

# Inline Amplifier



# Brief Introduction

➤ We have 2 type : LA series Vs MIA series :

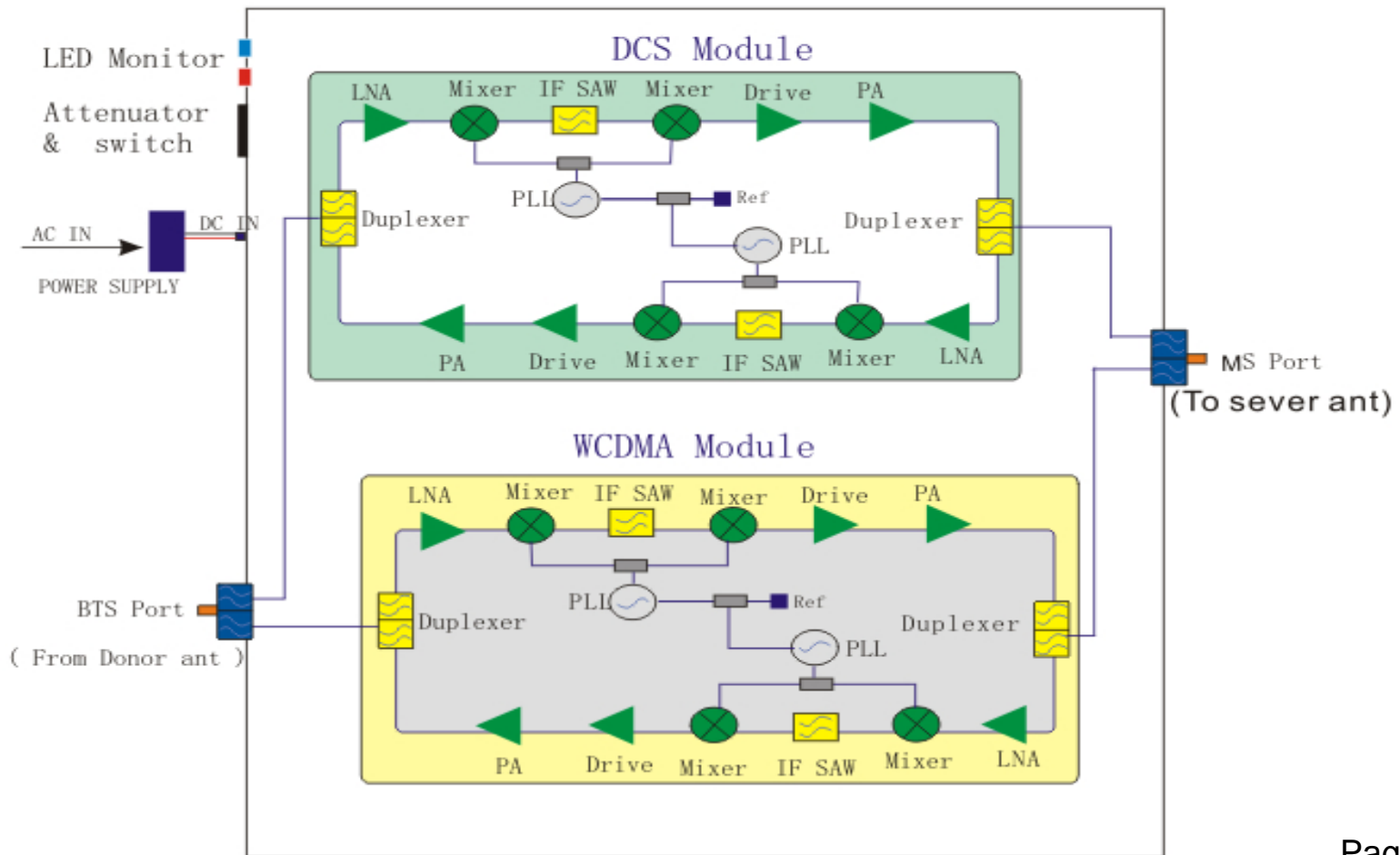
<b>Characteristic</b>	<b>LA Series</b>	<b>MIA Series</b>
<b>OMT Software</b>	No	Available via SMS Modem
<b>By pass Switch</b>	No	Available
<b>Manual Gain Setting</b>	Yes via DIP Switch	Yes via Push Button
<b>Automatic Gain Setting</b>	No	Available
<b>Max Output Power</b>	+33dBm (2watt)	+37dBm (5watt)
<b>Freq Range &amp; Max System</b>	Wideband & 2System	Wideband & 4System
<b>Electrical Power Adaptor</b>	External	Internal

