

Specifications

4G LTE Accelerator Kit		
CM288-W Antenna		
Freq. Range (MHz)	698-960	1710-2700
Gain (dBi)	2-3dB	3-4dB
VSWR	≤ 1.8	
Beam width	E:72 H:92	E:50 H:80
Impedance (Ω)	50	
Polarization	vertical	
Max power (Watts)	100	
Connector Type	N female (or custom)	
Dimensions (inches)	9.5" x 3.9"	
Weight (ounces)	11 oz.	
Color	white	
Mounting	wall, post, etc.	
Cable		
Cable	CM240-20 low-loss cable	

Cellphone-Mate, Inc.

Revision 1.0 (August, 2011)

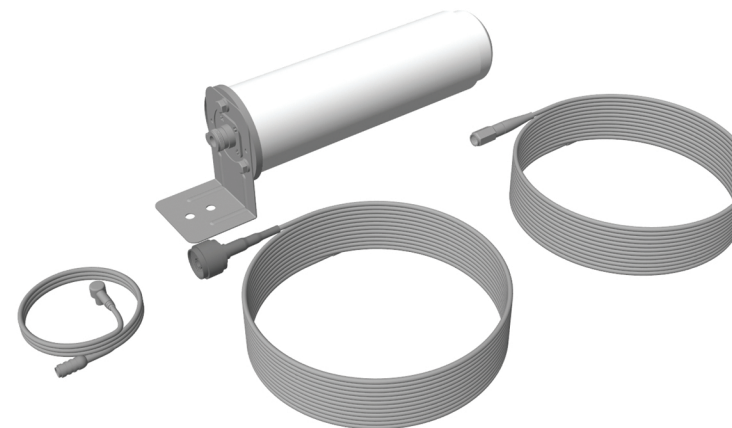
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<http://cellphone-mate.com/ticket.html>



Installation Manual

4G LTE Accelerator Kit

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Copyright & Trademark Information

THIS MANUAL CONTAINS SAFETY, INSTALLATION, CONFIGURATION AND WARRANTY INFORMATION FOR YOUR ACCELERATOR KIT BY CELLPHONE-MATE, INC (CMI). CMI RECOMMENDS THAT YOU SAVE THIS MANUAL IN A READILY ACCESSIBLE LOCATION IN CASE ANY QUESTIONS ARISE ABOUT THIS KIT.

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CHAPTER 1: Introduction

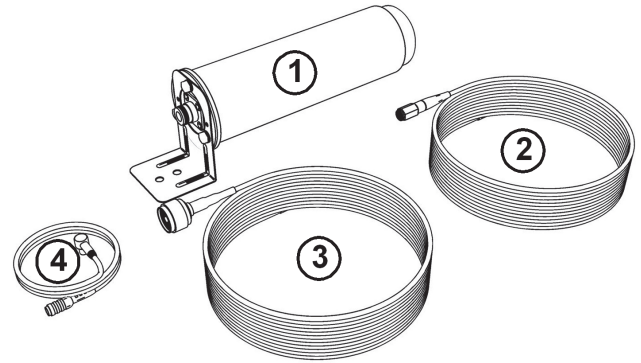
This chapter introduces you to the 4G LTE Accelerator Kit and familiarizes you with the layout of this manual.

If needed, you may purchase additional cables and other accessories from Cellphone-Mate, Inc.

1.1 - Package Contents

The 4G LTE Accelerator Kit contains the following items:

- CM288-W outdoor antenna (1)
- CM240-20FF 20' ultra-low loss cables (2)
- CM240-20FN 20' ultra-low loss cables (3)
- 4G adapter cable (4)
- Wall anchors (not shown)



1.2 - Features & Benefits

The 4G LTE Accelerator Kit gives you the best performance from your new 4G data card. 4G technology allows high speeds for easy image and movie viewing, video conferencing, and accessing the data you need. The 4G LTE Accelerator Kit by Cellphone-Mate lets you get the most out of this technology by making sure that the signal can reach you even when you are inside and/or blocked by geographic location, building materials, or structural design.

The 4G LTE Accelerator Kit includes the CM288-W antenna, which is compatible with 3G and 4G cellular networks. This kit receives the signal outside where it is strongest, passes it to your data card without the loss normally encountered when moving indoors, and returns the signal from the cellular data card to the tower. Please note that

the amount of performance boost depends on a number of factors including available service, outside signal strength, building structure, and more.

