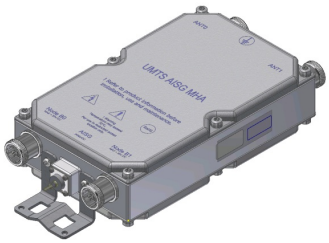
TMA2013F00V4-1

TWIN TMA 2100

A full band 2100MHz tower mounted amplifier the Kaelus TMA2013FxxV4-1 provides a field upgradable TMA with excellent noise figure performance. Field upgradable for BTS compatibility and AISG functionality the TMA2013 provides the following features and benefits.



FEATURES

- Dual duplexed TMA providing Improved base station sensitivity through excellent noise performance and high linearity
- Hardware and software configuration using AISG “personality” upload
- High reliability with full lightning protection and a fail-safe bypass mode
- AISG and current dump compatible
- High power handling

TECHNICAL SPECIFICATIONS

DOWNLINK (TX) PATH	
Passband	2110 - 2170MHz
Return loss	18dB minimum
Insertion loss	0.4dB maximum / variation @ 0.2dB maximum across pass band
Group delay variation	5ns maximum in any 5MHz
Maximum input power with no damage	100W (average) / 1kW (PEP)
Intermodulation @ antenna ports	-163dBc maximum in RX band with 2x 43dBm TX carriers, BTS port
DOWNLINK REJECTION	
TX filter rejection in RX band	60dB minimum
920 - 960MHz	> 75dB
1805 - 1880MHz	> 65dB
2010 - 2025MHz	> 25dB
2400 - 2700MHz	> 65dB
2700 - 2900MHz	> 75dB
UPLINK (RX) PATH	
Passband	1920 - 1980MHz
Nominal gain	12dB ±1dB
Gain variation over frequency, temperature	±0.2dB maximum / ±0.35dB maximum
Noise figure	1.15dB typical, 1.4dB maximum at 25°C, 1.6dB maximum at 60°C
Return loss	18dB minimum / 16dB minimum bypass mode
Insertion loss	3.5dB maximum bypass mode
Group delay variation	10ns maximum in any 5MHz
Output IP3	+28dBm minimum
Maximum input power with no damage	+12dBm

UPLINK REJECTION	
Rejection in RX input filter @ 2110 - 2170 MHz	> 68 dB
920 - 960MHz	> 75dB
1805 - 1880MHz	> 65dB
2010 - 2025MHz	> 45dB
2400 - 2700MHz	> 65dB
2700 - 2900MHz	> 75dB

POWER SUPPLY AND ALARM (CURRENT WINDOW ALARM MODE, DEFAULT)	
DC supply voltage	+9 to +30V DC
DC supply	Each BTS port powered individually at 100mA minimum
DC supply current, normal mode	100mA typ per port
DC supply current, alarm mode	programmable
DC supply current, alarm mode programmable range	150 - 300mA

AISG MODE OF OPERATION (AUTO SELECTED ON VALID AISG 2.0 FRAMES)	
AISG signals can be applied to either BTS port. The TMA unit switches to AISG mode when valid frames are detected on one of the ports. The TMA is DC powered from the BTS port supplying the AISG frames or from both ports if both have DC voltage.	
AISG version	2.0, with current alarm window backup
Supply current, AISG mode	210mA typical @ 9V
AISG connector, current rating	< 4A peak, 2 Amp continuous, pin 6
Field firmware upgradable	Yes

