

## Multi-Band, Multi-Standard, Multi-Carrier Coverage System

### - Remote Unit -

#### RF Specification (Remote Unit)

Specification	Down Link				Uplink			
	IDEN	GSM	PCS	UMTS	IDEN	GSM	PCS	UMTS
Frequency (MHz)	851-870	935-960	1805-1880	2110-2170	806-825	890-915	1710-1785	1920-1980
Gain	56dB				46dB			
Adjustable Gain Range	30 dB at 1dB Step				30 dB at 1dB Step			
Pass Band Ripple	+/- 2 dB				+/- 2 dB			
Power O/P	+43dBm	+46dBm	+46dBm	+46dBm				
IM3 (dBc)	>65	>65	>65	>65	>65	>65	>65	>65
ALC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Noise Figure	< 4 dB				< 4 dB			
AC Surge Protection	Standard (Max. 7KA (8/20us), limiting voltage < 750V)							
Input power(max)					0dBm			
VSWR	≤1.5							
Remote Control and Alarm Monitoring through Dial Up modem	Remote parameter setting, function control, status inquiring. If there has alarm, the system will report to the O&M center through modem.							
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, ≤ ±0.2 accuracy. The alarm will be reported if the VSWR is over the threshold. VSWR alarm trigger level: VSWR ≥ 5							

- Signal Power I/P and O/P Monitoring	The O&M center could monitor the output / input power, $\leq \pm 0.5\text{dB}$ accuracy.
- 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°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.
Temperature of operation	-20 ~ +60 °C
RF port	N female
Power supply	220V AC
Current	<8A @ Full power output
Communication port	RS232
Weight	82Kg
Dimensions (H x W x D)	800mm*600mm*200mm
Mechanical Material	IP53
MTBF	100,000 Hours

### Optical Interface Specification (Remote Unit)

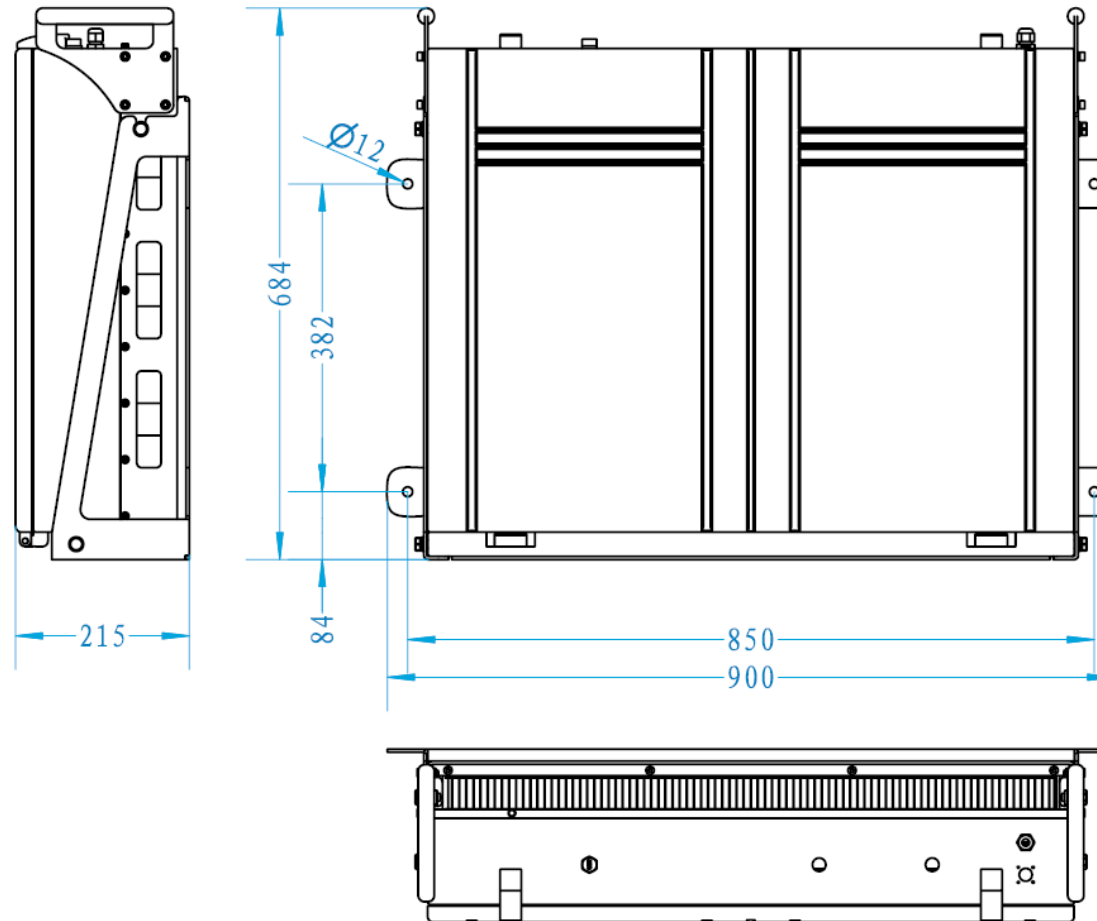
Character	Specification
RF Bandwidth Supported	100 MHz to 2.5 GHz
Max. Input power to Main unit (DL)	-10dBm
Max. input power to Remote unit (UL)	-10 dBm
RF Downlink Parameter of the Optical interface @ 5 KM F/O length	
- IMD	< -70 dBc
- Gain flatness pers band ( 800 - 2200 MHz)	+/- 2dB

