the O&M center through modern.	
User Friendly O&M interface	LCD with press-keys	
Alarm Record Function	Alarm information is recorded, and only can be erased manually.	
Alarm & Monitoring Function		
- ALC Control Monitoring	ALC can limit the output power below the threshold, and the threshold of ALC is adjustable. The control status will be reported to O&M center when the ALC is running.	
- VSWR alarm	The VSWR of PA output signal could be reported to the O&M center. The alarm will be reported if the VSWR is over the threshold. VSWR alarm trigger level: $\text{VSWR} \geq 5$	
- Signal Power I/P and O/P Monitoring	The O&M center could monitor the output / input power.	
- User defined over power alarm	PA unit will send over power alarm to O&M center when the output power is over the threshold. The alarm will be erased when the output power is below the threshold.	
- AC Power Monitoring	The +28V power supply status could be monitoring when the +12V power supply is normal.	
- Over temperature alarm	The PA temperature could be reported to the O&M center. The over temperature alarm will be reported to O&M center when PA temperature is over the threshold (adjustable). Over temperature alarm and shutdown trigger level: $95^{\circ}\text{C}$	
- Door Open alarm	When door is open, the alarm will be reported. When the door is closed, the alarm will be erased and the door status will be reported to the O&M.	
- Power Shut off	O&M center can switch-on or switch-off the +28V power supply.	
Operating Temperature Range	-20 ~ +60 °C	
RF Port	N female	

Input/Output Impedance	50Ω
Power Supply	220V AC
Power Consumption	<250W @ Full power output
Communication Port	RS232
Dimensions (H x W x D)	517mm x 402mm x 355mm
Weight	30Kg
Environmental Class	IP65
MTBF	100,000 Hours
Fiber Connector	FC / APC
Fiber Type	Single Mode
Optical Operational Wavelength (at 25degree)	Downlink:1550 nm Uplink: 1310 nm
Output Power of Optical Sources	0.5 - 5mW

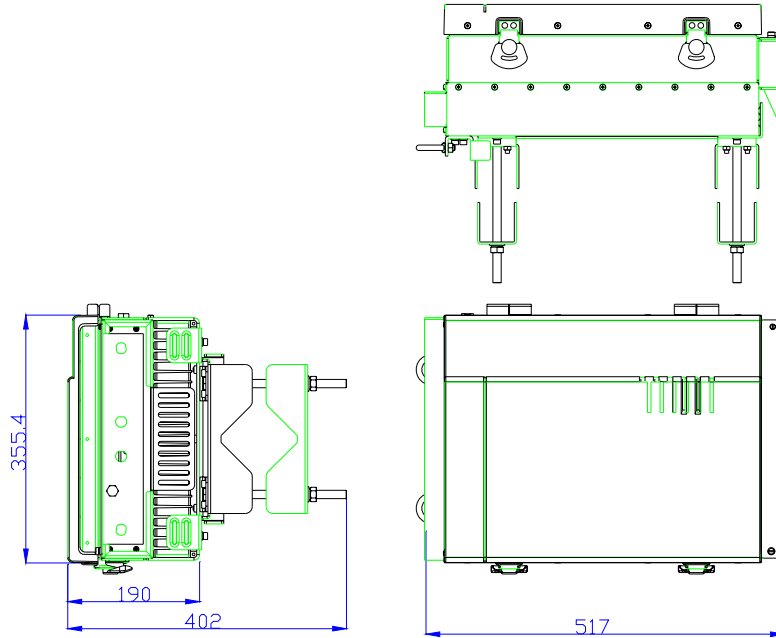
**System Block Diagram**



**Product Picture**



## Outline Drawing



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