



\*The photo is showing MI-14301

## General Description

Microdata Telecom's TMA provides network operators with a cost effective solution that delivers up to 50% improvement in uplink throughput while reducing dropped connections up to 20%.

The lower interference achieved with Microdata Telecom TMA shifts the traffic to higher coding schemes which further improves network performance and capacity.

The PIM buffer effect of Microdata Telecom TMAs will enable profitable use of spectrum previously avoided due to PIM contamination.

## Features & Benefits

- Active LNA on all bands
- Market leading PIM performance ( -160 dBc across the product portfolio)
- Efficiently prepare your sites for future expansions
- Fully utilize the capabilities of your ultra-wideband antennas
- Diplexed BTS Port that enable antenna and feeder sharing
- Small and light for minimum visual impact
- Reduce tower loading with up to 75%
- Full AISG operation and RET (Remote Electrical Tilt) antenna support

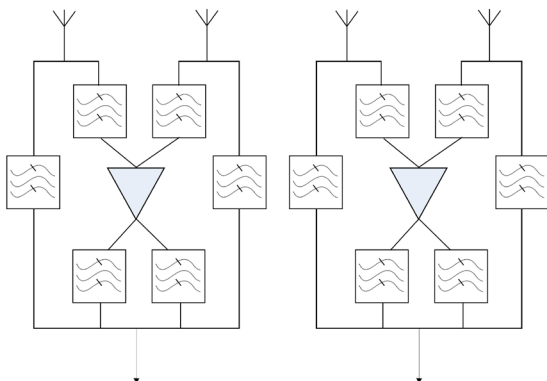
## Specifications

| Downlink (TX) Path                                 |  | 1800  | 2100                          |
|--|--|---|-------------------------------|
| Frequency Band                                     |  | 1805 - 1880 MHz   | 2110 - 2170 MHz               |
| Insertion Loss                                     |  | < 0.65 dB   | < 0.4 dB                      |
| Return Loss  |  | ≥ 18 dB   | ≥ 18 dB                       |
| Continuous Average Power                           |  | 200 W (53 dBm)  | 200 W (53 dBm)                |
| Intermodulation, 2x43 dBm TX Carrier BTS port      |  | -117 dBm in RX band, ANT port                           | -125 dBm in RX band, ANT port |
| Uplink (RX) Path                                   |  |   |                               |
| Frequency Band                                     |  | 1710 - 1785 MHz   | 1920 -1980 MHz                |
| Gain   |  | 12 dB nominal   | 12 dB nominal                 |
| Return Loss  |  | ≥ 16 dB   | ≥ 16 dB                       |
| Noise Figure                                       |  | 1.4 dB*   | 1.3 dB*                       |
| Insertion Loss, Bypass mode                        |  | <2.7 dB   | <2.5 dB                       |
| Return Loss, Bypass mode                           |  | ≥ 12 dB   | ≥ 12 dB                       |
| Output IP3   |  | 25 dBm*   | 25 dBm*                       |
| Power Supply and Alarm                             |  |   | AISG - Mode                   |
| DC   |  |   | 24 V DC nominal (9-31 V DC)   |
| Power  |  |   | < 4 W                         |
| Alarm  |  |   | 3GPP/AISG 2.0                 |
| Environmental                                      |  |   |                               |
| Operating Temperature Range                        |  | -40 to +65°C   -40 to +149°F                            |                               |
| Operation  |  | ETS 300 019-1-4 Class 4.1E                              |                               |
| Storage  |  | ETS 300 019-1-1 Class 1.2                               |                               |
| Ingress Protection                                 |  | IP67  |                               |
| Lightning Protection                               |  | 10 kA 8/20 μs (ANT, BTS)<br>5 kA common mode (RET port) |                               |
| Miscellaneous                                      |  |   |                               |
| EMC  |  | EN 301 489-8/-23  |                               |
| Safety standards                                   |  | EN 60950  |                               |
| MTBF   |  | 1 Mh/TMA min.   |                               |
| Mechanical   |  |   |                               |
| Dimensions (WxHxD)                                 |  | 234X209X107 mm   9.21x8.23x4.21 in                      |                               |
| Connectors (See Selection Guide for specification) |  | 4x ANT, 2xBTS, AISG f 8 pin circular                    |                               |
| Mounting (Supporter Pole Diameter: 40-140mm)       |  | Hose clamps, arbitrary orientation                      |                               |
| Volume   |  | 5.2 l   |                               |
| Weight gross / net                                 |  | 8.0 kg / 7.1 kg   17.64 lb / 15.65 lb                   |                               |
| Colour   |  | NCS 1502-R  |                               |
| Bracket  |  | Included  |                               |
|  |  | * typical   |                               |

## Selection Guide

| Model number | AISG        |            | Connector (F) |        |      |
|--------------|-------------|------------|---------------|--------|------|
|              | Common Mode | Indepedent | 7/16          | 4.3-10 | AISG |
| MI-14301     | X           | ONETWO     | X             |        | 1x   |
| MI-14302     | X           | TWOTWO     | X             |        | 1x   |
| MI-14306     |             |            | X             |        | 2x   |
| MI-14331     | X           | ONETWO     |               | X      | 1x   |
| MI-14332     | X           | TWOTWO     |               | X      | 1x   |
| MI-14336     |             |            | X             | X      | 2x   |

### Block Diagram



### Mechanical Drawing

\*The picture is showing MI-14306

