PRODUCT MANUAL

CAT CDMA

SKU: IPD-CAT-CDMA

Cellular Alarm Communicator

SECURESMART

ANDROID APP ON Google play

Available on the App Store

www.ipdatatel.com

About ipDatatel

At ipDatatel, LLC, we are dedicated to serving our dealers with quality products and support services.

ipDatatel engineers and manufactures innovative security and automation devices for the alarm industry. As a leader in the design and development of Cellular and IP connected products, we offer:

- Proprietary alarm signaling network with no single point of failure;
- No additional central station equipment needed;
- Verizon Cellular network ready;
- Encrypted IP alarm transmissions;
- Dealer support and training.

Technical Support Information

For Technical Support, call toll free: 866-896-2944
Email: techsupport@ipdatatel.com
Web: www.ipdatatel.com

ipDatatel, LLC
13110 Southwest Freeway
Sugar Land, TX 77478
Toll Free: 866-896-2944

Hours: 8am – 6:30pm M-F CST (except Holidays)

Revision Notes

Revision	Notes	Date
1	Initial Release	11/29/2014

QUICK REFERENCE

DSC:
See page 10 for details

Programming of DSC:

Section	Cellular CAT (CDMA) as Sole Communicator
301	Enter Phone Number
310	Enter Account Number
350	Enter '03' for Contact ID

Honeywell VISTA:
See page 11 for details

Programming of Honeywell Vista:

Section	Cellular CAT (CDMA) as Sole Communicator
41	Enter Phone Number
43	Enter Account Number

GE:
See page 12 for details

Programming of GE NetworX:

Section Device 0	Cellular CAT (CDMA) as Sole Communicator
Location 0	Enter the Phone Number
Location 1	Enter Account Number
Location 2	Enter '13' for Contact ID

All Other Alarm Control Panel Types:
See page 13 for details

Table of Contents

Introduction

ipDatatel's Cellular Alarm Transceiver (CDMA) (the "Cellular CAT" or "Product") is a cellular radio that connects directly to the Tip & Ring of an alarm control panel. The Product transmits alarm signals via Verizon's Cellular CDMA network.

The Cellular CAT is compatible with most alarm controls that transmit Contact ID (CID) format transmitted from its digital dialer communicator. This installation manual provides wiring examples for DSC, Honeywell, GE controls, and generic wiring examples for other alarm control brands.

The Product can also provide virtual key-switch access via smart-phone (if alarm control has key-switch feature), and the web, as well as alarm monitoring notifications via text/push, email, and computerized voice call.

Key Features

Cellular Connectivity

The Cellular CAT technology replaces outdated conventional phone lines (POTS) to provide cellular alarm monitoring transmissions over Verizon's Cellular CDMA Network. By capturing the data transmission from the alarm control's digital dialer output, the Product emulates an alarm receiver.

The Product also resolves the communication problems that Voice-Over-Internet-Protocol (VOIP) services create that can chop-up alarm signal transmissions.

Alarm retransmissions are made using Contact ID format and can be sent to your central station's alarm receiver via landline or direct by IP.

Alarm signals are normally routed to your central station; however, signals such as open/close can be routed directly to the customer. These automated features of the Cellular CAT provide you control over what signals are sent to the central station, helping save on monitoring costs.

Virtual Key-Switch Feature

Your customers can remotely operate their alarm system by Virtual Key-Switch by downloading ipDatatel's SecureSmart app through their smartphone, and they can also access the system through their web browser. Customers can find this feature useful for quick and convenient arming and disarming of the system, as well as being able to view alarm history. The SecureSmart app is compatible with iPhone and Android platforms and is free to download at the App Store or the Google Play Store (search for "SecureSmart"). The virtual key-switch is also available as a web application on www.alarmdealer.com that runs from any Internet connected browser.

Note: The Cellular CAT does not support full featured Virtual Keypad functionality, nor is it connected to the Internet. Please consider installing ipDatatel's Cellular BAT product for these advanced features.

Alarm Notifications via Text/Push and Email

The Cellular CAT also provides notifications for alarm, supervisory, trouble, and open/close signals. Notifications by text/push and email identify the alarm system address, alarm signal and zone, and zone description. Notifications are normally delivered within seconds.

