

# 125W GSM/EDGE Dual Amp Booster/Combiner

## General Information



The 125W Dual Amplifier Booster /Combiner Modules are integral components of Communication Component Inc.'s PCS GSM/EDGE Cell Booster System. The Cell Booster System provides the means to add capacity or increase the coverage area and penetration of existing GSM sites. The 125W Dual Amplifier Combiner (DAC) module combines multiple GSM/EDGE channels onto a common antenna port without suffering any combining losses.

► Model DAC-1819-125

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Consequently, capacity of existing sites can be expanded with the existing cabling and antenna infrastructure. The 125W Dual Amplifier Combiner (DAC) module significantly increases the downlink power of the Base Transceiver Station (BTS). When used in conjunction with a Tower Mount Amplifier (TMA), the Dual Amplifier Booster can significantly increase the footprint of rural sites and improve in-building penetration in urban locations.

## Technical Description

The GSM/EDGE PCS Cell Booster System was specifically designed to integrate with GSM/EDGE base stations without any need for retrofitting the original equipment. The core module is a Dual Amplifier Booster Combiner Module. The Cell Booster system is further complemented with a range of Combiner Modules, Duplexer Modules, Power Supply Modules, and Splitter/VSWR modules. The Cell Booster system can be configured with any combination of the above modules to seamlessly integrate with the carriers BTS equipment and achieve the desired performance results.

The 125W Dual Amplifier Combiner Module (DAC) consists of two linear power amplifiers with intermodulation level control circuitry, each capable of generating 125 Watts of useable GSM/EDGE signal. An integrated high power hybrid combiner at the output combines both signals to provide two 60 Watt GSM/EDGE signals on a common output. Additional Plug-in high power combiners can be installed at the output of the DAC Modules in order to provide up to eight channels on a common output. The Booster modules incorporate CCI's proprietary *GSM/EDGE failure-detect* circuitry that tracks the amplified GSM/EDGE signal by timeslot and actively controls and monitors the performance of both amplifiers, providing dry relay contact closures that can be tied into the BTS alarm circuit.

## 125 Watt Booster/Combiner Module Electrical Specification

	<b>DAC-1819-125</b>
Operating Frequency:	1930-1990 MHz
Maximum GSM/EDGE Output Power:	60 Watts (per channel)
	48 dBm Min. (per channel)
Number of Inputs/ Outputs:	2 Inputs / 1 Outputs
Gain:	7 dB Nominal
Gain Flatness:	+/-0.5 dB Max.
Input VSWR	1.4:1 Min; 1.25:1 (typical)
Port to Port Isolation	85 dB typical
Power Supply Voltage:	28 VDC Nominal, 22-30VDC
Current Consumption:	28 AMPS Max.
Dimensions:	8.75"L x 3.5"W x 12"D
Connectors	N female
Weight	13 Lbs. Max.
Operating Temperature:	-25° to +65° C Ambient



### Ordering Information

**125W Dual Amplifier Combiner Module:**  
**CCI Model DAC-1819-125**

**19" Rack Mount Trays:**  
**CCI Model TRA-1819 (5U)**  
**CCI Model TRA-1819-2U**  
**CCI Model TRA-1819-2M**

### Mechanical Diagram



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