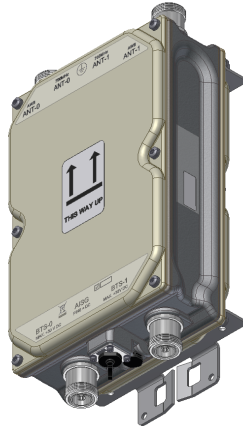


TMA2043F1V1-1

DUAL BAND AWS TMA WITH 700 BYPASS (TWIN)



Designed to be used at co-located 700MHz and AWS sites, the Kaelus TMA2043 provides internal diplexing of the two bands. External diplexers and feeders are no longer required, resulting in decreased hardware costs, environmental impact and tower licensing fees.



PRODUCT FEATURES

- LTE ready
- AISG 2.0 compatible, fully software upgradable
- Provides gain in the AWS path and bypass to 700MHz frequencies
- Excellent noise figure performance
- Full lightning protection and fail safe bypass mode

TECHNICAL SPECIFICATIONS

| Downlink AWS (TX) Path

Passband	2110-2170MHz
Insertion loss	0.25dB typ
Return loss	18dB min
Maximum average input power	500W
Maximum PEP input power	5000W
Intermodulation @ antenna ports	<-155dBc with 2 x 20W carriers

TECHNICAL SPECIFICATIONS CONTINUED

| Uplink AWS (RX) Path

Passband	1710-1770MHz
Gain	12dB min
Return loss	18dB min operating, 15dB min in bypass
Noise figure	1.1dB typ
Rejection in TX Band	80dB min
Rejection @ 1700MHz	25dBc min
Rejection @ 1800MHz	25dBc min
Bypass loss	2.0dB typ
Output IP3	26dBm typ

| 700MHz Bypass

Passband	698-746MHz
Insertion loss	0.15dB typ
Return loss	18dB min
Attenuation in AWS band	80dB min
Maximum average input power	500W
Maximum PEP input power	5000W
Intermodulation @ antenna ports	<-155dBc

| General Specifications (Measured in 180kHz Bandwidth)

Phase linearity, 700 & AWS	0.02° typ
Group delay variation, 700 & AWS	0.8ns typ
Amplitude variation, 700 & AWS	0.02dB typ

| Current Window Alarm Mode

CWA is the default TMA operating mode and can be configured to specific customer requirements. The TMA is configured so that each BTS port is individually powered and monitored. Each BTS port sinks additional current to indicate an alarm state in its uplink path. Normal operating and alarm current values are configured independently and are alterable via a field-loadable personality file, contact Kaelus for more information.

Operating voltage	7.5V to 30V DC, case is DC ground
DC supply	Through BTS connector
Supply current, normal operation	100±20mA per port
Supply current, alarm mode	200±30mA per port (programmable)
Power consumption, normal operation	0.85W @ 7.5V, 3W @ 30V typ
Power consumption, alarm mode	3W @ 15V per port typ

TECHNICAL SPECIFICATIONS CONTINUED

| AISG/RET Specifications

AISG signals can be applied to either BTS0 or BTS1 port. The TMA unit switches to AISG mode when valid frames are detected on one of the BTS ports. The TMA unit is DC powered (common feed for both channels) from the port supplying the AISG frames.

Operating voltage	7.5V to 30V DC, case is DC ground
Version	2.0 (1.1 optional)
Supply current, AISG mode	200mA @ 7.5V, 65mA @ 30V typ
Power consumption, AISG mode	1.5W @ 7.5V, 2W @ 30V typ
AISG connector / current rating	IEC60130-9, 8-pin female / < 4A peak, 2A continuous, pin 6
Voltage drop, BTS to AISG port	1.5V max at 2A

| Environmental

Ingress protection	IP67
Temperature	-40° C to +65° C
Lightning protection	5kA (8/20µs) RF ports, 2kA (8/20µs) AISG port
MTBF	>700,000 hours
Compliance	EMC:EN301 489, Ingress ETSI EN 300 019 class 4.1, RoHS

