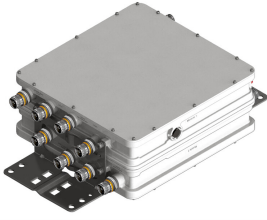


# E16Z01P89

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Tri Band Tower Mounted Amplifier, 1800/2100/2600 MHz, 12 dB, 2 BTS & 8 ANT ports, AISG with 1 RET connector (1 device with 2 sub-units each), with 4.3-10 connectors, 698-960 MHz Bypass

- Designed to boost UP-Link Coverage and KPIs
- Industry leading PIM performance
- New 4.3-10 connectors for improved PIM performance and size reduction
- 2 input ports and 8 output ports
- 1 device with 2 sub-units
- TMA is operating in AISG mode
- TMA with 1350-1525 MHz bypass
- TMA with 698-960 MHz bypass

## Product Classification

**Product Type** 2-BTS:8-ANT (Quadplex)

## 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** 316 mm | 12.441 in

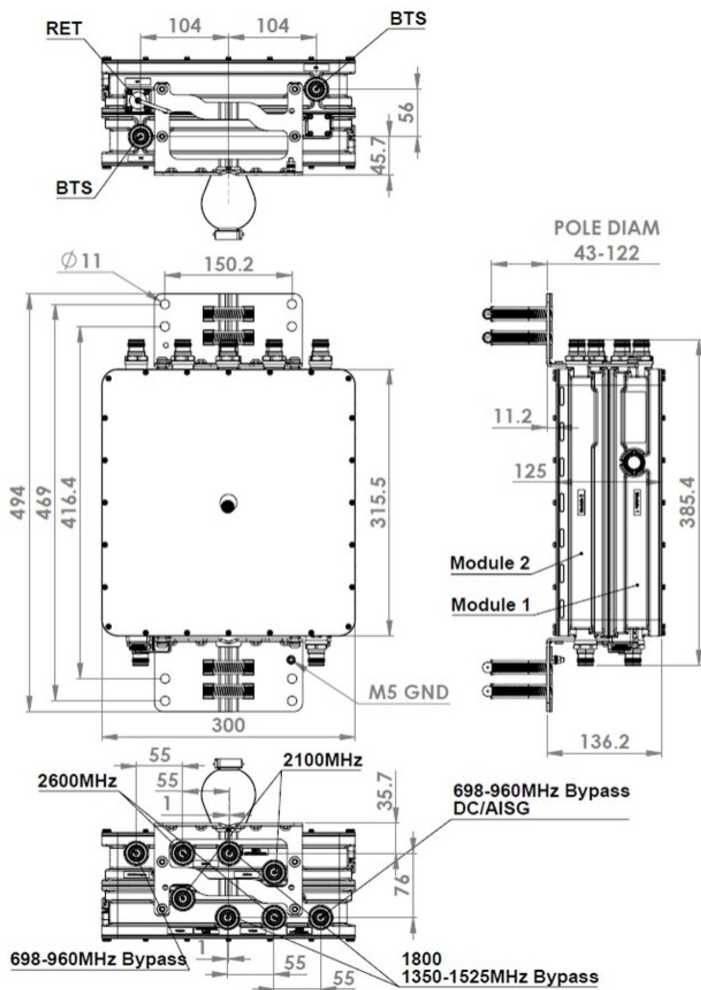
**Width** 300 mm | 11.811 in

**Depth** 125 mm | 4.921 in

**Mounting Pipe Diameter Range** 42.6–122 mm

## Outline Drawing

# E16Z01P89



## Electrical Specifications

**License Band, LNA** DCS 1800 | EDD 800 | IMT 2100 | IMT 2600

## Electrical Specifications, dc Power/Alarm

**dc Switching/Redundancy** Yes

**Lightning Surge Current** 10 kA

**Lightning Surge Current Waveform** 8/20 waveform

## Electrical Specifications, AISG

**AISG Connector** 8-pin DIN Female

**AISG Connector Standard** IEC 60130-9

**Protocol** AISG 2.0

# E16Z01P89

Voltage, AISG Mode

10–30 Vdc

## Electrical Specifications

|   |               |               |               |
|---|---------------|---------------|---------------|
| <b>Sub-module</b>                             | <b>1   2</b>  | <b>1   2</b>  | <b>1   2</b>  |
| <b>Branch</b>                                 | 1             | 2             | 3             |
| <b>Port Designation</b>                       | ANT           | ANT           | ANT           |
| <b>License Band</b>                           | DCS 1800, LNA | IMT 2100, LNA | IMT 2600, LNA |
| <b>Return Loss, typical, dB</b>               | 20            | 20            | 20            |
| <b>Return Loss - Bypass Mode, typical, dB</b> | 16            | 16            | 16            |

