

Cellular Bridge

900 MHz Radio System Cell Modem



Key Features

Available on Verizon and most SIM-based networks (AT&T, T-Mobile, Telus, Bell, & more)

Supports FreeWave serial radios in 900 MHz

Wide Input Voltage Range: +12 VDC to +24 VDC

Industrial Grade Specifications: -40°C to +75° C (Verizon) -30°C to +75°C (SIM-based)

External RS232/RS485 serial port

Terminal server port provides access to configuration, data, diagnostics, and external serial port

Informative LED display provides cellular connectivity status as well as FreeWave's standard CD, Tx and CTS LEDs

Configuration available on local serial port or over the Internet

Improved Deployment Time: Simplifies network design

Overview

The Cellular Bridge combines world class radio technology with globally deployable cellular technology, Verizon or SIM based cellular addressability. The "bridge" is designed to give ease of cellular deployment with the ability to reduce cellular connection fees by combining cell phone connectivity and world class proprietary radios at 900 MHz.

The basic application allows for the consolidation of a radio network into the cellular public infrastructure. This hybrid product, one of which uses more than one technology, is appropriate for several applications that include:

- New field development, reduced infrastructure, reduced connection fees, reliable data transfer.
- Retrofit deployment, where the number of cell connections can be reduced by improving ROI and reducing operating cost.
- Long term network development, the Cellular Bridge can avoid infrastructure costs associated with maintaining line of sight when it functions as "Tower Replacement Module".
- Used as an alternative where repeater locations or higher antenna heights are not an option.

Specifications

MODEL	FORM FACTOR	OPTIONS
CB-900-SM	156 L x 168 W x 54 H (mm)	SIM Card
CB-900-V	156 L x 168 W x 54 H (mm)	Verizon Network



Cellular Bridge 900 MHz: Technical Specifications

CELLULAR BRIDGE SPECIFICATIONS

Frequency for Cell Modem	Verizon 800 / 1900 MHz, EV-DP Rev/ CDMA2000 1xRTT
	AT&T / T-Mobile Tri-Band HPSA-850 / 1900 / 2100 MHz; Quad-Band GSM/GPRS/Edge-850 / 1800 / 1900 MHz
Indicator Lights	Cellular status and standard FreeWave radio; CD, Tx, CTS
Data Connector	Port 1 - DB9 diagnostic and programming RS232 Port 2 - DB9 data RS232/RS485
Antenna Connector	Cell: SMA, female Radio: TNC, female

FHSS TRANSMITTER

Frequency Range	902 to 928 MHz
Output Power	5 mW to 1 W
Data Link Range	60 mile, clear line of sight
Occupied Bandwidth	230 KHz
Hopping Patterns	15 per band, 105 total, user-selectable
Hopping Channels	50 to 112, user-selectable
Hopping Bands	7, user-selectable
Frequency Zones	16 zones, 7 channels per zone

FHSS RECEIVER

Sensitivity	-107 dBm for BER 1×10^{-4} -109 dBm for BER 1×10^{-4}
IF Selectivity	40 dBm at fc +/- 230 kHz

Dynamic Range	+10 dBm 3rd order intercept point at input connector
---------------	--

POWER REQUIREMENTS

Operating Voltage	+12 VDC to +24 VDC
-------------------	--------------------

Typical	267 mA
---------	--------

Peak	1.7 A
------	-------

GENERAL INFORMATION

Operating Temperature	CB-900-SM: -40°C to +75°C (SIM)
-----------------------	--

CB-900-V: -30°C to +75°C (Verizon)

Humidity	0 to 95% non-condensing
----------	-------------------------

Dimensions	156 L x 168 W x 54 H (mm)
------------	---------------------------

Weight	800 g
--------	-------

Cellular Bridge 900 MHz: Applications



Oil and Gas



Agriculture



Utilities

Contact your FreeWave reseller or sales rep for implementation details.

FreeWave Technologies, Inc.

5395 Pearl Parkway, Suite 100, Boulder, CO 80301

TF 866.923.6168

T 303.381.9200

For more information, visit www.freewave.com

Specifications are subject to change without notice.

©2014 FreeWave Technologies, Inc. All rights reserved.



LDS0001L14 Rev A