Increasing the performance of your 4G data card is as easy as:

1. Installing the CM288-W antenna outside where a strong signal is present.
2. Connecting the antenna directly to your data card.
3. Enjoying the increase in upload and download speeds.

The CM288-W antenna offers the following features:

- Compatible with 4G and 3G networks
- Compact size and low profile
- Easy to install

- Suitable for indoor or outdoor mounting
- Compatible with GSM/CDMA/3G/4G/WLAN/WiMAX/AWS/LTE systems
- Full-band (698-2700MHz) broadband frequency range
- N female connector
- Low VSWR

1.3 - How It Works

To get the strongest signal possible, it is very important to set up the Accelerator Kit properly. The antenna must be mounted in such a way that it is able to pick up the best possible cell signal on the outside of the building. Mount the antenna as high as possible facing the cell tower in an area with the best possible signal coverage.

Cellular signal loss usually occurs for any one or a combination of the following reasons:

- The nearest cell tower may be too far away to provide a reliable signal in your area.
- Obstructions such as trees, buildings, hills, weather, etc. can also cause signal loss even when you are close to a cell tower.
- Building structures can cause signal loss, especially in buildings with metal, concrete, or stucco walls.

The Accelerator Kit works by receiving the cellular signal from the tower, relaying that signal through the included cables to your 4G cellular data card, and returning the signal from the data card to the tower. This eliminates the signal loss caused by the building and low-lying obstacles such as trees.

The CM288-W antenna is omnidirectional, meaning that you need to mount it vertically for best results unlike directional antennas that must point toward the cell tower.

In general, you should mount the CM288-W antenna as high as possible on the building exterior nearest the cell tower for best reception.

1.4 - Additional Options

If needed, you may purchase the following accessories from Cellphone-Mate, Inc:

- **Additional cables:** Cellphone-Mate, Inc. offers a variety of cables if you need more than the 40 feet provided in this kit.
- **Amplifiers:** You may add an amplifier and an interior antenna to further boost signal strength inside the building.

Please visit the Cellphone-Mate, Inc. web site at www.cellphone-mate.com for more information.

1.5 - About This Manual

This manual contains the following information:

- **Introduction:** This chapter introduces the Accelerator Kit and this manual.
- **Safety:** This chapter contains important safety information.
- **Installation:** This chapter describes how to install the Accelerator Kit.
- **Warranty:** This chapter contains warranty information for your Accelerator Kit.

Lists of items, points to consider, or procedures that do not need to be performed in a specific order appear in bullet format:

- Item 1
- Item 2



Note: Notes provide helpful information.

Procedures that must be followed in a specific order appear in numbered steps:

1. Perform this step first.
2. Perform this step second.

This manual also contains important safety information and instructions in specially formatted callouts with accompanying graphic symbols:



WARNING: WARNINGS INDICATE THE POSSIBILITY OF PERSONAL INJURY.



CAUTION: WARNINGS INDICATE THE POSSIBILITY OF EQUIPMENT DAMAGE RADIO INTERFERENCE, ETC.

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CHAPTER 2: Safety

This chapter contains important safety information designed to prevent personal injury, equipment malfunction, and/or radio interference. You are responsible for ensuring a safe installation.

2.1 - Safety Warnings

- You are responsible for knowing and following all applicable codes and regulations and for obtaining all required permits and inspections.
- Follow all safety precautions contained in this Installation Manual.
- The installation process may require working in high locations such as roofs and/or ladders. Follow applicable safety regulations and best practices to avoid falling. Take care not to drop objects off any high area. Cordon off ground areas directly below roof or ladder work when possible.
- Always use appropriate personal protective equipment such as goggles, gloves, hard hat, etc. as needed and as required.
- Some components may be heavy and/or bulky. Always use proper lifting and carrying techniques when handling components, especially when working on a ladder, roof, or other area with a fall hazard.

- The antenna must not be co-located or operating in conjunction with any other antenna.
- Always completely remove the cable from the data card during a storm or when there is lightning in the area.



WARNING: FAILURE TO EXERCISE CAUTION WHEN WORKING IN HIGH AREAS COULD CAUSE A FALL AND PERSONAL INJURY.



CAUTION: FAILURE TO COMPLETELY REMOVE THE CABLE DURING A STORM OR WHEN LIGHTNING IS PRESENT CAN DAMAGE THE DATA CARD AND YOUR COMPUTER.