Computerized Voice Alarm Notifications

The Cellular CAT also provides notifications via computerized voice for customers who wish a phone call, where they may not desire text/push or email messages.

Installation Guide

New Dealer Registration

We are delighted for the opportunity to serve you and your firm. Becoming an ipDatatel dealer is easy and is at no cost. Please go to www.ipDatatel.com and click “Become a Dealer” for directions.

General Considerations

- Before installation, your Cellular CAT must also be setup using the dealer branded Portal located at: www.alarmdealer.com.
- The Product should be installed securely within the supplied plastic housing and be mounted next to the alarm control panel.
- Choose a location with good Cellular reception by monitoring the Product's signal strength LEDs utilizing a temporary power wire.
- Power the Product down before mounting / installation.
- Programming of the alarm control is fairly simple. Written instructions are included in the “Wiring & Programming” section of this manual.

Pre-Installation

Hardware Registration

Before the installation of your Cellular CAT, the Product must be also registered through ipDatatel at: www.alarmdealer.com.

Here are the steps needed to register the Cellular CAT:

- Log in to alarmdealer.com with the dealer login information that was emailed to you;
- Navigate to ‘Dealer Menu’ -> ’Hardware Registration; and
- Enter the MAC address from the pc board you wish to register.

Adding a Cellular CAT to a Customer Account

After registering the Cellular CAT, the Product must be added to a Customer Account. To perform this, follow these steps:

- Log in to alarmdealer.com with the dealer login information that was provided to you;
- Navigate to ‘Dealer Menu’ -> ’User Accounts,’ click ‘Create Account;
- Fill in the customer information;
- Click ‘Add Hardware;’
- Find and select the Product you registered earlier;
  (You can search for it by MAC address)
- Follow other registration steps and options as found on the page, and then click ‘Save’ to complete the registration.

Locating and Installing the Cellular CAT

The Product connects to the alarm panel's power connections, Telco, and key-switch connections (optional).

Telco - Digital Dialer

The Cellular CAT's signal collection requires Contact ID format transmit from the digital dialer of the alarm control. Wire the Telco side of the alarm control's Tip & Ring to the Product's Tip & Ring. Obviously, you must remove the POTS line (if any) from the alarm control as it would interfere with the installation of the Product.

Virtual Key-Switch Connection

The Cellular CAT can connect to most panels and provide a Virtual Key-Switch, allowing the customer to use the arm/disarm function. Virtual Key-Switch access is obtained after the customer authenticates using the customer username and password you have assigned them in the pre-installation phase. The customer will then need to download the SecureSmart app from their smart-phone. Additionally, the customer can also obtain access through a web interface. The Virtual Key-Switch is an option, and is not required to for alarm signal transmission from the Cellular CAT.

Power Connection

The final step is to wire the alarm panel's 12VDC auxiliary positive and negative power to the Product's positive (pin 4) and negative (pin 3) terminals.

Basic Programming

The Cellular CAT simulates a POTS telephone service to the panel. General programming for the control requires configuring the signal format as Contact ID, and inputting a telephone number to dial. The telephone number can be arbitrary (555-555-5555).

Validating the Installation

After the Cellular CAT is properly connected to the alarm control and powered, use the following steps to validate that the system is functioning properly:

- Ensure that all alarm signals are received by your central station.
- Ensure that virtual key-switch functionality works through the SecureSmart mobile app, and/or the web at: alarmdealer.com.

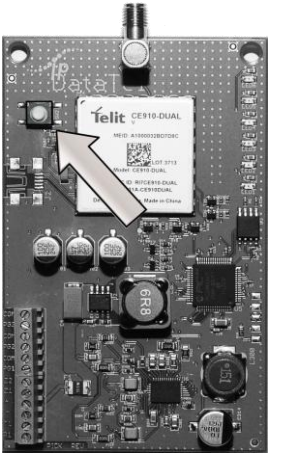
Cellular CAT (CDMA) Service Provisioning

Overview
Upon installation, the Cellular CAT must be registered with Verizon Cellular. The Product can obtain the credentials needed by its Over-The-Air Provisioning (OTAP). During an OTAP, the Cellular CAT obtains an IP address with the nearest cell towers and provides IP connectivity for the Product.

