

## TTA-GLG000H

GSM 900 | Twin TMA | Dual Duplex

- Compact, low weight
- Low Noise Figure and high linearity
- Variable gain 8 to 16 dB (default 16 dB)
- Lightning protected
- AISG 2.0 and current dump compatible
- AISG connector for external RET antenna control by coaxial feeder

RF Characteristics	
<b>Downlink (TX) Path</b>	
Frequency band	935 - 960 MHz
Insertion Loss	0.45 dB max band-edge, 0.3 dB typ mid-band
Return Loss, all ports	18 dB min
Group delay variation	5 ns max per 200 kHz , 20 ns max per 4 MHz
EVM (BW 4 MHz)	3% max
Continuous Average Power	200 W max
Peak Envelope Power	1.6 kW max (into 50 ohm load, 1.6 μs on, 2.5% duty cycle)
<b>Uplink (RX) Path (LNA Mode)</b>	
Frequency Band	890 - 915 MHz
Gain	Variable 8 to 16 dB (selected via AISG) set to 16 dB at delivery
Gain variation over frequency, temperature	± 1 dB max
Noise Figure	1.0 dB typical (16 dB gain)
Noise Figure at band edge over temperature	1.6 dB max (16 dB gain)
Return Loss, normal mode, all ports	18 dB min
Group delay variation	10 ns max per 200 kHz , 40 ns max per 4 MHz
Input Intercept Point	+ 10 dBm min
Maximum Input Power with no damage	+ 12 dBm max
<b>Uplink (RX) Path (Bypass Mode)</b> Bypass is the default mode for each channel when not powered	
Insertion Loss, Bypass Mode	2.0 dB typical, 3.0 dB max
Return Loss, Bypass Mode, all ports	12 dB min
<b>General</b>	
Impedance	50 ohms <sup>1</sup>
Rejection of out of band signals (ANT to BTS, vs 902.5 MHz)	
50-800 MHz	46 dB min
1000-2200 MHz	46 dB min
2200-2750 MHz	26 dB min
Intermodulation (2x 43 dBm Tx Carriers at BTS port)	-110 dBm max. in Rx band, IM3, ANT port
<b>DC Power Supply, Alarm currents &amp; AISG Control</b>	
The DC supply for the internal LNAs is provided through the BTS ports. If no DC is supplied on these ports, all uplink paths are set to bypass mode.	
DC Supply Voltage	+8.5 to +30 V DC
<b>Current Alarm Mode (default mode)</b>	
The TMA is configured so that each BTS port is individually powered and monitored. Each BTS port sources additional current to indicate any alarm state.	
DC Supply current, operating, per port	100 mA typ, 120 mA, max (two ports powered)
DC Supply current, alarm mode, per port	180 mA (other current level can be set, contact us)



<sup>1</sup> Performances are expressed for all ports terminated with a 50 ohms load.

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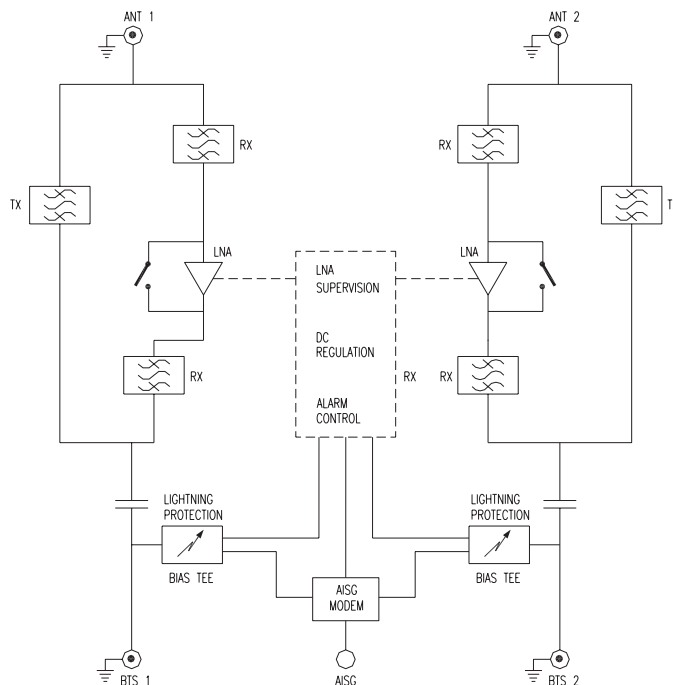
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AISG mode (auto-selected on valid frames)		
AISG signals can be applied to either BTS1 or BTS2 port. The TMA unit switches to AISG mode when valid frames are detected on one of the BTS ports. The TMA unit is DC powered (common feed for both channels) only from the port supplying AISG frames. An AISG 8-pin connector is available on the unit for the control of RET antennas in daisy chain.		
AISG Version	2.0 (for AISGv1.1, please contact us)	
DC supply current, total, typical	55 mA at 30V, 135 mA at 12V	
AISG connector current rating	< 4A peak, 2 Amp continuous, pin 6	
Current window alarm backup	Yes	
Field Firmware upgradeable	Yes, by AISG download	
Environmental		
Maximum Operating Temperature Range	-40 to +60 °C	-40 to +140 °F
Environmental	ETS 300 019	
Environmental Sealing	IP67 (EN 60529)	
Altitude	2600 m max	8,530 ft
Lightning Protection, RF and AISG ports	IEC61312-1 RF ports: 10/350 $\mu$ s, +/-2kA max AISG port: 10/350 $\mu$ s, +/-0.5kA max	
MTBF	>500,000 hours	
Mechanical		
Dimensions (excluding connectors and mounting bracket)	239 (W) x 217 (H) x 86 (D) mm see diagram next page	9.4 (W) x 8.5 (H) x 3.4 (D) in
Weight	7.5 kg est	16.5 lbs
Finish	Painted, light grey (RAL7035)	
Connectors	4 x 7/16 - EDIN Female	
Mounting	Pole / Wall, any orientation if breather is not facing upwards. Supplied with two quick release metal clamps for 45-178 mm (1.8-7.1 in) diameter poles.	