➤ Designed with :

- Various options of single system, dual band and triple systems
- Different power levels of 15dBm, 25dBm, 33dBm, 37dBm & 40dBm
- High linearity of power amplifiers
- ETSI standard and 3GPP, especially in IM3
- OMT software for MIA Series
- Shut off any single system if wanted (for MIA Series)

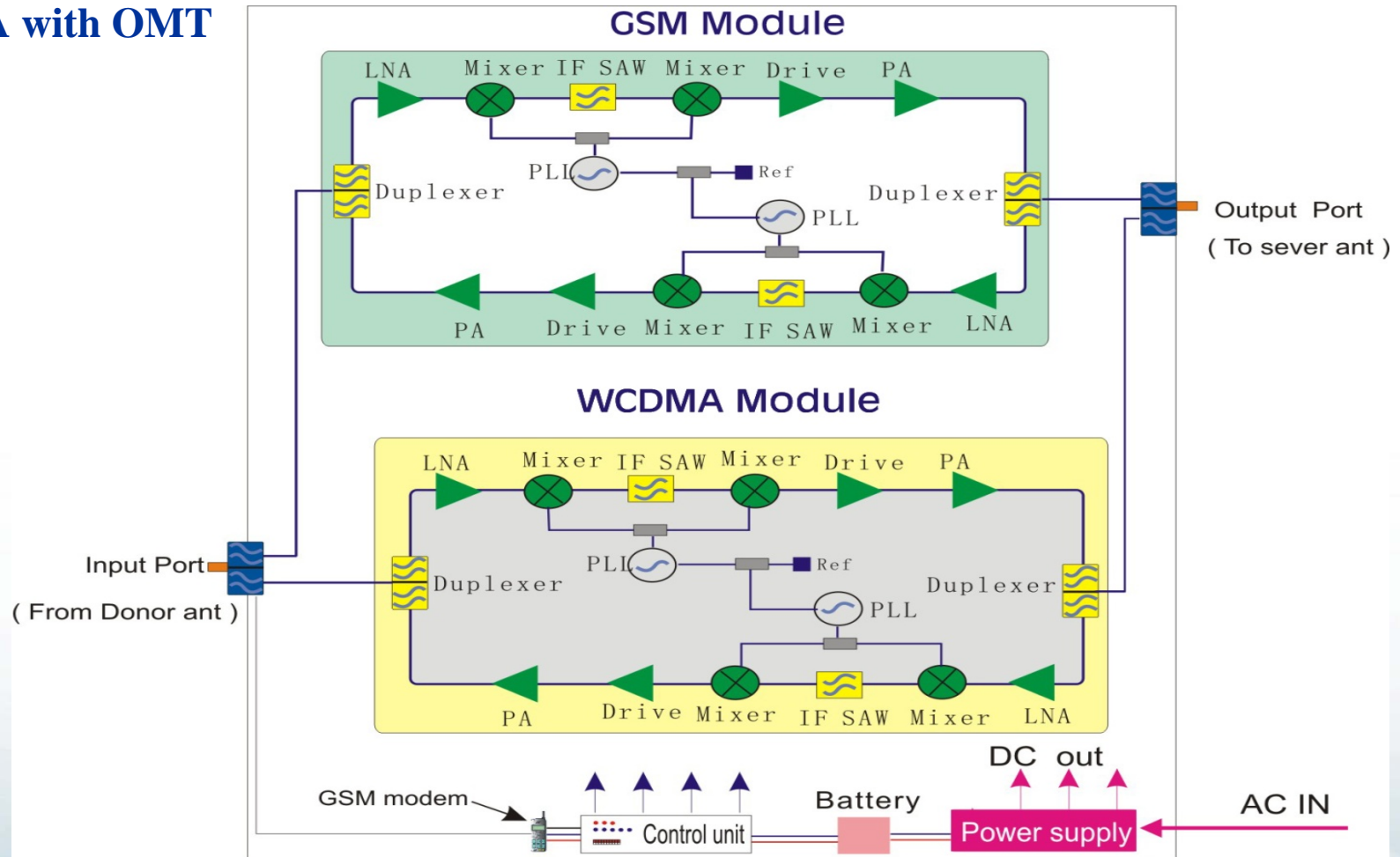
# System Diagram : LA Series

with no OMT Software



# System Diagram : MIA Series

-MIA with OMT

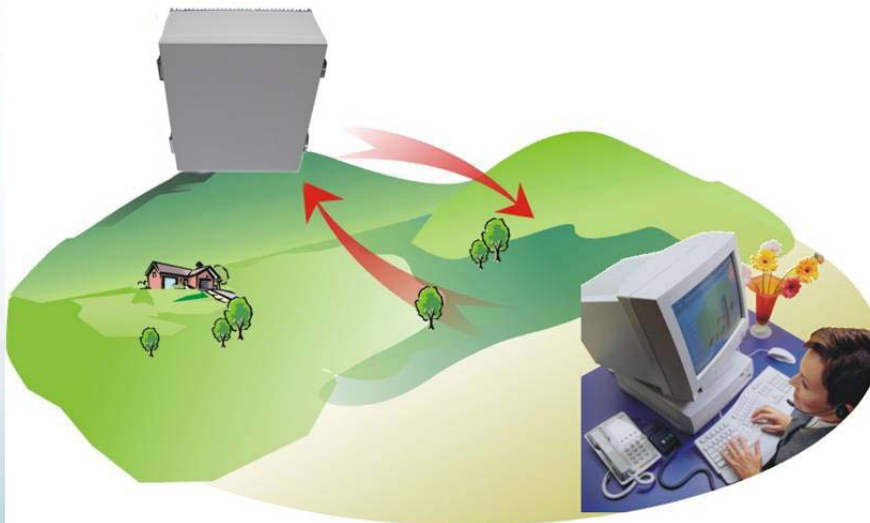




# OMT Software

## ➤ Remote Monitoring for MIA:

1. Current status of inline amplifier can be remotely monitored.
2. Any alarm will be reported back to OMT immediately.



3. Inline amplifier configuration can be remotely changed or viewed.



# Alarm & Monitoring Items for MIA

## Control

- 1、 Repeater Info
- 2、 Alarm Enable
- 3、 MGC in UL & DL
- 4、 PA on/ off
- 5、 Output power level

## Monitoring

- 1、 Repeater Info
- 2、 AGC status
- 3、 Alarm message
- 4、 Output power
- 5、 Maximum gain
- 6、 Attenuation

## Alarm

- 1、 AGC out of range
- 2、 Power failure
- 3、 PA failure
- 4、 Over temperature
- 5、 Door open