## Electrical Specifications Rx (Uplink)

|  |                  |                  |                  |
|--|------------------|------------------|------------------|
| <b>Frequency Range, MHz</b>                      | <b>1710–1785</b> | <b>1920–1980</b> | <b>2500–2570</b> |
| <b>Bandwidth, MHz</b>                            | 75               | 60               | 70               |
| <b>Gain, nominal, dB</b>                         | 12               | 12               | 12               |
| <b>Noise Figure, typical, dB</b>                 | 1.4              | 1.5              | 1.5              |
| <b>Total Group Delay, typical, ns</b>            | 120              | 60               | 60               |
| <b>Insertion Loss - Bypass Mode, typical, dB</b> | 2.2              | 2                | 2.3              |

## Electrical Specifications Tx (Downlink)

|                                       |                      |                      |                      |
|---------------------------------------|----------------------|----------------------|----------------------|
| <b>Frequency Range, MHz</b>           | <b>1805–1880</b>     | <b>2110–2170</b>     | <b>2620–2690</b>     |
| <b>Bandwidth, MHz</b>                 | 75                   | 60                   | 70                   |
| <b>Insertion Loss, typical, dB</b>    | 0.5                  | 0.35                 | 0.45                 |
| <b>Total Group Delay, typical, ns</b> | 50                   | 25                   | 30                   |
| <b>Return Loss, typical, dB</b>       | 20                   | 20                   | 20                   |
| <b>Input Power, RMS, maximum, W</b>   | 200                  | 200                  | 200                  |
| <b>Input Power, PEP, maximum, W</b>   | 2000                 | 2000                 | 2000                 |
| <b>3rd Order PIM, typical, dBc</b>    | -160                 | -160                 | -160                 |
| <b>3rd Order PIM Test Method</b>      | Two +43 dBm carriers | Two +43 dBm carriers | Two +43 dBm carriers |

## Electrical Specifications, Band Pass

|                                       |                |                  |
|---------------------------------------|----------------|------------------|
| <b>Frequency Range, MHz</b>           | <b>698–960</b> | <b>1350–1525</b> |
| <b>Insertion Loss, typical, dB</b>    | 0.2            | 0.2              |
| <b>Total Group Delay, typical, ns</b> | 5              | 15               |
| <b>Return Loss, typical, dB</b>       | 19             | 20               |
| <b>Input Power, RMS, maximum, W</b>   | 200            | 200              |
| <b>Input Power, PEP, maximum, W</b>   | 1000           | 1000             |

# E16Z01P89

3rd Order PIM, typical, dBc

-160

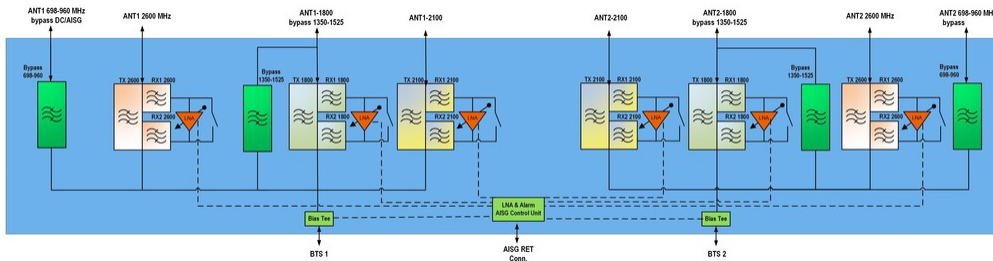
-160

3rd Order PIM Test Method

Two +43 dBm carriers

Two +43 dBm carriers

## Block Diagram



## Environmental Specifications

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| <b>Operating Temperature</b>          | -40 °C to +65 °C (-40 °F to +149 °F) |
| <b>Relative Humidity</b>              | Up to 100%                           |
| <b>Corrosion Test Method</b>          | IEC 60068-2-11, 30 days              |
| <b>Ingress Protection Test Method</b> | IEC 60529:2001, IP67                 |

## Packaging and Weights

|                    |                     |
|--------------------|---------------------|
| <b>Included</b>    | Mounting hardware   |
| <b>Volume</b>      | 11.8 L              |
| <b>Weight, net</b> | 15.4 kg   33.951 lb |

## Regulatory Compliance/Certifications

|               |  |
|---------------|--|
| <b>Agency</b> | <b>Classification</b>  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

## \* Footnotes

|                          |  |
|--------------------------|--|
| <b>License Band, LNA</b> | License Bands that have RxUplink amplification |
|--------------------------|--|