CHAPTER 3: Installation

This chapter describes how to plan your Accelerator Kit installation and how to install the antenna for best results.

3.1 - Selecting the Location

The CM288-W antenna included with your 4G LTE Accelerator Kit is designed to connect to a 4G cellular data card via one or both of the included CM240 20-foot cables. The CM240 cables run from the antenna and into the building to connect to the 4G adapter cable that in turn connects to the data card.

In general, you will want to select an exterior location on a wall or fence as close to the roof of the building as possible to mount the antenna for best results; however, you may mount the antenna in any convenient location provided the signal is good in that location.



Note: The illustration on page 14 shows an installation near the building roof line; you may mount the antenna in any convenient location with a strong signal.

The mounting location should be located on the side of the building with the strongest signal reception whenever possible. You may locate the antenna 20 to 40 feet from where you will connect it to the data card. Be sure to account for

cable length taken up running through walls, around corners, etc. as this may shorten the available straight-line distance between the data card and the antenna. Plan the route for the cable and make sure you have enough cable.

3.2 - Finding the Strongest Signal

The best way to find the strongest signal is to slowly walk around the building while monitoring the mobile broadband signal with your laptop. To do this:

1. Open the network access application on your laptop.
2. Connect to the network.
3. Walk slowly around the building while hovering the mouse cursor over the mobile broad-

band signal bars. You will see a popup displaying the dB level.

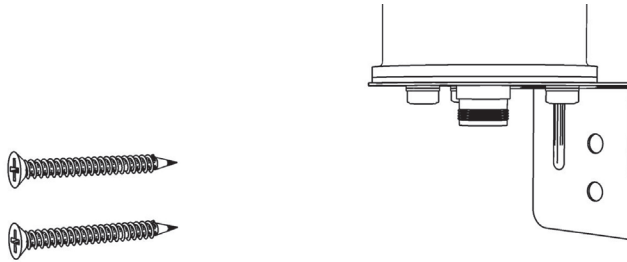
The area with the best reception is the area where the Access Manager application displays the maximum number of bars of signal strength and highest dB. Hold the laptop upright while walking and be sure to move slowly to give the data card time to register the signal.

3.3 - Mounting the Antenna

To mount the CM288-W antenna:

1. Verify that the location you selected has good reception and that the supplied CM240 20-foot cable or cables will reach your computer.
2. Mount the CM288-W antenna to the side of the building using two exterior-grade screws that are appropriate to the building material.

Alternatively, you may use the screws and wall anchors supplied with the Accelerator Kit.



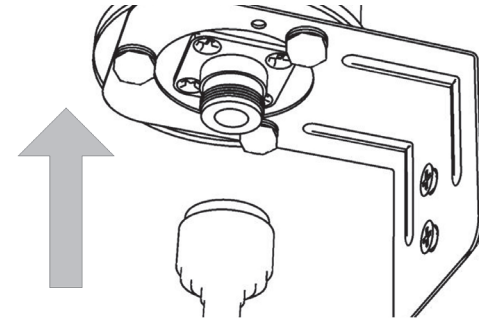
3. Tighten the screws until the antenna is firmly mounted against the building.

3.4 - Running the Cable

If you are mounting the CM288-W antenna near the roof of the building, you may want to run the CM240-20 cable(s) underneath the edge of the roof flashing. You may also choose to follow the

route of existing cables such as satellite TV or telephone lines.

1. Connect the male (large) end of the CM240-20 FN cable to the antenna by placing the cable end over the antenna connector and tightening the screw collar clockwise until hand tight.



2. Run the cable along the outside of the building to where you want to run it inside. Please see Section 3.5 if you need to connect both CM240 cables.

3. Either drill through the wall using a drill and bit appropriate to the material you are drilling through. Alternatively, you may pass the cable through an existing opening and skip this step.



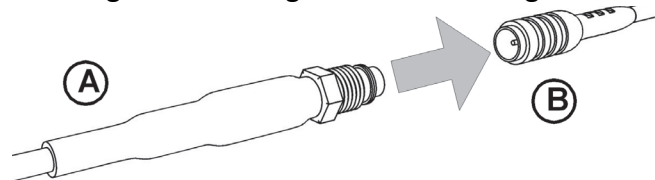
WARNING: MAKE SURE THERE ARE NO ELECTRICAL WIRES OR CONDUITS IN THE WAY BEFORE DRILLING THE HOLE.



