

# Dual-Band Wireless Adjustable Signal Booster / Kit



Flex Pro Booster, Flex Pro  
Omni Kit, Flex Pro Panel Kit  
(FLEX PRO)

<u>INTRODUCTION</u>	<u>2</u>
<u>THEORY OF OPERATION</u>	<u>2</u>
<u>SURECALL FLEX PRO PACKAGES</u>	<u>3</u>
<u>FLEX PRO BOOSTER HARDWARE</u>	<u>4</u>
<u>SUMMARY AND DESCRIPTION OF SAFEGUARD FEATURES</u>	<u>4</u>
<u>SITE SELECTION</u>	<u>5</u>
<u>INSTALLATION INSTRUCTIONS</u>	<u>6</u>
<u>TROUBLESHOOTING</u>	<u>9</u>
<u>FREQUENTLY ASKED QUESTIONS</u>	<u>13</u>
<u>OBTAINING TECHNICAL SUPPORT</u>	<u>13</u>
<u>WARRANTY</u>	<u>14</u>
<u>SPECIFICATIONS</u>	<u>16</u>
<u>SAFETY INFORMATION</u>	<u>17</u>

## User Guide

## **Congratulations on purchasing the SureCall Flex Pro, the finest cellular signal booster available!**

SureCall adjustable cellular signal boosters and kits from Cellphone-Mate remove frustrations over dropped calls, limited range, and slow data rates by amplifying incoming and outgoing cellular signals in buildings, offices, and homes. The Flex Pro is designed with leading-edge technologies to detect and amplify weak incoming signals your cellular device would otherwise miss and to broadcast a significantly stronger signal back to the cell tower.

This guide contains all the information you need to get your SureCall Flex Pro booster system up and running.

### **Theory of Operation**

The SureCall Flex Pro is a high-quality bidirectional signal booster that boosts cellular signals for areas prone to weak or shadowed cellular coverage.

The Flex Pro works with two antennas:

- An inside antenna that communicates with your cell phone.
- An outside antenna that communicates with the cell tower.

Signals sent from a cell tower are received by the outside antenna, amplified by the booster and then sent to your phone via the inside antenna.

When your phone transmits, the signal is sent to the inside antenna, and then sent to the cell tower via the outside antenna.

Some cell signal is required for the Flex Pro to enhance cellular signal coverage. The weakest cell signal for the Flex Pro to work is low -100dBm to high -90dBm. dBm is an abbreviation for the power ratio in decibels of the radio power per one milliwatt.

To measure your existing cell signal on an Apple iPhone, dial **\*3001#12345#\*** and press **Call**. In the top-left corner, a number appears instead of bars.

For Android devices, you can download several apps to measure exact signal strength. Look up **check real signal strength** to find a cell signal measurement app.

## SureCall Flex Pro Packages

### Flex Pro - Antenna Kitting Information

Component	Product Number (Description)	Gain/Loss		Notes
		800 MHz	1900 MHz	
Outdoor Antennas*	CM288W	3 dBi	4 dBi	
	CM100-L	5 dBi	7 dBi	
	CM100-S	4 dBi	5 dBi	
	CM230W	10 dBi	10 dBi	
Outdoor Cables*	CM240-40FN (40 feet)	-3.98 dB	-6.52 dB	
	CM400-65NN (65 feet)	-3.89 dB	-5.43 dB	65 feet or longer
Indoor Antennas*	CM248W	7 dBi	10 dBi	
	CM222W	3 dBi	6 dBi	
Indoor Cables*	CM240-20FN (20 feet)	-2.29 dB	-3.56 dB	
	CM400-40NN (40 feet)	-2.63 dB	-3.57 dB	
* All equivalent antennas and cables are suitable for use with the Flex Pro booster.				

