Communication Components Inc.

Tel: 201-342-3338
Fax: 201-342-3339
Email: sales@cciproducts.com

PCS GSM Cell Booster/Combiner

General Information

CCI's PCS GSM Cell Booster provides the means to add capacity to existing PCS sites by combining multiple channels onto a common antenna port without suffering any combining losses. Consequently, capacity of existing sites can be expanded with the existing cabling and antenna infrastructure. The Cell Booster/Combiner allows the cost efficient implementation of multi-channel high capacity radio networks. The Cell Booster can also be deployed as a booster amplifier without combining, thus increasing the downlink power of the Base Transceiver Station (BTS). When used in conjunction with a Tower Mount Amplifier (TMA), the Cell Booster can significantly increase the footprint of rural sites and improve in-building penetration in urban locations.

- Model DAB-1819
- Model DAC-1819

Contents

Technical Description

The PCS Cell Booster was specifically designed to integrate with GSM base stations without any need for retrofitting the original equipment. The system consists of 19" rack mount trays that can accommodate multiple modules. The core modules include a Dual Amplifier-Booster Module and a Dual Amplifier-Combiner Module. The Cell Booster system can be further complemented with a range of 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 Dual Amplifier-Booster Module (DAB) consists of two linear power amplifiers with intermodulation level control circuitry, each capable of generating a 70 Watt GSM signal. The Dual Amplifier-Combiner Module (DAC) is identical to the DAB Module with the exception of a power hybrid combiner at the output which combines both signals to provide two 35 Watt GSM signals on a common output. Both modules incorporate CCI's proprietary *GSM failure-detect* circuitry that tracks the amplified GSM 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.

Dual Amplifier-Booster (DAB-1819) Module Electrical Specification

Operating Frequency:	1930-1990 MHz
Rated GSM Output Power:	70 Watts (Per Channel)
1 dB Compression Point:	48.5 dBm Min.
Pass Band Ripple:	+/-0.5 dB Max.
Power Supply Voltage:	28 VDC Nominal
Current Consumption:	12 AMPS Typical
Dimensions:	8.75”L x 3.5”W x 12”D
Number of Inputs/ Outputs:	2 Inputs / 2 Outputs
Connectors	N or SMA female
Weight	13 Lbs. Max.
Operating Temperature:	-25° to +65° C Ambient

Dual Amplifier-Combiner (DAC-1819) Module Electrical Specification

Operating Frequency:	1930-1990 MHz
Rated GSM Output Power:	35 Watts (Per Channel)
1 dB Compression Point:	45.5 dBm Min. (Per Channel)
Pass Band Ripple:	+/-0.5 dB Max.
Power Supply Voltage:	28 VDC Nominal
Current Consumption:	12 AMPS Typical
Dimensions:	8.75”L x 3.5”W x 12”D
Number of Inputs/ Outputs:	2 Inputs / 1 Outputs
Connectors	N or SMA female
Weight	13 Lbs. Max.
Operating Temperature:	-25° to +65° C Ambient

CCI's Cell Booster/Combiner for PCS Mechanical Drawing

89 Leuning Street
South Hackensack, NJ 07606
Tel: 201-342-3338
Fax: 201-342-3339
Email: sales@cciproducts.com

Www.cciproducts.com

Cell Booster 19” Rack Mountable Chassis

Ordering Information

Dual Amplifier-Booster Module:
CCI Model DAB-1819

Dual Amplifier-Combiner Module:
CCI Model DAC-1819

Cell Booster / Amplifier Plug-in Module