# Why Inline Amplifier

1. Space limitation inside cable shaft



# Why Inline Amplifier

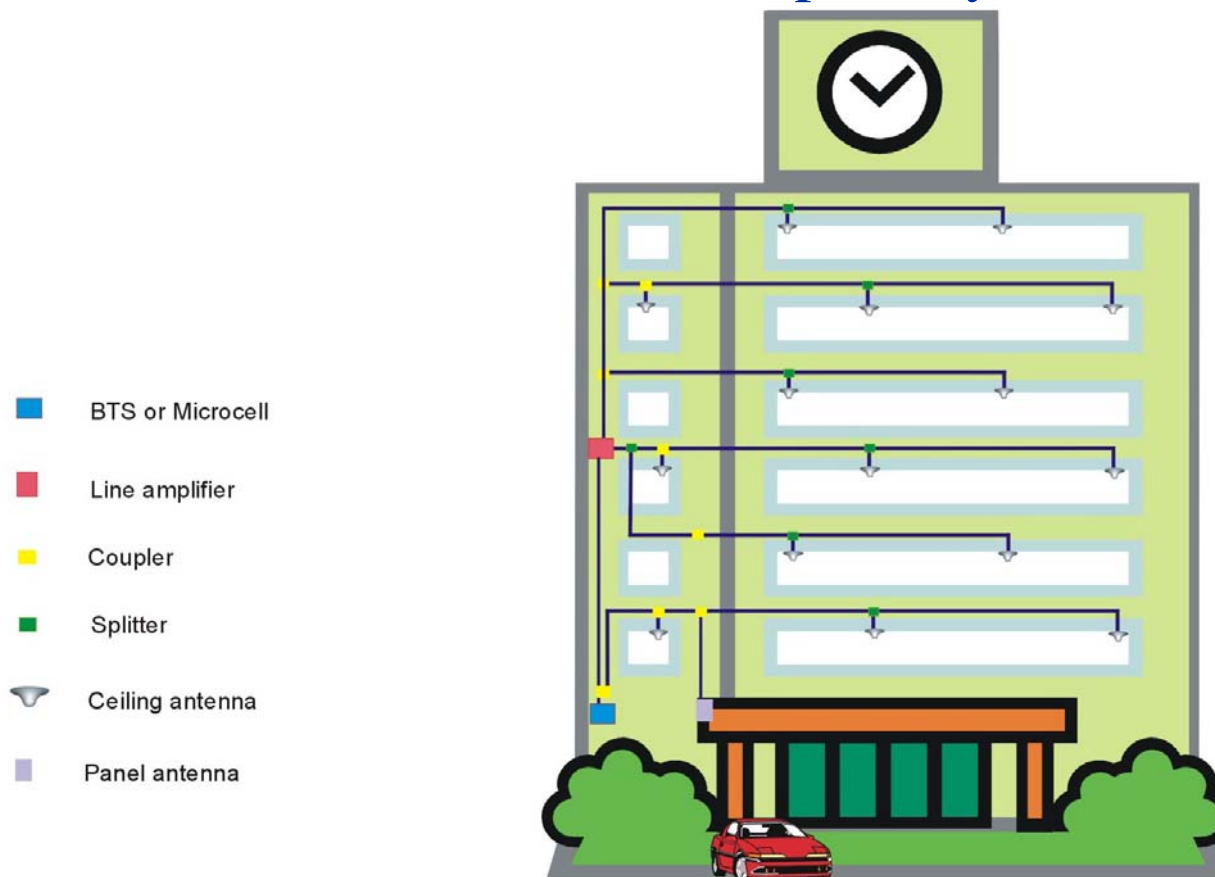
2. To reduce Feeder cable to smaller size (cost efficient)