**Note:** For the signal booster to work, the following items are required:

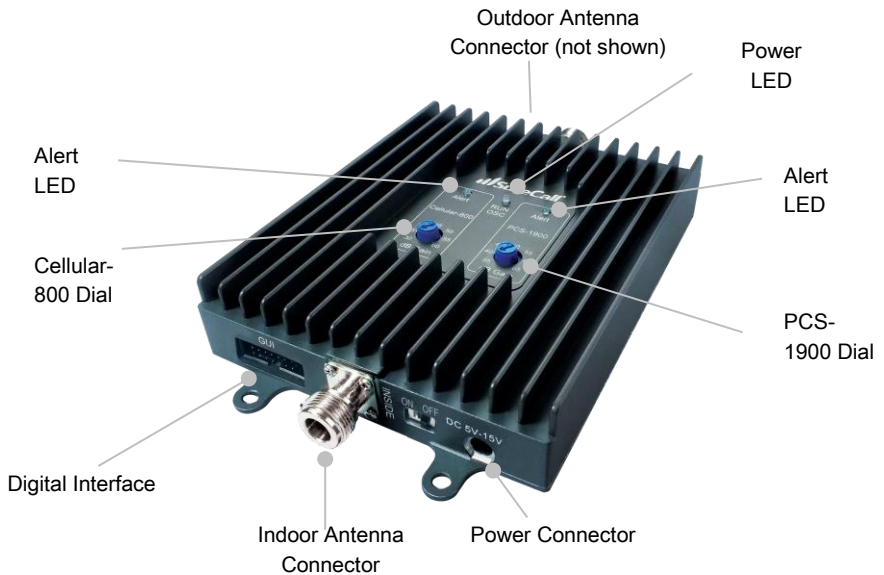
- Outside antenna
- Cable for connecting the outside antenna to the booster
- Signal booster
- Inside antenna
- Cable for connecting the inside antenna to the booster
- Power supply

**Warning:** Unauthorized antennas, cables, and/or coupling devices are prohibited by FCC new rules. Please contact FCC for details: 1-888-CALL-FCC.

Changes or modifications not expressly approved by Cellphone-Mate could void the user's authority to operate the equipment.

## Flex Pro Booster Hardware

The following figure shows the key hardware components on the Flex Pro cellular signal booster. Refer to this figure as you install your SureCall Flex Pro components.



## Summary and Description of Safeguard Features

This device is equipped with all the safeguard features required by FCC new rules to ensure no interference is created to affect the cell tower: AGC, automatic shutdown, Dual RSSI monitoring, automatic silence, and more.

Unpack all package contents and check for damage. For missing or damaged items, contact your reseller. Keep the carton and packing material to store the product or if you need to return it.

### Site Selection

For optimum performance, select a location for your booster that:

- Provides the best signal strength possible. To measure your existing cell signal on an Apple iPhone, dial \*3001#12345#\* and press Call. In the top-left corner, a number appears instead of bars. For Android devices, you can download several apps to measure exact signal strength. Look up “check real signal strength” to find a cell signal measurement app.
- Avoids areas where wireless signals can be blocked or reflected by buildings, walls, trees, hills, and other terrain features. This can result in low signal strength.
- Is not close to energy-efficient windows, which can affect signal penetration into a home or office.

**Note:** The cell phone tower site in relation to the location where you install your booster also determines signal strength. Although cell phone providers try to place towers for maximum coverage, local ordinances and terrain features can restrict tower locations, which can limit signal strength at your location.

## Installation Instructions

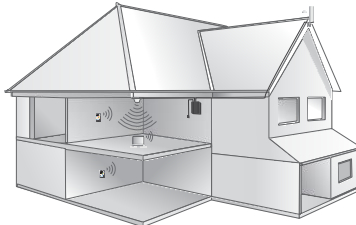
The Flex Pro signal booster is suited for installation in a building or home.

### **Step 1. Connect the Outside Antenna**

1. Mount the fiberglass antenna in an outside mounting location that:
  - Has at least a 12-inch radius clear of obstructions and other radiating elements.
  - Is at least 75 feet in a straight line from the inside antenna when used in an area prone to weak cellular signals and operating the booster at full 65dB gain.
  - Is not co-located or operating with any other antenna or booster.
2. Using the CM240 or CM400 cable, connect the outside antenna to the booster connector marked **OUTSIDE** (see page 4).
3. Hand tighten the connection.

### **Step 2. Connect the Inside Antenna**

1. Mount the inside antenna:
  - Omnidirectional dome antenna: mount the antenna on the ceiling in a central location where you want reception.
  - Panel antenna: install the antenna against a wall or surface projecting where you want reception.



2. Using the CM240 or CM400 cable, connect the inside antenna to the booster connector marked **INSIDE** (see page 4).
3. Hand tighten the connection.

**Note:** With a signal booster kit with panel antenna, stay 6½ feet from the panel based on new FCC rules.

**Step 3. Mount the Booster (Optional)**

1. Select a location for your booster.
2. Clean the intended surface and allow it to dry.
3. Peel the protective paper from the back of the hook sides of the Velcro. Press the adhesive side of the Velcro strips into place on the bottom of the booster, one strip on each end.
4. Wait 5 minutes, and then attach the loop side of the Velcro to the hook side. The adhesive bond reaches maximum strength after 24 hours.
5. With both the Velcro loop and hook pieces attached to the back of the booster, peel the protective paper off of the back of the loop strips.
6. Press the entire booster into its mounting place, and then wait 5 minutes for the adhesive to set.
7. Be sure the booster is seated firmly.

