

# E14R02P27



## Tower Mounted Amplifier, Dual 700 MHz with AISG 2.0

- TMA is operating in AISG & CWA mode, Alarm Current consumption CWA mode 190 mA
- Designed to boost UP-Link Coverage and KPIs
- RET interface to control antenna RET actuators with AISG standard
- Single AISG with 1 RET connector
- Automatic LNA by-pass function
- Built in lightning protection
- Connectors "in line"
- 2 input ports and 2 output ports

## Product Classification

**Product Type** 2-BTS:2-ANT (Uniplex) | 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** 144 mm | 5.669 in

**Width** 230 mm | 9.055 in

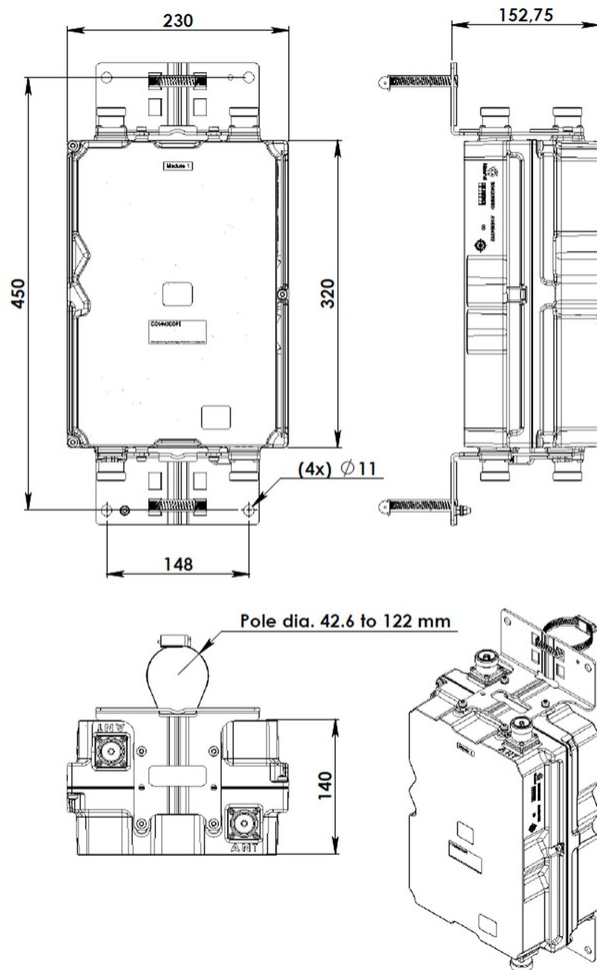
**Depth** 320 mm | 12.598 in

**Ground Screw Diameter** 8 mm | 0.315 in

**Mounting Pipe Diameter Range** 40–160 mm

## Outline Drawing

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## Electrical Specifications

**License Band, LNA** APT 700

## Electrical Specifications, dc Power/Alarm

<b>dc Switching/Redundancy</b>	Yes
<b>Lightning Surge Current</b>	10 kA
<b>Lightning Surge Current Waveform</b>	8/20 waveform
<b>Operating Current at Voltage</b>	110 mA @ 12 V
<b>Operating Current Tolerance</b>	±20 mA
<b>Voltage, CWA Mode</b>	7–18 Vdc
<b>Alarm Current, CWA Mode</b>	190 mA ±10 mA

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## Electrical Specifications, AISG

<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>	7–30 Vdc

## Electrical Specifications

<b>Sub-module</b>	<b>1   2</b>
<b>Branch</b>	1
<b>Port Designation</b>	ANT
<b>License Band</b>	APT 700, LNA
<b>Return Loss, typical, dB</b>	20
<b>Return Loss - Bypass Mode, typical, dB</b>	18