Character	Specification
Uplink Parameter of the Optical interface @ 5 Km F/O length	
- IP3	> 12 dBm
- Noise Figure (Optical to RF)	< 35 dB
- Gain flatness per band ( 800 - 2200 MHz)	+/- 2 dB
Fiber Connector (Master and Remote amplifier unit)	FC / APC
Optical fiber used	Single Mode
Optical operational Wavelength (at 25degree)	Downlink:1550 nm Uplink: 1310 nm
O/P power of the Optical sources	0.5 - 5mW

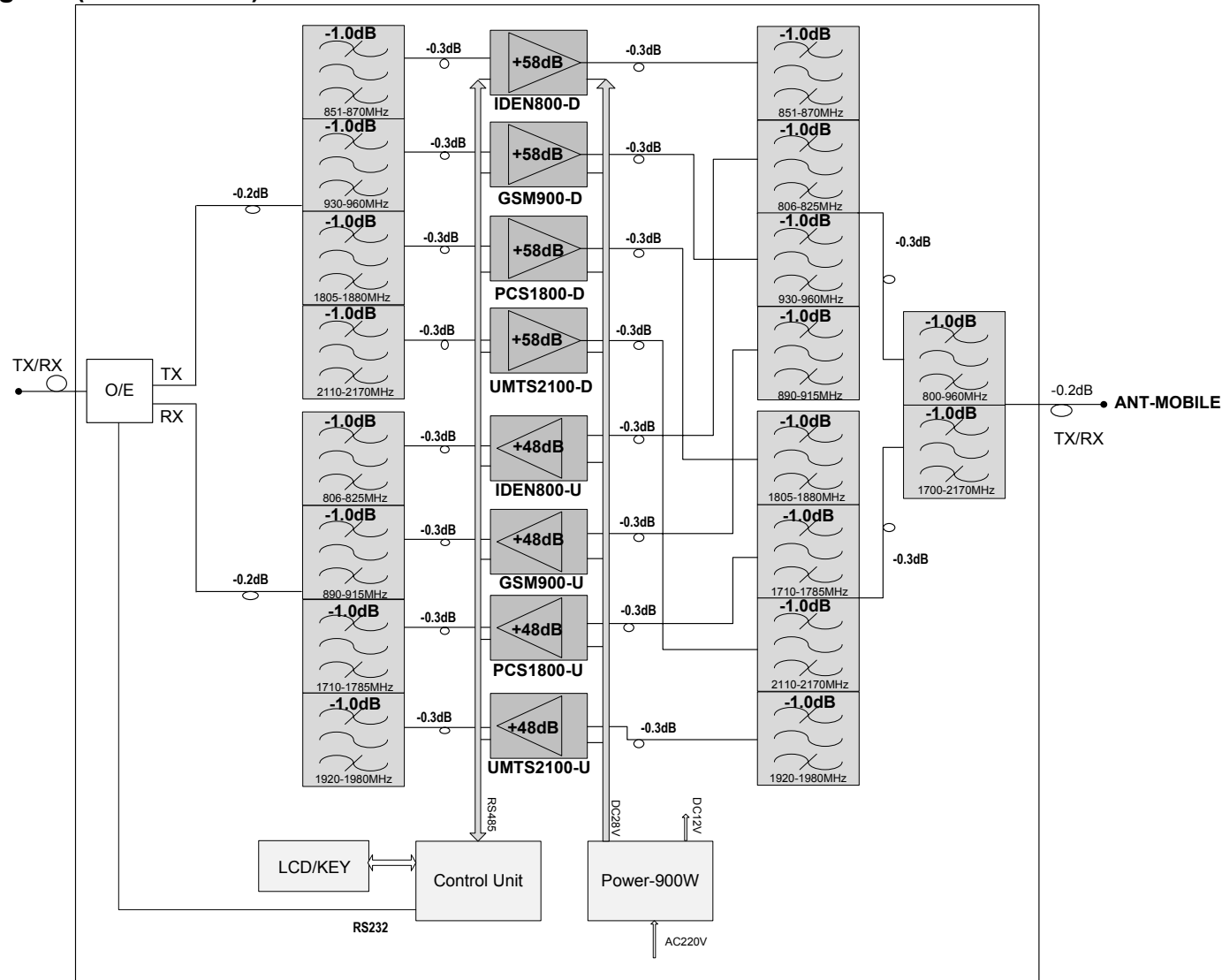
**Product Picture (Remote Unit)**



**Outline Drawing (Remote Unit)**



**System Block Diagram (Remote Unit)**



## - Master Unit -

### RF Specification (Master Unit)

Specification	Down Link				Uplink			
	IDEN	GSM	PCS	UMTS	IDEN	GSM	PCS	UMTS
Frequency (MHz)	851-870	935-960	1805-1880	2110-2170	806-825	890-915	1710-1785	1920-1980
Gain	0dB				10dB			
Pass Band Ripple	+/- 1 dB				+/- 1 dB			
Power O/P					10dBm	10dBm	10dBm	10dBm
IM3 (dBc)	>65	>65	>65	>65	>65	>65	>65	>65
Input power(max)	0dBm							
VSWR					≤1.5			
Temperature of operation					-20 ~ +60 °C			
RF port					N female			
Power supply					220V AC			
Current					<1A @ Full power output			
Communication port					RS232			
Weight					5Kg			
Dimensions (H x W x D)					130mm*440mm*435mm			
Mechanical Material					IP53			
MTBF					100,000 Hours			

### Optical Interface Specification (Master Unit)

Character	Specification
RF Bandwidth Supported	100 MHz to 2.5 GHz
Max. Input power to Main unit (DL)	-10dBm
Max. input power to Remote unit (UL)	-10 dBm
RF Downlink Parameter of the Optical interface @ 5 KM F/O length	
- IMD	< -70 dBc
- Gain flatness pers band ( 800 - 2200 MHz)	+/- 2dB

Character	Specification
Uplink Parameter of the Optical interface @ 5 Km F/O length	
- IP3	> 12 dBm
- Noise Figure (Optical to RF)	< 35 dB
- Gain flatness per band ( 800 - 2200 MHz)	+/- 2 dB
Fiber Connector (Master and Remote amplifier unit)	FC / APC
Optical fiber used	Single Mode
Optical operational Wavelength (at 25degree)	Downlink:1550 nm Uplink: 1310 nm
O/P power of the Optical sources	0.5 - 5mW

**Product Picture (Master Unit)**



**System Block Diagram (Master Unit)**