To remove the booster, rotate it across the Velcro. Do not pull the booster or cables.

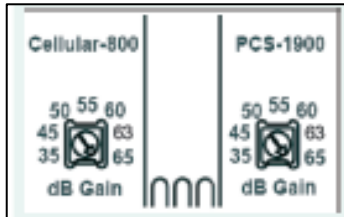
**Step 4. Connect to AC Power**

1. Connect the AC power cord to the booster (see page 4).
2. Connect the plug on the other end to a 110V AC power outlet. Be sure all connections to the booster are tight and secure.
  - The booster turns on automatically.
  - The **Power** LED goes ON to show that the booster is ready for use (see page 4).
  - The **Alert** LEDs flash up to 15 seconds on each band to show the band is activated (see page 4).

**The booster is rated for 5-20V input voltage. DO NOT use the booster with a higher voltage power supply. This can damage the booster and/or cause personal injury.**

**Step 5. Configure Gain Settings**

1. Facing the front of your booster, find the **Cellular-800** dial on the left side and the **PCS-1900** dial on the right side (see page 4).



2. Set these dials according to the coverage area and the distance between the indoor and outdoor antennas (see the following table).

If Coverage Area is...	and Antenna Separation is...	Set Both Dials to...
4000 square feet	60 feet	60 (default setting)
2000 square feet	50 feet	55
1000 square feet	45 feet	50
500 square feet	40 feet	45
100 square feet	25 feet	40

**Note:** As you can see from the table above, acquiring the recommended indoor and outdoor antenna separation optimizes coverage significantly. Any reduced antenna separation reduces the booster’s cellular signal capabilities.

**Important:** A minimum separation distance of 30 vertical feet is necessary between the outside and inside antennas. If the inside coverage is not sufficient, you may need as much as 60 feet of separation. See the table above.



In the unlikely event you encounter a problem, use the following steps to identify and resolve the issue.

Problem	Resolution
Booster has no power.	<ol style="list-style-type: none"><li data-bbox="400 344 976 411">1. Verify that the switch on the power supply is turned on and red LED is ON.</li><li data-bbox="400 425 976 492">2. Connect the power supply to an alternate power source.</li><li data-bbox="400 506 976 574">3. Be sure the power source is not controlled by a switch that can remove power from the outlet.</li><li data-bbox="400 588 976 859">4. Check the green POWER LED on the booster. If it is OFF, return the power supply to Cellphone-Mate. Contact tech support at 1-888-365-6283, email support@surecall.com, or go to surecall.com and log on via online support to receive a Return Merchandise Authorization (RMA).</li></ol>

Problem	Resolution
<p>After installing the booster system, you have no signal or reception.</p>	<ol style="list-style-type: none"><li data-bbox="402 225 979 664">1. Check the strength of the outside signal as close as you can to the outside antenna. To measure your existing cell signal: Apple iPhone: dial *3001#12345#* and press Call. In the top-left corner, a number replaces the bars. Android devices: download apps to measure exact signal strength, such as Network Signal Info in the Google Play store. Search "check real signal strength" to find other cell signal measurement apps.</li><li data-bbox="402 682 979 743">2. Double-check all booster and antenna cable connections.</li><li data-bbox="402 762 979 823">3. Be sure your booster's dB gain is turned up to full power on each dial.</li></ol>

Problem	Resolution
<p>One of the red lights next to the dials on your booster is flashing.</p>	<ol style="list-style-type: none"> <li>1. Turn down the dB gain on the dial until the light goes OFF or turns yellow.</li> <li>2. Be sure the inside panel antenna is facing away from the outside antenna.</li> <li>3. Use the recommended antenna separation: <ul style="list-style-type: none"> <li>• 65dB — 60 ft. separation</li> <li>• 63dB — 50-60 ft. separation</li> <li>• 55dB — 40-50 ft. separation</li> <li>• 50dB — 30-40 ft. separation</li> <li>• 45dB — 20-30 ft. separation</li> <li>• 40dB — 10-20 ft. separation</li> <li>• 35dB — 10 ft. separation</li> </ul> </li> </ol>
<p>Your booster restarted and shut down for 15 minutes, and is now shut down permanently.</p>	<p>Each SureCall booster is equipped with Auto Shutdown to prevent cell tower interference. The outside antenna may be close to a cell tower. Move the outside antenna to a location that provides sufficient distance from the cell tower to prevent the booster from automatically enabling Auto Shutdown. Once away from the original location, perform the procedure under Step 4. Connect to AC Power on page 7.</p>

