

# E16S02P59

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Dual Band Tower Mounted Amplifier, 1800//2100 MHz, 12 dB, 2 BTS & 4 ANT ports, AISG with 1 RET connectors (1 devices with 2 sub-units each)

- Industry leading PIM performance
- TMA is operating in AISG & CWA mode, Alarm Current consumption CWA mode 190 mA
- 2 input ports and 4 output ports
- Designed to boost UP-Link Coverage and KPIs
- 1 device with 2 sub-units
- New 4.3-10 connectors for improved PIM performance and size reduction

## Product Classification

**Product Type** 1-BTS:2-ANT (Diplex) | Tower mounted amplifier

## General Specifications

**Color** Gray

**Modularity** 2-Twin

**Mounting** Pole | Wall

**Mounting Pipe Hardware** Band clamps (2)

**RF Connector Interface** 4.3-10 Female

## Dimensions

**Height** 280 mm | 11.024 in

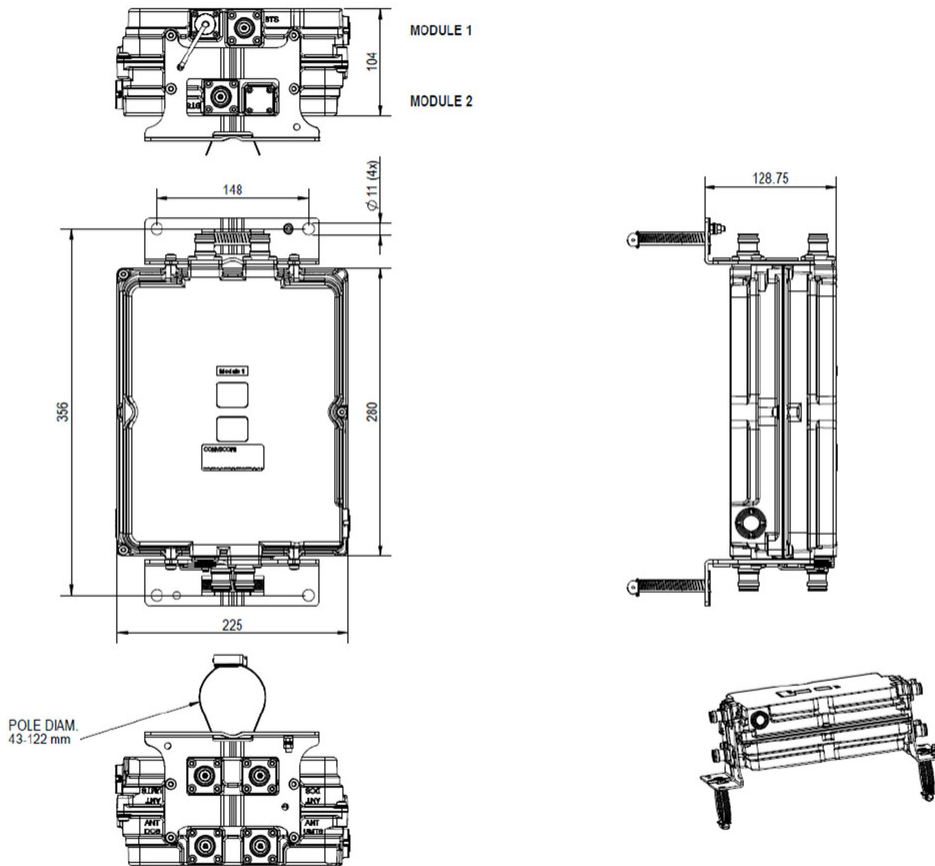
**Width** 225 mm | 8.858 in

**Depth** 104 mm | 4.094 in

**Mounting Pipe Diameter Range** 50–120 mm

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## Outline Drawing



## Electrical Specifications

**License Band, LNA**

DCS 1800 | IMT 2100

## Electrical Specifications, dc Power/Alarm

**dc Switching/Redundancy**

Yes

**Lightning Surge Current**

10 kA

**Lightning Surge Current Waveform**

8/20 waveform

**Voltage**

7-30 Vdc

**Alarm Current, CWA Mode**

190 mA  $\pm$ 10 mA

## Electrical Specifications, AISG

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<b>AISG Connector</b>	8-pin DIN Female
<b>AISG Connector Standard</b>	IEC 60130-9
<b>Protocol</b>	AISG 2.0
<b>Voltage, AISG Mode</b>	10–30 Vdc