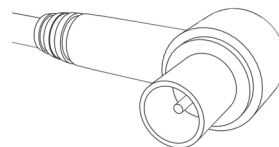
CAUTION: MAKE SURE THERE ARE NO HIDDEN CABLES, PIPES, ETC. IN THE WALL BEFORE DRILLING THE HOLE.

4. Pass the female (small) end of the cable through the hole until all excess slack is used up.
5. Fill the hole with appropriately rated sealant such as exterior-grade silicon caulking.

6. Run the cable inside the building to where you will connect the other end to the data card adapter cable.
7. Thread the female end of the CM240-20 cable into the male end of the 4G adapter cable and snug until hand tight. Do not over-tighten.



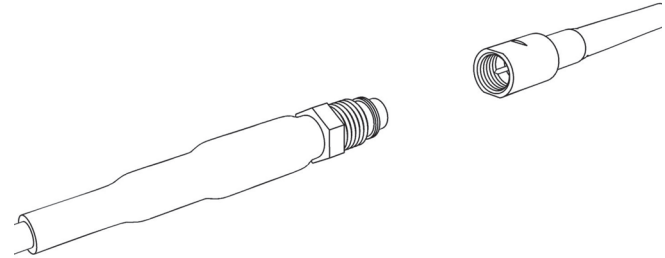
8. Remove the protective rubber cap from the RF port on the cellular data card.
9. Connect the other end of the 4G adapter cable to the 4G cellular data card.



10. Power on the computer and data card, and start enjoying faster browsing and data transfer speeds!



Note: The actual adapter cable end may vary depending on the type of cellular data card you are using.

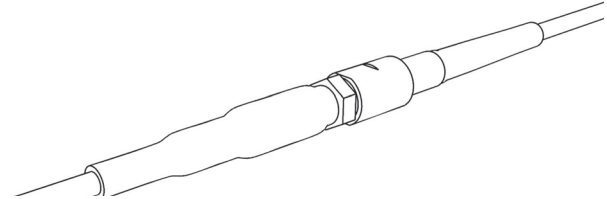


3.5 - Extending the Cable

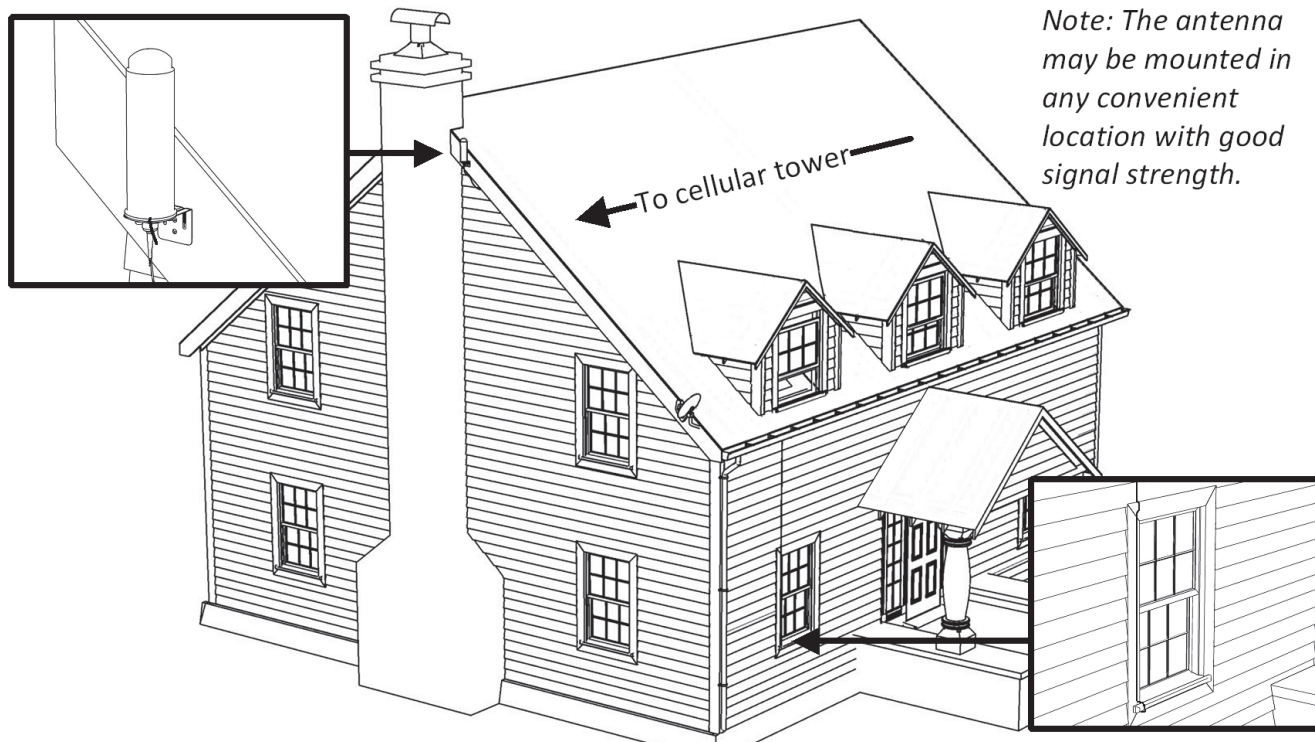
If needed, you may connect both CM240-20 cables to obtain up to 40 feet of cable. To connect the cables:

