	<b>Single Band In-Line Amplifier</b> <b>For CDMA800 + GSM1800 +</b> <b>UMTS 2100 + CDMA1900</b>	<b>Code : PW-LA-Series</b>		
		<b>Rev</b> 1	<b>Issued</b> 18/03/2008	<b>Page</b> 1/3

## SINGLE BAND IN-LINE AMPLIFIER (LA SERIES)

### Introduction

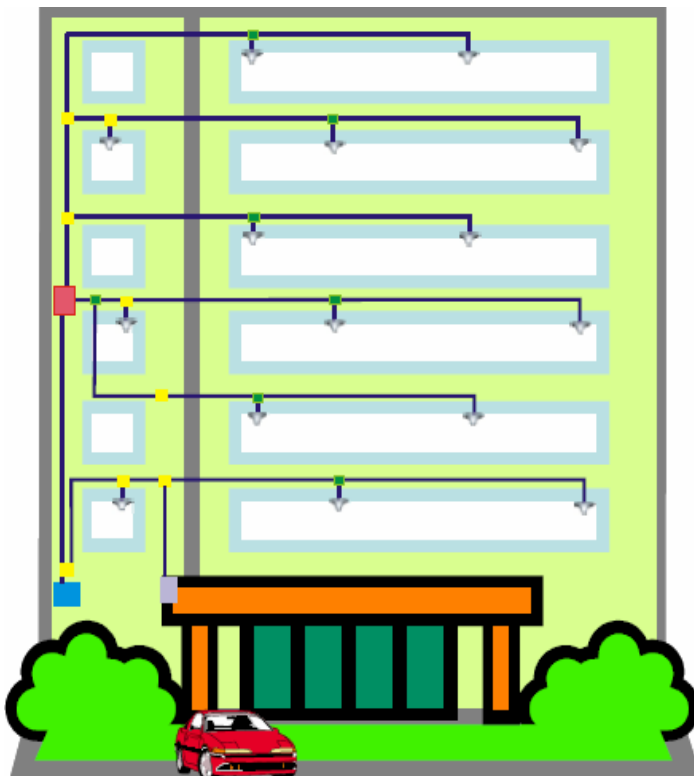



- ▶ Compact designed and light weight and cost effectiveness.
- ▶ Implemented with repeater or BTS for indoor coverage extension
- ▶ Applicable to In-Building with medium or small size with Maximum coverage up to 3000 Square meters, such as VIP room, office, house, restaurants, apartments, parking lots.
- ▶ High linearity design, simple and easy installation and maintenance  
LED indication for operation status.
- ▶ Low power consumption, Low interference.
- ▶ ALC to limit output power at specified power level and ensure stable coverage effect .


### Application

In some In-Building, we need of In-Line Amplifier with below conditions:

- Space Limitation inside Cable shaft/Riser.
- In-Line Amplifier is solution for cost efficiency by using small size of Feeder Cable.
- Insufficient RF Link Budget for huge or high rise building application.
- To save Number of BTS for certain site with low Cellular Traffic.



- BTS or Microcell
- Line amplifier
- Coupler
- Splitter
-  Ceiling antenna
- Panel antenna

	<b>Single Band In-Line Amplifier For CDMA800 + GSM1800 + UMTS 2100 + CDMA1900</b>	<b>Code : PW-LA-Series</b>		
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## Specification

### Electrical Specification

Frequency Range		
CDMA	UL:824~849MHz	DL:869~894MHz
GSM	UL:880~915MHz	DL:925~960MHz
DCS	UL:1710~1785MHz	DL:1805~1880MHz
PCS	UL:1850~1910MHz	DL:1930~1990MHz
WCDMA	UL:1920~1980MHz	DL:2110~2170MHz
Bandwidth	Wide band	
Maximum Gain	UL : $\geq 15$ dB	DL : $\geq 20$ dB
Output Power	$\geq 15$ dBm	
Spurious Emission	$\leq -36$ dBm (9KHz~1GHz)	
	$\leq -30$ dBm (1GHz~12.75GHz)	
Noise Figure	$\leq 6$ dB(Typical)	
Return Loss	$\leq -10$ dB	
Group Delay	$\leq 1.5$ uS	