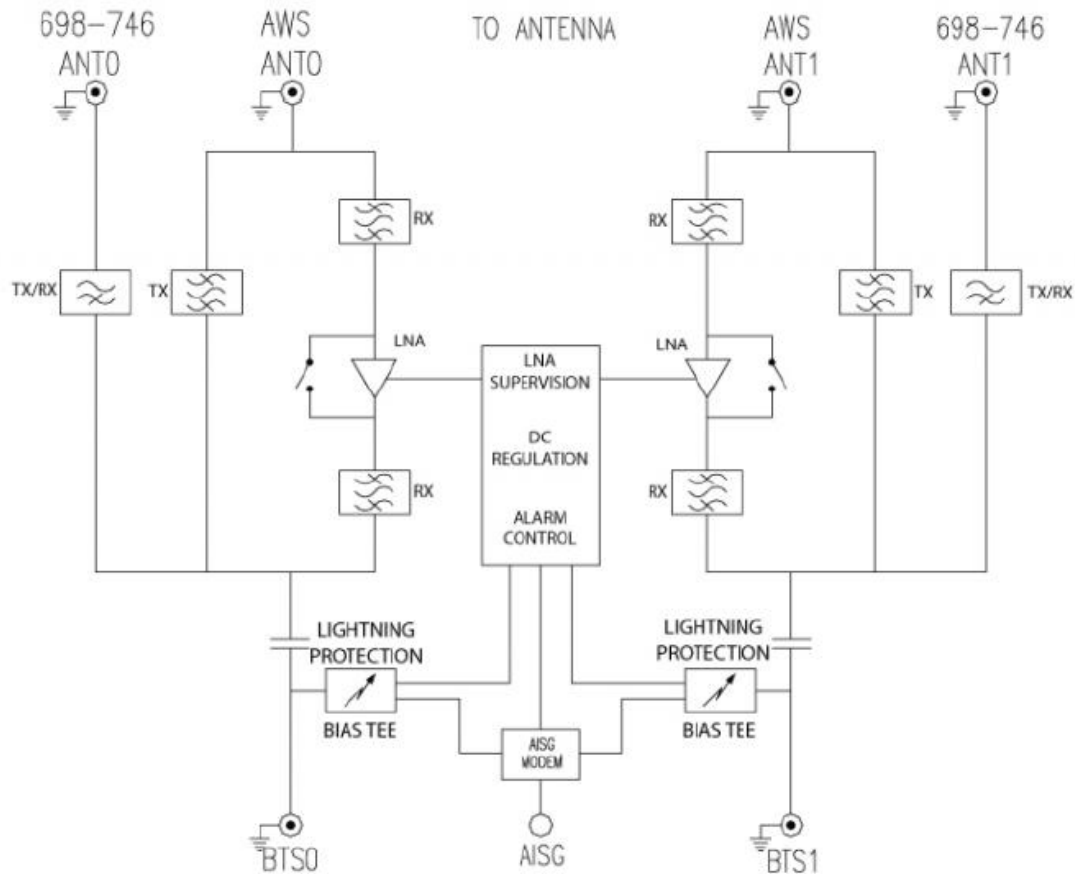
| Mechanical

Connectors	DIN 7-16 (F) x 6 long neck
Dimensions, H x D x W	284 x 181.5 x 89 mm/0.93 x 0.59 x 0.29 ft excluding brackets and connectors
Finish	Painted, light grey (RAL7035)
Weight	9.0kg /20.0lbs
Mounting	Pole/wall bracket supplied with two metal clamps for 45-178mm diameter poles