1. Connect the male (large) end of the CM240-FN cable to the CM288-W antenna.
2. Thread the female end (small) of the CM240-20FN cable into one of the female sides (small) of the CM240-FF cable.

The completed connections should look like this:



CAUTION: CONNECTIONS SHOULD BE SNUG. DO NOT OVER-TIGHTEN.



CHAPTER 4: Warranty

This chapter contains the warranty information for your CELLPHONE-MATE product and also contains information on how to contact the company.

4.1 - Warranty Periods

Your warranty includes the following periods:

- **Two-Year Product Warranty:** CELLPHONE-MATE products are covered under a two-year product warranty from the date of purchase. This protects the customer from any defects or problems the product may have that are

solely the fault of CELLPHONE-MATE Inc. Incorrect installation or misuse will void this warranty. Upon the return of a defective product, CELLPHONE-MATE will issue the customer a working replacement. All returned packages should contain all products distributed.

- **Five-Year Extended Product Warranty:** A five year warranty is available for purchase on any products sold by CELLPHONE-MATE Inc. A five-year warranty must be obtained at the time of purchase. This warranty adds an additional three years to the two year warranty we provide. All regulations still apply.

4.2 - Warranty Information

1. CELLPHONE-MATE, Inc. warrants to the Buyer that each of its products will be free from defects in material and workmanship and will perform in full accordance with applicable specifications when shipped. The limit of liability under this warranty is, at CELLPHONE-MATE, Inc.'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, Inc., prove defective in material and/or workmanship. Warranty returns must first be authorized in writing by CELLPHONE-MATE, Inc. Disassembly of any CELLPHONE-MATE, Inc. product by anyone other than an authorized representative of CELLPHONE-MATE, Inc. voids this warranty in its entirety. CELLPHONE-MATE, Inc. reserves the right to make changes in any of its prod-

ucts without incurring any obligation to make the same changes on previously delivered products.

2. As a condition of the warranties provided for herein, the Buyer will prepay the shipping charges for all products returned to CELLPHONE-MATE, Inc. for repair and CELLPHONE-MATE, Inc. will pay the return shipping with the exception of product returned from outside the United States, in which case the Buyer will pay all shipping charges.
3. 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.
4. Products sold by CELLPHONE-MATE, Inc. shall not be considered defective or non-conform-

ing 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, Inc. This warranty shall not apply to any products or parts thereof which have been subject to accident, negligence, alteration, abuse, or misuse. CELLPHONE-MATE, Inc. makes no warranty whatsoever in respect to accessories or parts not supplied by it.

5. 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, INC.'S 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.

6. 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.

7. 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 herein.
8. CELLPHONE-MATE reserves the right to bill for labor spent on equipment where there is no defective found
9. All items that are out of warranty are subject to a repair fee and additional freight charges.
10. Defective items in warranty will be repaired at no additional charge and will be returned with freight paid by CELLPHONE-MATE.

4.3 - Contact Information

You may consult a Cellphone-Mate, Inc. customer service agent directly by contacting us as follows:

- View the list of Frequently Asked Questions (FAQ) online at http://cellphone-mate.com/tech_faq.html.
- Our online support center is at <http://cellphone-mate.com/ticket.html>. If needed, you can create an online support ticket. This is the fastest and best way to get support for your product.
- Write to the address or call the phone number on the back cover of this manual.