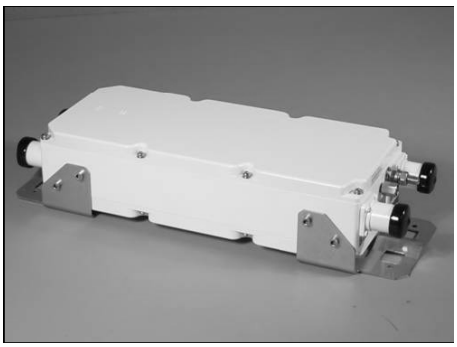
COMMUNICATION COMPONENTS INC.

1900 Full-Band Dual Tower Top Amplifier

Gap Wireless Inc.

...closing the gap

General Information



Communication Components, Inc. Dual Tower-Top Masthead Amplifier (TMA) contains two TMAs in a single housing. Each TMA is full band and fully duplexed. High linearity improves the uplink sensitivity and the receive performance of base stations.

The TMA is fully compliant with CDMA, EDGE/GSM and UMTS BTS equipment and provides a convienent package for sites upgraded to dual or quad antenna configurations. The dual TMA package reduces tower loading, leasing, and installation costs. Unit count on the tower is cut in half . An excellent match for two branch receive diversity applications using dual polarization antennas . The input and output connectors are located inline for ease of installation in space constrained areas such as uni-pole structures and stealth antennas.

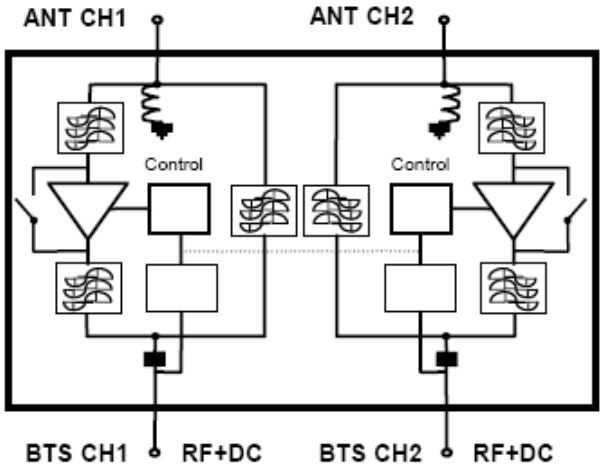
Features:

- Small, lightweight, twin unit
- Dual duplexed
- High linearity
- Lightning protected
- High reliability
- Full 60 MHz PCS band

Technical Description

The TMA system consists of a dual outdoor tower mount unit with two antenna inputs. The tower mount unit separates the low-power uplink signal from the high-power downlink signal at the antenna port, amplifies the low-level uplink signal using an ultra-low noise amplifier (LNA), and recombines the two paths at the BTS port. The tower mount units consist of six band-pass filters, four redundant low-noise amplifiers, bypass failure circuitry, and bias tee's which are all housed in an IP67 moisture proof enclosure suited to long-life masthead mounting. The unit provides protection against lightning strikes via a multi-stage surge protection circuit. DC power is provided via the feeder cable from the BTS. An optional indoor power supply unit (PDU) is available to power up to six tower mount units and to provide the all the monitoring and alarm functions for the system. The PDU is housed in a single (1U) 1.75" x 19" rack and contains dual redundant power supplies capable of being "hot swapped" that provide a regulated DC supply voltage on the RF coax for the tower mount amplifiers.

Block Diagram



Ordering Information:

Model DTMA-1819-DD-12

Options:

Pole Mount Kit

PRODUCTS MANUFACTURED BY: Communication Components Inc., www.cciproducts.com

14 – 2900 Argentia Road, Mississauga, ON L5N 7X9
Tel: 905-487-8245 Fax: 905-487-8246

www.gapwireless.ca

...closing the gap

Tower Top Masthead Amplifier Electrical & Mechanical Specifications

Receive Frequency Range	1850 – 1910 MHz
Transmit Frequency Range	1930 - 1990 MHz
Amplifier Gain	12 dB (24 dB with HG option)
Gain Variation	+/- .5 dB
System Noise Figure	1.6 dB Typical
Output Third Order Intercept Point	+24 dBm Min
Input/Output Return Loss	18 dB Min all ports
Insertion Loss	
Transmit Passband	0.5 dB Typical
Bypass Mode, Rx	2.0 dB Typical
Filter Characteristics	
Out of Band Rejection	40 dB Min @ 1800 -1810 MHz
Out of Band Rejection	80 dB Min @ 1930 – 2130 MHz
Continuous Average Power	200 Watts max
Peak Envelope Power	6.5 kW max
Intermodulation Performance	
IMD at ANT port in Rx Band	-118 dBm typical
Operating Temperature	-40° C to +55° C
Operating Voltage	+7 to +18 DC provided via coax
Operating Current per side at +12 VDC	125 mA max (normal mode), 200—250 mA (alarm mode)
Lightning Protection	8/20us, +/-10KA max, 10 strikes each, IEC61004-2
Dimensions/Weight	13.2" (H) x 5.5" (W) x 3.2" (D), 14.3 lbs. Max
Enclosure	IP 67 Weather Proof
Connectors	7/16 DIN female x 4
MTBF	>500,000 hours
Mounting	Pole/Wall Mounting Bracket

Tower Top Masthead Amplifier Unit