Problem	Resolution
The red LED goes ON.	More antenna separation is needed. If you cannot provide more antenna separation and the Alert LEDs flash after the initial activation period, lower the dial above the blinking LED by 5dB (for example, from 50 to 45) and monitor the bars on your cell phone to see whether reception improves.
The <b>Power</b> LED does not turn ON.	Be sure the AC outlet is working and is not controlled by a wall switch that can remove power from the outlet.
The <b>Alert</b> LEDs flash after the initial activation period.	Lower the dial above the blinking LED by 5dB (for example, from 60 to 55) and monitor the bars on your cell phone to see whether reception has improved.
The <b>Alert</b> LEDs continue to flash.	The booster shuts down automatically, and then restarts after 60 seconds. Turn down the <b>Cellular-800</b> or <b>PCS-1900</b> dial that is oscillating to prevent the booster from shutting down automatically.

## FREQUENTLY ASKED QUESTIONS

For a list of Frequently Asked Questions and a comprehensive, up-to-date Troubleshooting Guide, please visit our website at: [www.surecall.com](http://www.surecall.com) or call us at 1-800-365-6283.

You can also consult a Cellphone-Mate technical specialist directly by emailing us at [support@surecall.com](mailto:support@surecall.com).

Record the model and serial number for your products:

Serial #: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

## Two-Year Product Warranty

Cellphone-Mate warrants its products for two years from the date of purchase against defects in workmanship and/or materials.

Products returned by customers must be in their original, un-modified condition, shipped in the original or protective packaging with proof-of-purchase documentation enclosed, and a Return Merchandise Authorization (RMA) number printed clearly on the outside of the shipping container.

Buyers may obtain an RMA number for warranty returns by calling the Cellphone-Mate Return Department toll-free at 1-888-365-6283. Any returns received by Cellphone-Mate without an RMA number clearly printed on the outside of the shipping container will be returned to sender. In order to receive full credit for signal boosters, all accessories originally included in the signal booster box must be returned with the signal booster. (The Buyer does not need to include accessories sold in addition to the signal booster, such as antennas or cables.)

This warranty does not apply to any product determined by Cellphone-Mate to have been subjected to misuse, abuse, neglect, or mishandling that alters or damages the product's physical or electronic properties.

Cellphone-Mate warrants to the Buyer that each of its products, when shipped, will be free from defects in material and workmanship, and will perform in full accordance with applicable specifications. The limit of liability under this warranty is, at Cellphone-Mate's option, to repair or replace any product or part thereof which shall within TWO YEARS of purchase as determined by examination by Cellphone-Mate, prove defective in material and/or workmanship. Warranty returns must first be authorized in writing by Cellphone-Mate. Disassembly of any Cellphone-Mate, Inc. product by anyone other than an authorized representative of Cellphone-Mate voids this warranty in its entirety. Cellphone-Mate reserves the right to make changes in any of its products without incurring any obligation to make the same changes on previously delivered products.

As a condition to the warranties provided for herein, the Buyer will prepay the shipping charges for all products returned to Cellphone-Mate for repair, and Cellphone-Mate will pay the return shipping with the exception of products returned from outside the United States, in which case the Buyer will pay the shipping charges.

The Buyer will pay the cost of inspecting and testing any goods returned under the warranty or otherwise, which are found to meet the applicable specifications or which are not defective or not covered by this warranty.

Products sold by Cellphone-Mate shall not be considered defective or non-conforming to the Buyer's order if they satisfactorily fulfill the performance requirements that were published in the product specification literature, or in accordance with samples provided by Cellphone-Mate. This warranty shall not apply to any products or parts thereof which have been subject to accident, negligence, alteration, abuse, or misuse.

Cellphone-Mate makes no warranty whatsoever in respect to accessories or parts not supplied by it.

**Limitations of Warranty, Damages and Liability:**

EXCEPT AS EXPRESSLY SET FORTH HEREIN, THERE ARE NO WARRANTIES, CONDITIONS, GUARANTEES, OR REPRESENTATIONS AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHER WARRANTIES, CONDITIONS, GUARANTEES, OR REPRESENTATIONS, WHETHER EXPRESSED OR IMPLIED, IN LAW OR IN FACT, ORAL OR IN WRITING.