Pre-Provisioned
All new Cellular CAT's are pre-provisioned with Verizon, which means they are linked to the network and no additional steps are required for this Product to come online initially. If you are installing a Cellular CAT that was previously installed, you may need to perform a re-provisioning of the OTAP, which is required by Verizon to make the Product come online. If a Cellular CAT is removed or deactivated from an account, you will need to make sure it is re-provision. To re-provision the Cellular CAT, please follow these steps:

Re-Provisioning
OTAP Steps (If Needed)

1. To begin, ensure that the Product is powered appropriately with 12- volts either from a battery or the control panel.
2. Press and release the SW1 switch 3 times (i.e. triple click the switch),
3. Once released, the Product will auto power cycle. When it re-initializes you should see LEDs 3 – 6 scrolling,
4. Once acquired into the network, you will see the signal strength indicated on the board via LEDs 3 – 6.
5. Wait approximately 5 minutes before sending signals.

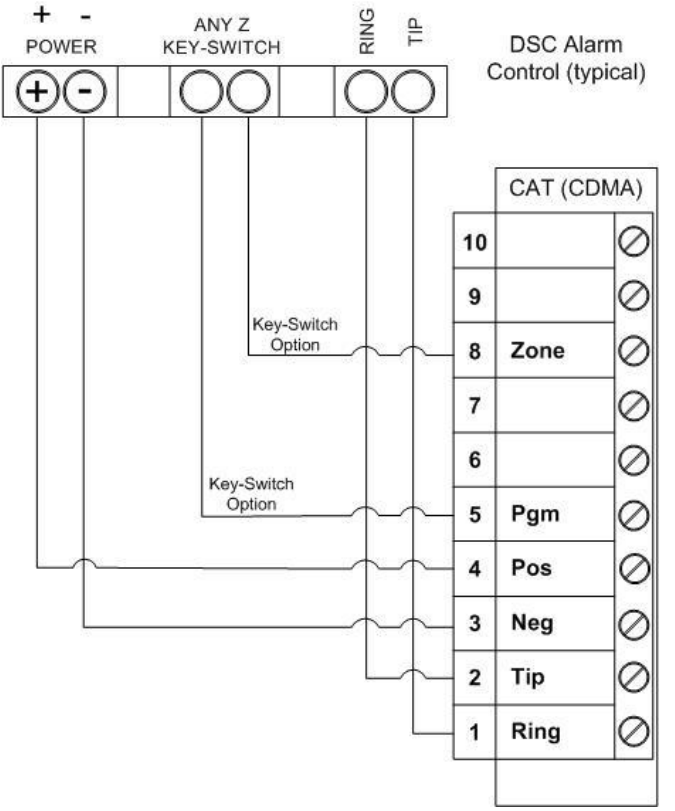


Wiring & Programming for Popular Panels

The following pages are organized by alarm panel type. Wiring and programming instructions are provided for:

- Digital Security Control (DSC) Alarm Panels
- Honeywell Vista Alarm Panels
- GE NetworX Alarm Panels

