

**PRODUCT  
SPECIFICATION**



Designed for the highest reliability even in the most demanding installation environments

## OneBase™ PCS Twin Dual Duplex TMA

Full Band Tower Mounted Amplifier  
with AISG and VSWR Alarm

**T**he tower mounted amplifiers from Andrew Wireless Solutions optimize network performance and represent the ideal solution for coverage and capacity enhancement.

By improving uplink performance, the tower mounted amplifier (TMA) ensures optimum coverage of fringe areas, weak spots, and indoor locations. The unit is easy to install in any wireless system and guarantees:

**Improved sensitivity**, reducing dropped calls and failed connection attempts.

**Enhanced signal quality**, improving voice clarity and data speed.

**Lower handset output**, extending talk time, reducing interference in GSM/EDGE, UMTS, and CDMA systems.

The PCS twin dual duplex TMA is part of the OneBase™ product family, which combines Andrew products and

technology into complete solutions for use in integrated base station systems.

The self-contained body is engineered to ensure the highest reliability in severe environments while featuring a very compact size and attractive appearance.

The PCS twin dual duplex TMA includes pole mounting hardware.

- 12 dB gain
- Full band operation
- AISG compatible interface
- RET antenna port
- Multi-stage lightning protection
- Sealed to protection class IP67
- In-line connectors
- Failsafe LNA bypass
- VSWR monitoring alarm
- Automatic dc switching
- Conventional PDU compatible
- Field upgradeable firmware

## SPECIFICATIONS

# OneBase™ PCS Twin Dual Duplex TMA

### Electrical

#### UPLINK

Frequency range, MHz	1850–1910
Gain, dB	12 ± 1
Total group delay, ns	150 max.
Delay variation – any 5 MHz BW, ns	50 max.
Delay variation – any 240 kHz BW, ns	9 max.
Noise figure – mid band, dB	1.2 typ.
Noise figure – full band, dB	2 max.
Return loss, dB	18 min.
Output IP3, dBm	26 min.

#### DOWNLINK

Frequency range, MHz	1930–1990
Insertion loss, dB	0.4 typ, 0.7 max.
Group delay, ns	50 max.
Delay variation – any 5 MHz BW, ns	15 max.
Return loss, dB	18 min.
IMD at antenna port, (2 x +43 dBm), dBm	-107
Maximum input power – RMS, W	500
Maximum input power – PEP, W	5000

#### AISG

Protocol	AISG 2.0 standard AISG 1.1 optional
RET Antenna support	24 VDC & RS-485

#### VSWR ALARM

Alarm threshold – return loss, dB	<9.54 ± 2
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#### POWER

Power supply voltage, Vdc	7–30
Operating current, mA	135 ± 15 mA at 12V 110 ± 15 mA at 15V 75 ± 10 mA at 24V
Failure current consumption, mA	190 ± 10 mA at 10-18V

### Mechanical

Height, depth, width, mm (in)	260 × 94 × 170 (10.2 × 3.7 × 6.7)
Weight w/o mounting hardware, kg (lb)	6.6 (14.6)
Finish	Gray paint
Connectors	
RF	7-16 DIN female (long-neck)
AISG	8 pin circ., IEC 60130
Ground screw diameter, in	1/4 in

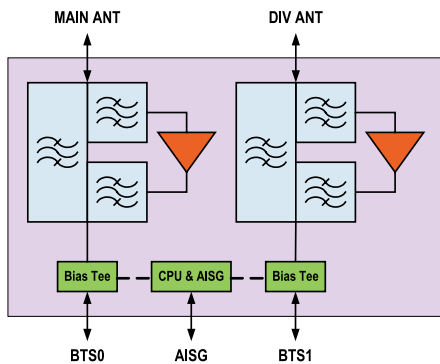
### Environmental

Operating temperature range, °C	-40 to +65
Ingress protection	IP67
Lightning protection	
Antenna port	dc ground
BTS port	20 kA, 8/20 μs

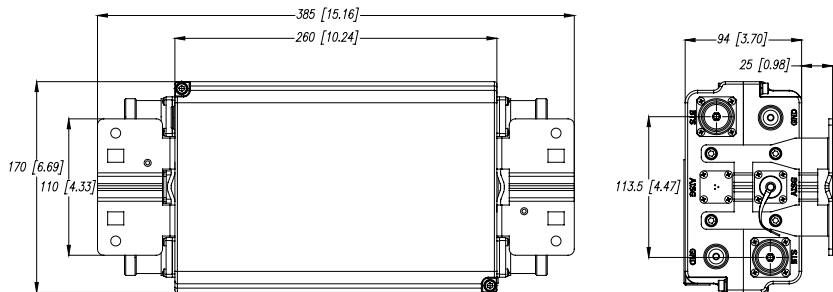
### Part Number

PCS twin dual duplex TMA	E15509P94
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### Block Diagram



### Dimensions-mm [in]



### Ordering Information: SPECIFY MODEL NUMBER TO ORDER TMA WITH ACCESSORIES AS SHOWN

Model: ETW190VS12UB

Description: PCS Twin Dual Duplex TMA - AISG 2.0 standard

Included Accessories: Mounting hardware



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