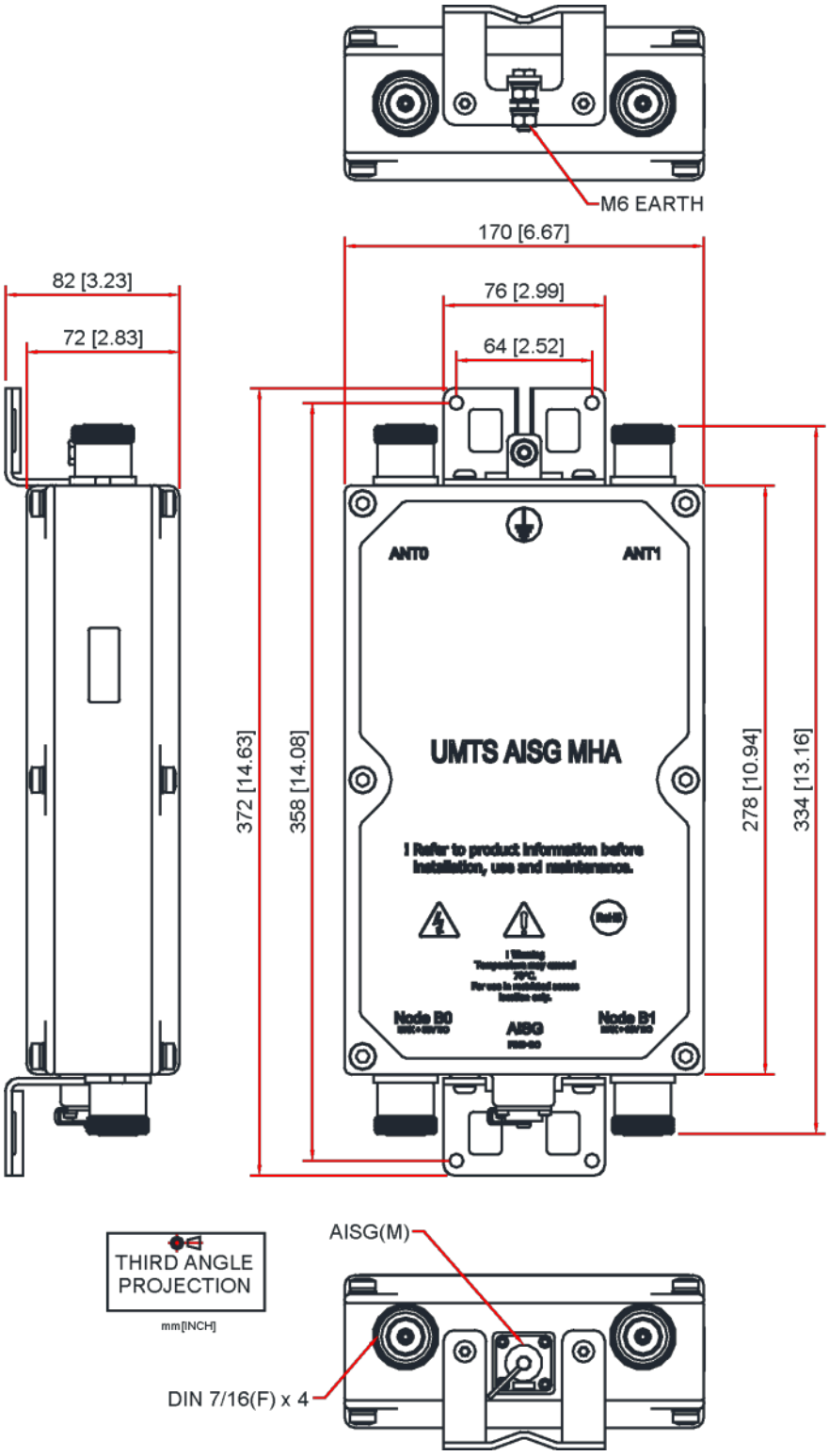
ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-40°C to +65°C | -40°F to +149°F
Ingress protection	IP67
Lightning protection	IEC61312-1, RF: 3kA, 10/350us pulse
MTBF	>700,000 hours

MECHANICAL	
Dimensions H x D x W	278 x 169 x 72mm | 10.94 x 6.65 x 2.83in
Weight	6.5kg | 14.33lbs maximum
Finish	Painted, light grey (RAL 7035)
Connectors	DIN 7-16 (F) x 4 long shank
Mounting	Pole/wall bracket supplied with two metal clamps 45-178mm diameter poles

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
xx Denotes different internal software personalities for different CWA and BTS configurations	
TMA2013FxxV4-1	Twin TMA, UMTS2100 60MHz BW, dual duplex

MECHANICAL BLOCK DIAGRAM



SYSTEM BLOCK DIAGRAMS