DSC Panel Wiring and Programming



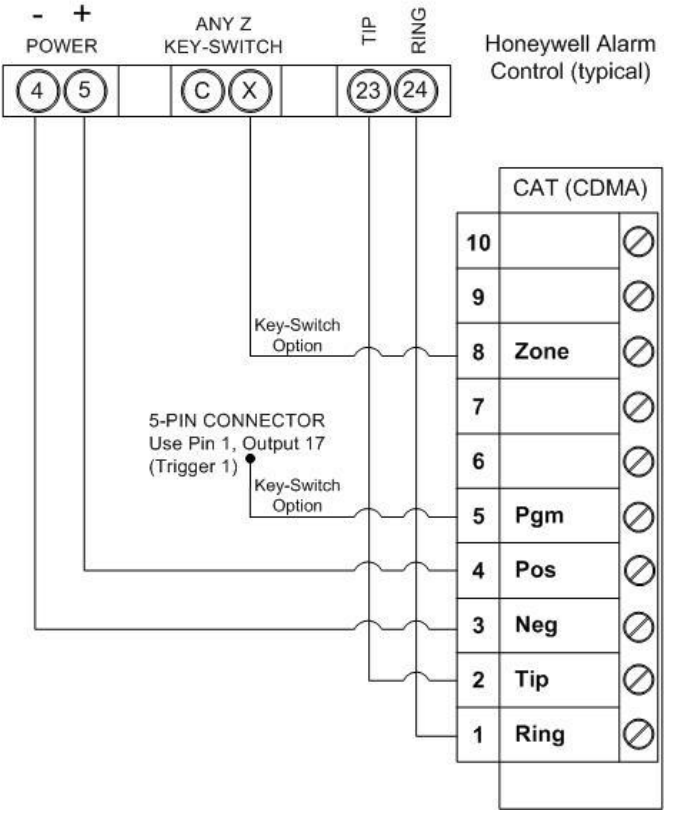
DSC Control Wiring & Key-Switch Option

General Concept for programming a DSC panel for the Cellular CAT as a Sole Communicator:

Section	As Sole Communicator	Code Summarization
301	Enter Phone Number	
310	Enter Account Number	
350	Enter '03' to send Contact ID	Panel default is '04', SIA
367	Turn on option '1'	Open/closing

Note: Ensure All Report Codes are in and signals can be sent.

Honeywell Vista Panel Wiring and Programming

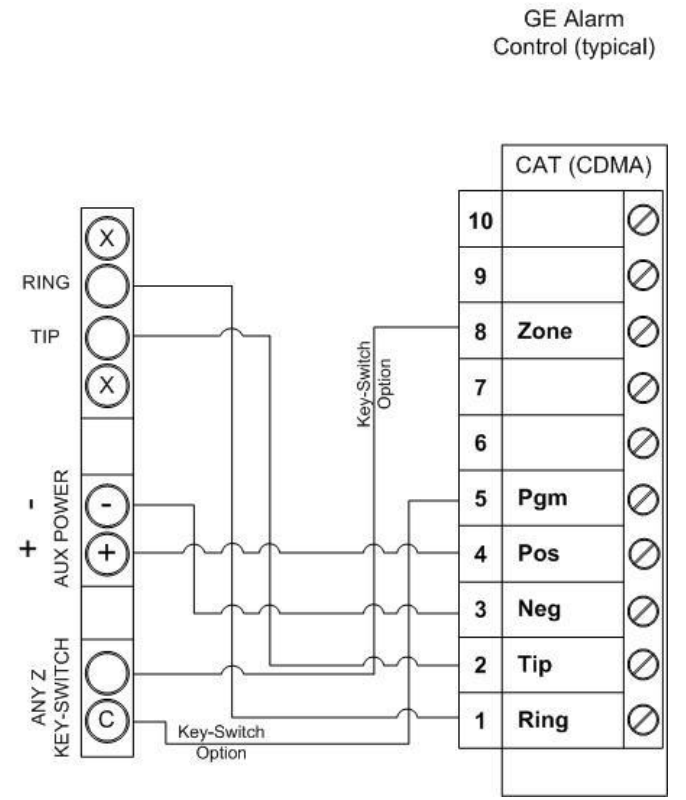


Honeywell Vista Control Wiring & Key-Switch Option
Note: Key-Switch programming is available for Vista-15 and up.

General Concept for programming a Honeywell Vista panel for the Cellular CAT as a Sole Communicator:

Section	As Sole Communicator	Code Summarization
41	Enter Phone Number	
43	Enter Account Number	
65 & 66	Enter 1	If you wish to receive Opening/Closing Reports