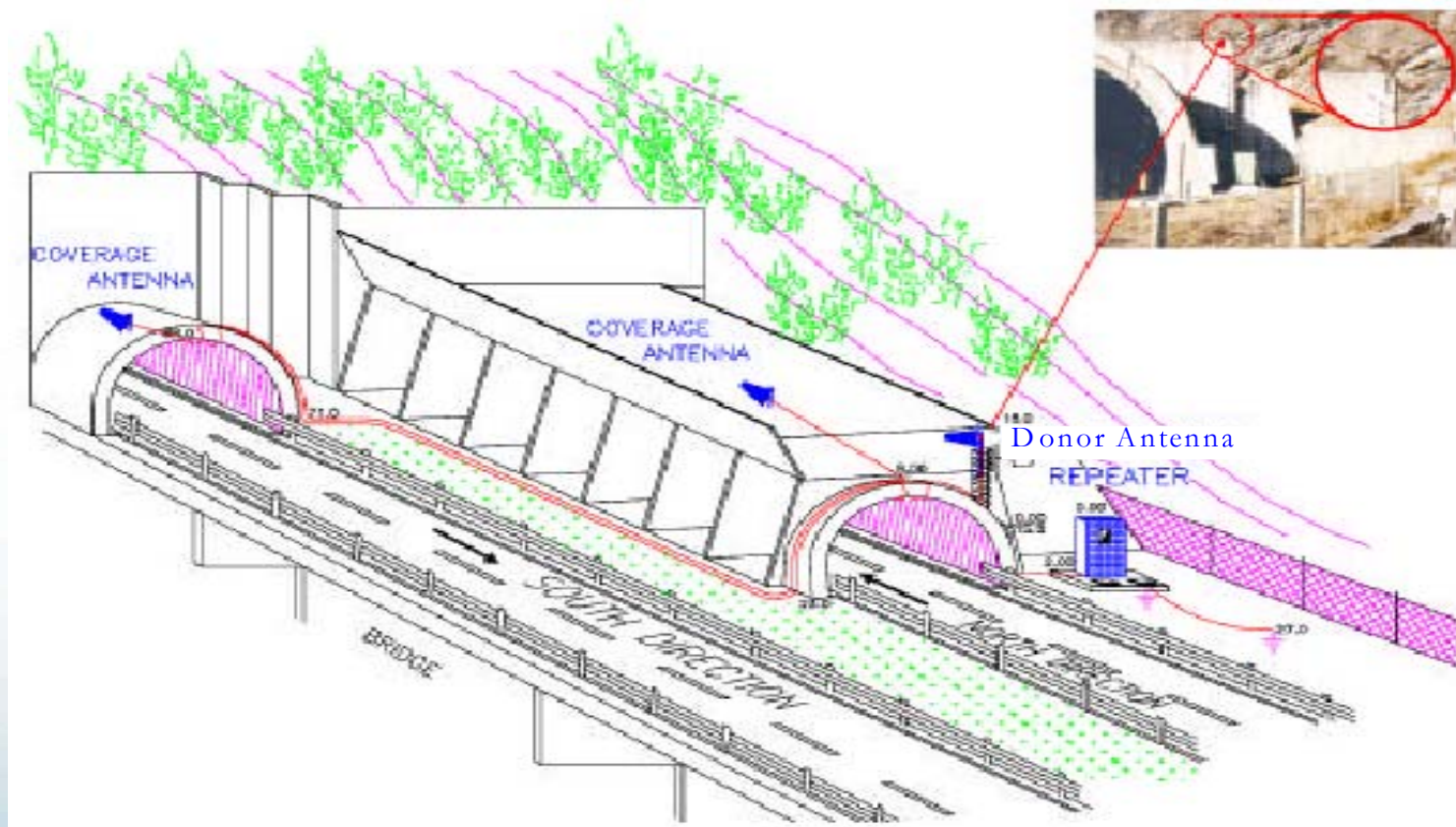
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3. To help BTS or repeater to extend the coverage or to reduce number of BTS especially for low traffic site.



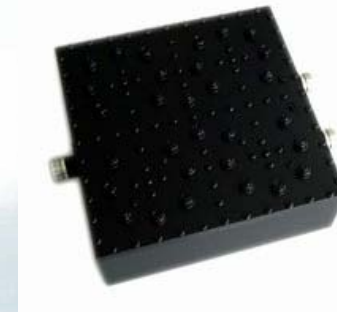
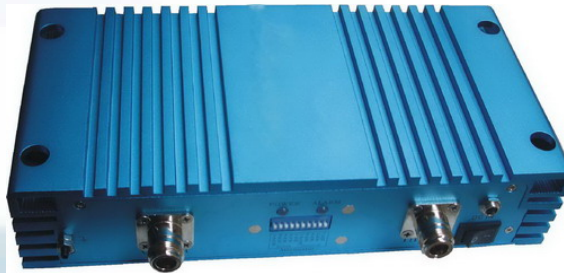
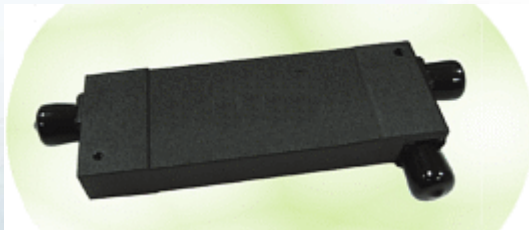
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4. Tunnel Application : to boost up low signal strength



# Simple Rule on using Inline amplifier

1. Max input power is  $<+5\text{dBm}$ , otherwise Attenuator is needed.
2. We can use Power Coupler to maintain existing Connection at Low Loss Output port and connect Amplifier at Coupled port.
3. For In-Building Combined Network, if we only boost certain Frequency band then we need to use Diplexer or Triplexer to filter input signal.
4. Use Gain Setting to adjust output power (if necessary).





## Application

- Rural areas
- Medium or large sized in-buildings
- Elevators
- Tunnels