## Electrical Specifications

<b>Sub-module</b>	<b>1   2</b>	<b>1   2</b>
<b>Branch</b>	1	2
<b>Port Designation</b>	ANT 1800	ANT 2100
<b>License Band</b>	DCS 1800, LNA	IMT 2100, LNA
<b>Return Loss - Bypass Mode, typical, dB</b>	14	14

## Electrical Specifications Rx (Uplink)

<b>Frequency Range, MHz</b>	<b>1710–1785</b>	<b>1920–1980</b>
<b>Bandwidth, MHz</b>	75	60
<b>Gain, nominal, dB</b>	12	12
<b>Gain Tolerance, dB</b>	+1.3/-1.0	±1
<b>Noise Figure, typical, dB</b>	1.5	1.5
<b>Group Delay Variation, maximum, ns</b>	30	16
<b>Group Delay Variation Bandwidth, MHz</b>	5	5
<b>Total Group Delay, maximum, ns</b>	100	80
<b>Return Loss, minimum, dB</b>	17	17
<b>Insertion Loss - Bypass Mode, typical, dB</b>	2.5	2.5

## Electrical Specifications Tx (Downlink)

<b>Frequency Range, MHz</b>	<b>1805–1880</b>	<b>2110–2170</b>
<b>Bandwidth, MHz</b>	75	60
<b>Insertion Loss, maximum, dB</b>	0.6	0.5
<b>Insertion Loss, typical, dB</b>	0.5	0.4
<b>Group Delay Variation, maximum, ns</b>	10	4
<b>Group Delay Variation Bandwidth, MHz</b>	5	5
<b>Total Group Delay, maximum, ns</b>	45	25
<b>Return Loss, minimum, dB</b>	18	18
<b>Input Power, RMS, maximum, W</b>	200	200
<b>Input Power, PEP, maximum, W</b>	2000	2000
<b>3rd Order PIM, maximum, dBc</b>	-161	-161

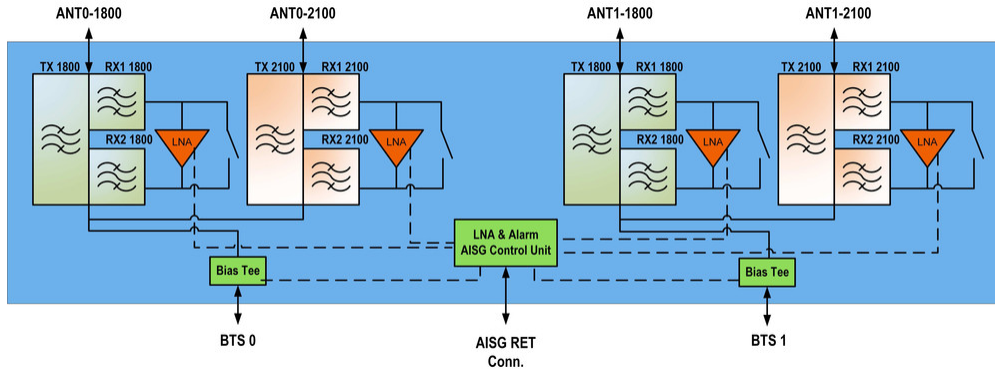
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## 3rd Order PIM Test Method

Two +43 dBm carriers

Two +43 dBm carriers

## Block Diagram



## Environmental Specifications

**Operating Temperature** -40 °C to +65 °C (-40 °F to +149 °F)

**Relative Humidity** Up to 100%

**Corrosion Test Method** IEC 60068-2-11, 30 days

**Ingress Protection Test Method** IEC 60529:2001, IP67

## Packaging and Weights

**Included** Mounting hardware

**Volume** 6.5 L

**Weight, net** 7 kg | 15.432 lb

## Regulatory Compliance/Certifications

### Agency

ISO 9001:2015



### Classification

Designed, manufactured and/or distributed under this quality management system

## \* Footnotes

**License Band, LNA** License Bands that have RxUplink amplification