GE Panel Wiring and Programming

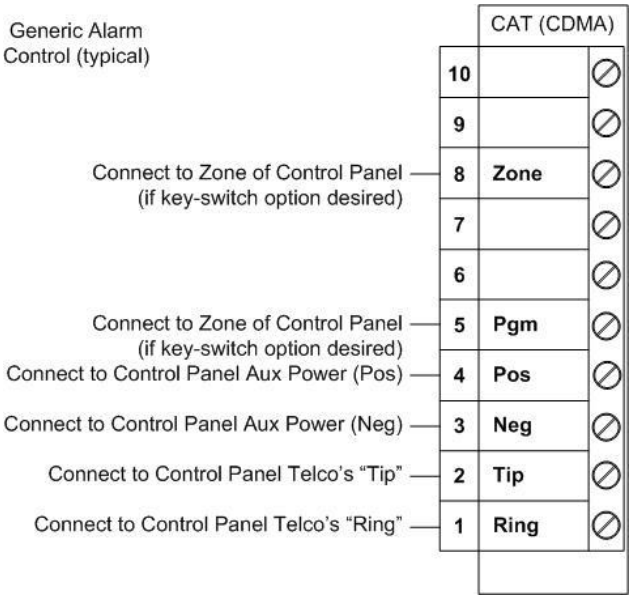


GE Control Wiring & Key-Switch Option

General Concept for programming a GE NetworX panel for the Cellular CAT as a Sole Communicator::

Section	As Sole Communicator	Code Summarization
Device 0, Location 0	Enter Phone Number	
Device 0, Location 1	Enter Account Number	
Device 0, Location 2	Enter '13' Recommended value	Contact ID

Generic Alarm Panel Wiring and Programming



For basic Key-Switch operation with the Cellular CAT, the following alarm panel wiring is needed.

- A programmable output on the alarm panel will be used to signal to the Product (PGM Terminal 5) that the panel has entered Arm/Disarmed state.
- The zone (Terminal 8) output on the Product will be used as a Key-Switch connecting to a 'zone' terminal on the alarm panel.

General Concept: Key-Switch Programming

Key-Switch programming examples for Honeywell, DSC, and GE NetworX are provided in the following paragraph. Most panel manufacturers will have the capability to configure a zone for key-switch operation and generally have at least one on-board programmable output that can be configured to activate on a number of different controls state conditions. Please reference the alarm panel installation manual for details for your specific installation.

Honeywell Vista (General Concept)

1. *56 Program zone as type 77
2. Partition # 1
3. Report Code 01 00
4. EOL 0 (can be 2 depending on panel)
5. Resp Time 1
6. *79 output 17
7. Set 0 for normally low
8. *00 quit
9. *80 field 80
10. Output function 17
11. * Twice
12. Activated by 2
13. Zone type 78
14. Key-Switch red* partition 1
15. *Output number 17
16. **Output function 18
17. Activated by 2
18. Zone type 79
19. Key-Switch green
20. Output still 17

DSC PowerSeries (General Concept)

Program Zone (*Section 001*) as '22'
Program PGM Output (*Section 009*) as '5'

DSC Alexor (General Concept) Wiring:

CAT - Terminal 8 (*Zone*) → I/01 - Panel
CAT - Terminal 5 (*PGM*) → I/02 - Panel
CAT - 6.2k ohms resistor from Term 4 (*Positive*) → Terminal 5 (*PGM*)

DSC Alexor (General Concept) Programming:

Section 009 - '05'/'22'
Section 013 - Enable 2 & Disable 1
Section 134 - Enable 14 (*Press 9, then 6 on, 7 off*) normally closed.
Section 206 - Enable 2
Section 501 - Enable 3

GE NetworX (General Concept)

Stay in Device '0'
Go to location 25
Program zone as '11'
LED Status
Location 47 Segment 1: 21
Location 47 Segment 2: 0

Testing:

It is highly recommended that you test every alarm signal that the control panel is designed to transmit to ensure correct programming of the alarm control, Cellular CAT, and central station devices.

Warranty Information

LIMITED WARRANTY

ipDatatel, LLC (hereinafter referred to as "Seller") warrants its Product to be in conformance with the Product specification, and to be free from defects in materials and workmanship under normal use and service for a period of twelve (12) months from the date of original purchase. Seller's sole obligation shall be limited to repairing or replacing, at its option, free of charge for materials or labor, any Product which is proven not to be within Seller's specifications of the Product, or proven defective in materials or workmanship under normal use and service.

Any Product or device purchased which is enclosed within a plastic case must remain in the plastic case for installation and regular use after installation. At no point should the device be removed and mounted without the plastic case, in doing so you may void the Limited Warranty.