## Electrical Specifications Rx (Uplink)

<b>Frequency Range, MHz</b>	<b>703–748</b>
<b>Bandwidth, MHz</b>	45
<b>Gain, nominal, dB</b>	13
<b>Gain Tolerance, dB</b>	±1
<b>Noise Figure, maximum, dB</b>	2
<b>Noise Figure, typical, dB</b>	1.2
<b>Group Delay Variation, maximum, ns</b>	100
<b>Group Delay Variation Bandwidth, MHz</b>	5
<b>Total Group Delay, maximum, ns</b>	150
<b>Return Loss, minimum, dB</b>	18
<b>Insertion Loss - Bypass Mode, typical, dB</b>	1.3

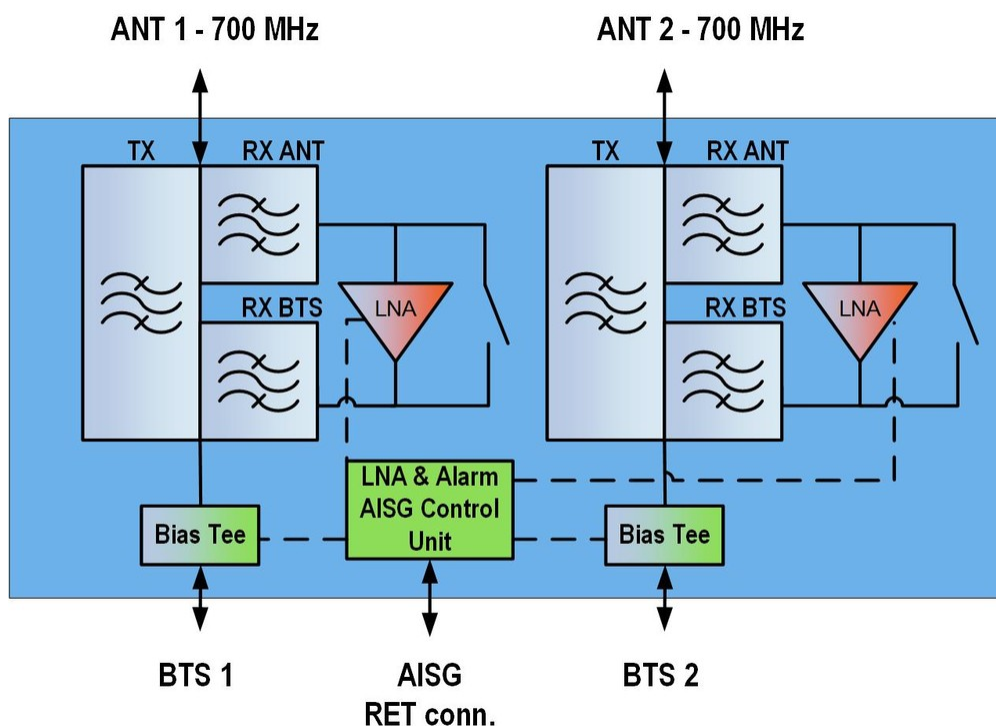
## Electrical Specifications Tx (Downlink)

<b>Frequency Range, MHz</b>	<b>758–803</b>
<b>Bandwidth, MHz</b>	45
<b>Insertion Loss, maximum, dB</b>	0.5
<b>Insertion Loss, typical, dB</b>	0.4

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<b>Group Delay Variation, maximum, ns</b>	30
<b>Group Delay Variation Bandwidth, MHz</b>	5
<b>Return Loss, minimum, dB</b>	18
<b>Return Loss, typical, dB</b>	20
<b>Input Power, RMS, maximum, W</b>	200
<b>Input Power, PEP, maximum, W</b>	2500
<b>3rd Order PIM, typical, dBc</b>	-160
<b>3rd Order PIM Test Method</b>	Two +43 dBm carriers

## Block Diagram



## Material Specifications

**Finish** Painted

## Environmental Specifications

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

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<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>	10 L
<b>Weight, net</b>	12 kg   26.455 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
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