CELLPHONE-MATE AGGREGATE LIABILITY IN DAMAGES OR OTHERWISE SHALL NOT EXCEED THE PAYMENT, IF ANY, RECEIVED BY CELLPHONE-MATE, INC. FOR THE UNIT OF PRODUCT OR SERVICE FURNISHED OR TO BE FURNISHED, AS THE CASE MAY BE, WHICH IS THE SUBJECT OF CLAIM OR DISPUTE. IN NO EVENT SHALL CELLPHONE-MATE, INC. BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, HOWSOEVER CAUSED.

All matters regarding this warranty shall be interpreted in accordance with the laws of the State of California, and any controversy that cannot be settled directly shall be settled by arbitration in California in accordance with the rules then prevailing of the American Arbitration Association, and judgment upon the award rendered may be entered in any court having jurisdiction thereof.

If one or more provisions provided herein are held to be invalid or unenforceable under applicable law, then such provision shall be ineffective and excluded to the extent of such invalidity or unenforceability without affecting in any way the remaining provisions hereof.

<b>Specification</b>	<b>FLEX PRO</b>
Supported Standards:	CDMA, GSM, LTE
Uplink Frequency Range:	Cellular-800: 824 - 849 MHz PCS: 1850 - 1910 MHz
Downlink Frequency Range:	Cellular: 869-894 MHz PCS: 1930-1990 MHz
Input/Output Impedance:	50 $\Omega$
Maximum Gain:	Cellular: 65 dB PCS: 72 dB
Noise Figure:	7dB
VSWR:	$\leq 2.0$
AC Power Transmitter:	Input: AC 110 V, 60 Hz Output: DC 5 V/15 V
Maximum Output Power:	1 Watt EIRP
Cable:	CM240 or CM400 recommended
RF Connectors:	N Female, both ends
Power Consumption:	10W
Dimensions:	8 x 5 x 1.25 in. (20.32 x 12.7 x 3.175 cm.)
Weight:	1.5 lbs (.68 kgs.)
FCC ID (USA):	RSNFLEXPRO
IC (Canada):	7784A-FLEXPRO

**RS131 – for Canadian Use**

<b>Band</b>	<b>Operating Channel Frequency Range</b>	<b>Pass Bandwidth</b>	<b>Power Rated</b>
Cellular Uplink	824 - 849 MHz	38.5 MHz	24.2 dBm
PCS Uplink	1850 - 1910 MHz	60.9 MHz	24.1 dBm
Cellular Downlink	869 - 894 MHz	33.0 MHz	1.7 dBm
PCS Downlink	1930 - 1990 MHz	73.7 MHz	2.4 dBm



This is a **CONSUMER** device.

**BEFORE USE**, you **MUST REGISTER THIS DEVICE** with your wireless provider and have your provider's consent. Most wireless providers consent to the use of signal boosters. Some providers may not consent to the use of this device on their network. If you are unsure, contact your provider.

You **MUST** operate this device with approved antennas and cables as specified by the manufacturer. Antennas **MUST** be installed at least 20 cm (8 inches) from any person.

You **MUST** cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

**WARNING.** E911 location information may not be provided or may be inaccurate for calls served by using this device.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**NOTICE:** The manufacturer's rated output power of this equipment is for single-carrier operation. For situations when multiple carrier signals are present, the rating must be reduced by 3.5 dB, especially where the output signal is reradiated and can cause interference to adjacent-band users.

This power reduction is to be by means of input power or gain reduction and not by an attenuator at the device output.

La puissance de sortie nominale indiquée par le fabricant pour cet appareil concerne son fonctionnement avec porteuse unique. Pour des appareils avec porteuses multiples, on doit réduire la valeur nominale de 3,5 dB, surtout si le signal de sortie est retransmis et qu'il peut causer du brouillage aux utilisateurs de bandes adjacentes. Une telle réduction doit porter sur la puissance d'entrée ou sur le gain, et ne doit pas se faire au moyen d'un atténuateur raccordé à la sortie du dispositif.



48346 Milmont Drive  
Fremont, California 94538  
USA  
888.365.6283  
Fax: 510.996.7250

[www.surecall.com](http://www.surecall.com)

Cellphone-Mate has made a good faith effort to ensure the accuracy of the information in this document and disclaims the implied warranties of merchantability and fitness for a particular purpose and makes no express warranties, except as may be stated in its written agreement with and for its customers.

Cellphone-Mate shall not be held liable to anyone for any indirect, special or consequential damages due to omissions or errors. The information and specifications in this document are subject to change without notice.

Copyright © 2014. All Rights Reserved.

All trademarks and registered trademarks are the property of their respective owners.

SureCall Flex Pro User Guide  
February 6, 2014