LIMITED LIABILITY

Seller shall have no liability or obligation under this Limited Warranty or otherwise for merchantability or fitness for any particular use; nor shall it extend its Limited Warranty, if the Product is altered, or improperly installed, repaired, or serviced. There are no warranties, express or implied, that extend beyond those contained within this document. In no case shall Seller be liable to person or entity for any consequential or any other basis of law or liability whatsoever, whether or not such loss or damage is caused by Seller's own negligence or fault.

Seller does not represent that the Product may not be compromised or circumvented, or that it will provide the service intended; or that the Product will prevent any personal injury or property loss by burglary, robbery, or otherwise; or that the Product in all cases will provide adequate warning or detection.

Customer understands that a properly installed and maintained alarm system may only reduce the risk of burglary, robbery, or other such events occurring without providing an alarm, but is not insurance or guarantee that such will not occur or that there will be no personal injury or property loss as a result.

Consequently, Seller shall have no liability for any personal injury, property damage or any other loss based on a claim that the Product or services there from, failed to give warning. However, if seller is held liable, directly or indirectly, for any loss or damage arising under this Limited Warranty or otherwise regardless of cause or origin, Seller maximum liability shall not in any case exceed the purchase price of the Product, which shall be the complete and exclusive remedy against Seller.

This Limited Warranty replaces any previous warranty, and is the only warranty made by Seller for this Product. No increase or alteration, written or verbal.

FCC and Industry Canada Regulatory Compliance

FCC Warning / IC Statement

This device complies with Part 15 of the FCC Rules and with ICES-003, Issue 4 of Industry Canada. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

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 a radio/TV technician for help.

Canada Avertissement de la FCC / IC Déclaration

Cet appareil est conforme à la Partie 15 des règlements de la FCC et ICES-003, 4 e édition d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes:

(1) Cet appareil ne doit pas causer d'interférences nuisibles et

(2) Cet appareil doit accepter toute interférence reçue, y compris les interférences qui peuvent perturber le fonctionnement.

Note: Cet équipement a été testé et trouvé conforme aux limites pour un dispositif numérique de classe B, conformément à la Partie 15 des règlements de la FCC. Ces limites sont conçues

pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre des fréquences radio et, s'il n'est pas installé et utilise en conformité avec les instructions, peut causer des interférences nuisibles aux communications radio. Cependant, il n'existe aucune garantie que des interférences ne se produiront pas dans une installation particulière. Si cet équipement provoque des interférences nuisibles à la réception radio ou de télévision, qui peut être déterminé en mettant l'équipement hors tension, l'utilisateur est encouragé à essayer de corriger l'interférence par un ou plusieurs des mesures suivantes:

• Réorienter ou déplacer l'antenne de réception.
• Augmenter la distance entre l'équipement et le récepteur.
• Branchez l'appareil dans une prise sur un circuit différent de celui auquel le récepteur est connecté.
• Consulter le revendeur ou un technicien radio / TV.

Specifications

Cellular CAT (CDMA)

Radio

- Frequencies CDMA 1x 800 MHz/1900 MHz

Power

- Externally Provided 12v DC
- Typical Current Draw 130 mA
- Max Current Draw 180 mA

Environmental

- Temperature Range - 22° to +158° F (- 30° to +70° C)
- Humidity 0 to 95% non-condensing

Physical

- Height 4.125 Inches (with antenna stub)
- Width 2.4375 Inches
- Depth .5 Inch

With Case

- Height 5.18 Inches
- Width 3 Inches
- Depth 1.5 Inches

Troubleshooting Diagnostic Information

LED – 1: Status:

- Normal Operating – Solid when connected to network.
- Blinks 3 times if not connected to network.
- Blinks 4 times when initializing over the network.

LED – 2: Activity:

- Normal Operating – Light is not illuminated.
- Blinks when there is a pending signal.

LED – 3: Connection:

- Blinks until the Cellular CAT has been initialized and will remain solid after connection to Verizon is complete.

LEDs – 3 to 6: Verizon Signal Strength

- LED 3 being the lowest and LED 6 being the highest signal strength. The minimum recommended operation is two bars (LEDs 3 & 4 Solid which is roughly -101 & -94 dB).

ipDatatel, LLC.
13110 Southwest Freeway
Sugar Land, Texas 77478

Main: 713.452.2700
Toll Free: 866.896.2944

www.ipdatatel.com