### Mechanical Specification

I/O Port	N-Female
Impedance	50 ohm
Dimensions (W x H x D)	93x92x24mm
Weight	$\leq 0.5$ Kg
Operating Temperature	-5°C~50°C
Environment Conditions	IP40
Switch Adapter	Input AC 90~264V

### Models

LA-15-800 for CDMA 800Mhz  
 LA-15-900 for GSM 900Mhz  
 LA-15-1800 for DCS 1800Mhz  
 LA-15-1900 for CDMA 1900Mhz  
 LA-15-2100 for UMTS 2100Mhz

Note : +15dBm In-Line Amplifier suitable to provide coverage area of 600-1,200 meter square (depends on Total carrier and Building Structure).

### Electrical Specification

Frequency Range		
CDMA	UL:824~849MHz	DL:869~894MHz
GSM	UL:880~915MHz	DL:925~960MHz
DCS	UL:1710~1785MHz	DL:1805~1880MHz
PCS	UL:1850~1910MHz	DL:1930~1990MHz
WCDMA	UL:1920~1980MHz	DL:2110~2170MHz
Bandwidth	Bandwidth is available upon request	
Maximum Gain	UL : $\geq 25$ dB	DL : $\geq 30$ dB
Manual Gain Control	31dB@1dB/Step	
Output Power	DL $\geq 25$ dBm	UL $\geq 5$ dBm
Spurious Emission	$\leq -36$ dBm (9KHz~1GHz)	
	$\leq -30$ dBm (1GHz~12.75GHz)	
Noise Figure	UL $\leq 5$ dB(Typical)	
Return Loss	$\leq -10$ dB	
Group Delay	$\leq 1.5$ uS	


### Mechanical Specification

I/O Port	N-Female
Impedance	50 ohm
Dimensions (W x H x D)	250x100x58mm
Weight	$\leq 1.8$ Kg
Operating Temperature	-5°C~50°C
Environment Conditions	IP40
Switch Adapter	Input AC 90~264V;Output 12V/5A

### Models

LA-25-800 for CDMA 800Mhz  
 LA-25-900 for GSM 900Mhz  
 LA-25-1800 for DCS 1800Mhz  
 LA-25-1900 for CDMA 1900Mhz  
 LA-25-2100 for UMTS 2100Mhz

Note : +25dBm In-Line Amplifier suitable to provide coverage area of 1,000-4,000 meter square (depends on Total carrier and Building Structure).

	<b>Single Band In-Line Amplifier For CDMA800 + GSM1800 + UMTS 2100 + CDMA1900</b>	<b>Code : PW-LA-Series</b>		
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### Electrical Specification

Frequency Range		
CDMA	UL:824~849MHz	DL:869~894MHz
GSM	UL:880~915MHz	DL:925~960MHz
DCS	UL:1710~1785MHz	DL:1805~1880MHz
PCS	UL:1850~1910MHz	DL:1930~1990MHz
WCDMA	UL:1920~1980MHz	DL:2110~2170MHz
Bandwidth	Wide band	
Maximum Gain	UL : $\geq 35$ dB	DL : $\geq 40$ dB
Auto Level Control	$\geq 20$ dB	
Output Power	$\geq 33$ dBm	
Spurious Emission	$\leq -36$ dBm (9KHz~1GHz)	
	$\leq -30$ dBm (1GHz~12.75GHz)	
Noise Figure	$\leq 6$ dB(Typical)	
Return Loss	$\leq -10$ dB	
Group Delay	$\leq 1.5$ $\mu$ s	

### Mechanical Specification

I/O Port	N-Female
Impedance	50 ohm
Dimensions (W x H x D)	268x275x58mm
Weight	$\leq 4$ Kg
Operating Temperature	-10°C ~50°C
Environment Conditions	IP40
Switch Adapter	Input AC 90~264V

### Models

- LA-33-800 for CDMA 800Mhz
- LA-33-900 for GSM 900Mhz
- LA-33-1800 for DCS 1800Mhz
- LA-33-1900 for CDMA 1900Mhz
- LA-33-2100 for UMTS 2100Mhz

Note : +33dBm In-Line Amplifier suitable to provide coverage area of 6,000-10,000 meter square (depends on Total carrier and Building Structure).