Block Diagram

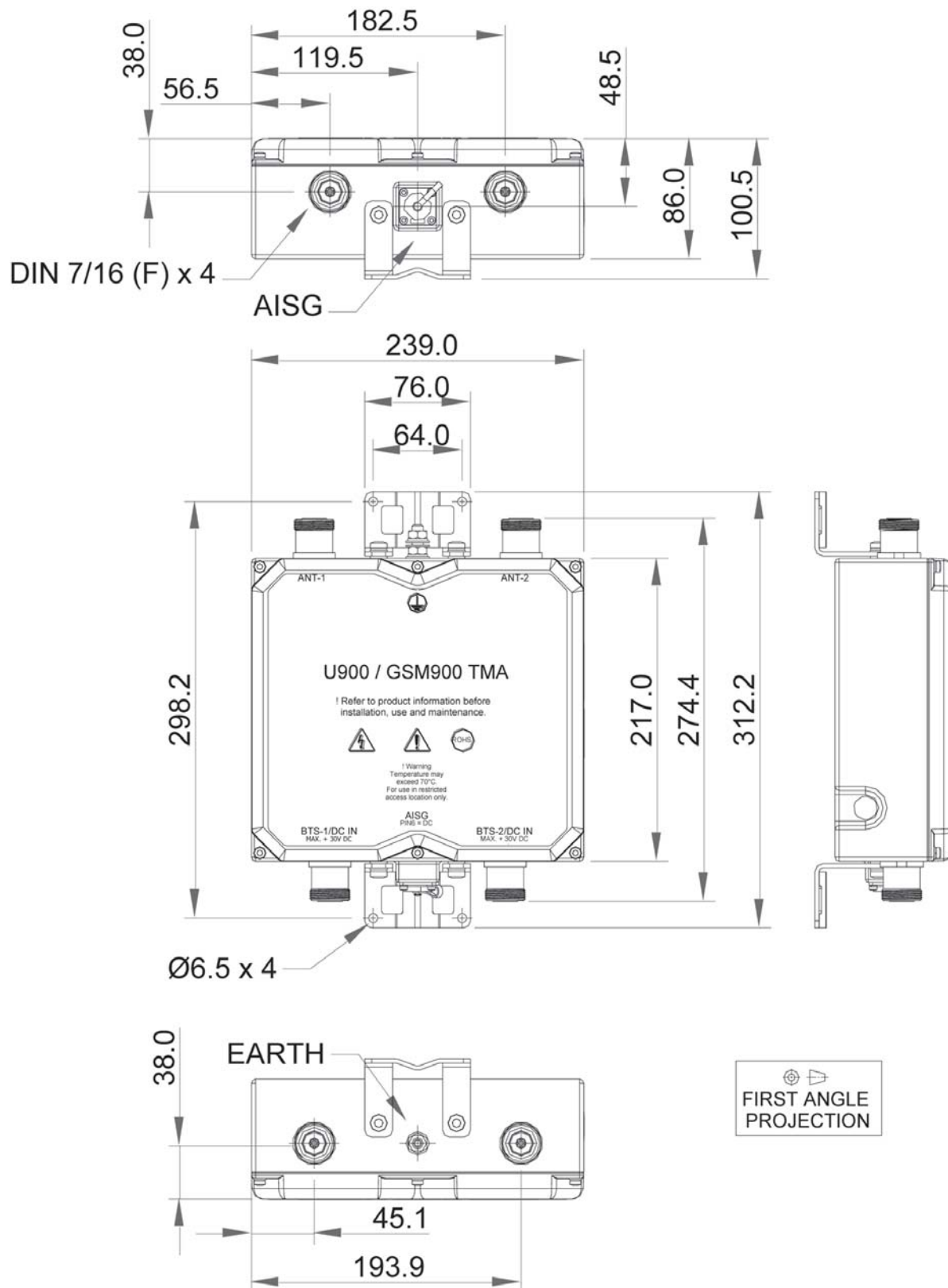


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### Mechanical



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