ORDERING INFORMATION

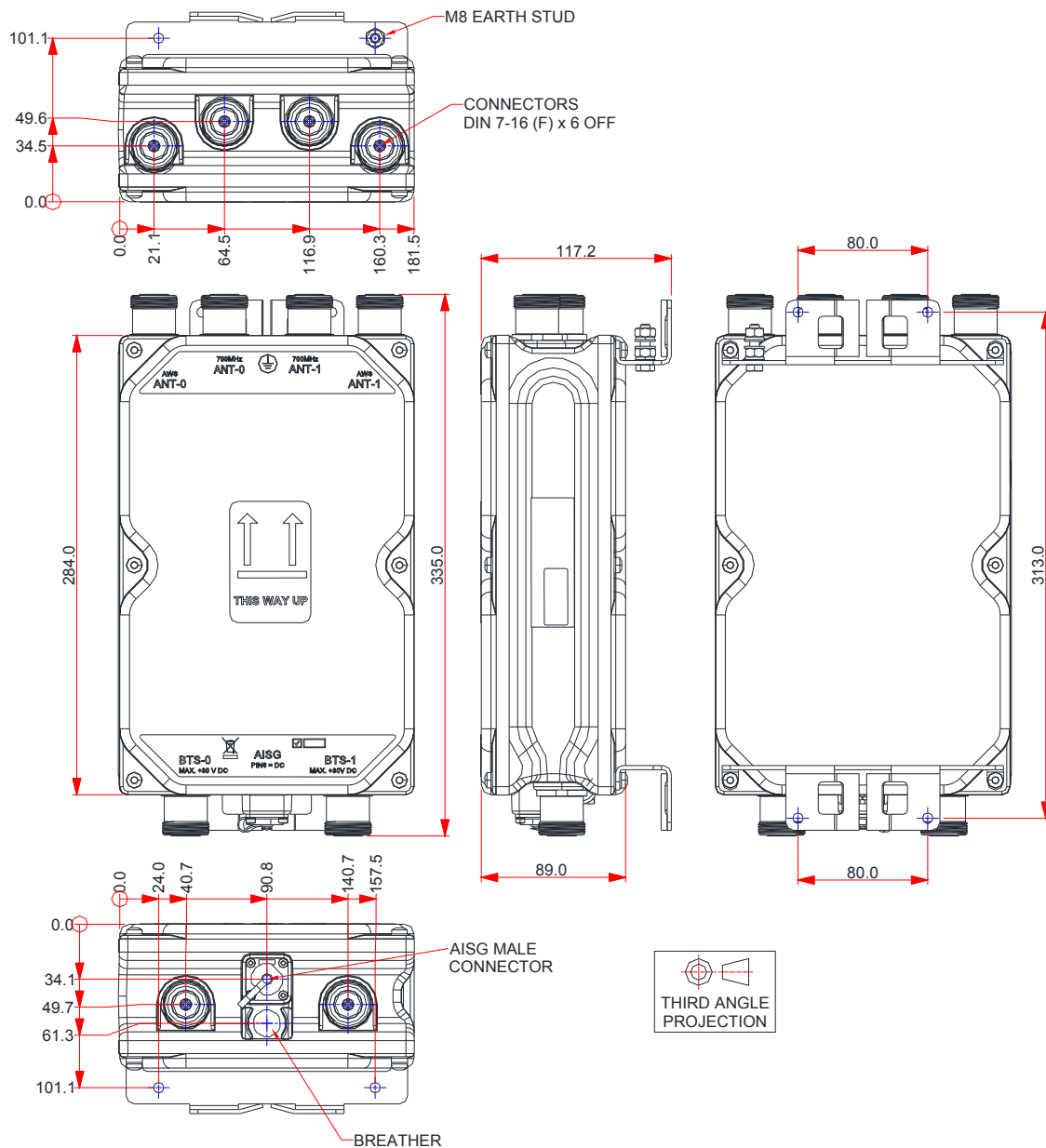
Kaelus part number	Kaelus description
TMA2043F1V1-1	Dual band TMA with 700MHz bypass (twin unit), with pole mounting bracket

ELECTRICAL BLOCK DIAGRAM



TMA2043F1V1-1
Electrical Block Diagram

MECHANICAL BLOCK DIAGRAM



TMA2043F1V1-1 Mechanical Diagram
Dual Band TMA with 700MHz Bypass (Twin Unit), with pole mounting bracket

Information contained within this datasheet is valid at the time of release and may be reviewed by Kaelus.

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