

USER MANUAL

OVITAG READER

GATEWAY

Model : READER- WIFI

www.trackerwave.com

INTRODUCTION ABOUT TRACKERWAVE

PRODUCT

INTRODUCTION

The Wifi Gateway Reader TWR1W is a Real Time Location Services (RTLS) device which has been designed and developed by Trackerwave Pvt. Ltd. It supports Bluetooth 5.0 BLE, Wi-Fi. The intended use of this device is for gathering and aggregating RTLS data from various sensors in the facility and synching the information with cloud system. The system helps in tracking assets and personnel along with environment monitoring in a multi campus enterprise.

Reader is an IoT device installed in identified positions of the healthcare facility to track patients, assets and staff. Ovitag Readers are proven to offer industry best ranges, thus reducing the installation points.

These readers are easy to install and configure, also support WiFi. All reader models update firmware over the cloud, minimizing maintenance and support activities.

Biomedical engineers can map the readers in the facility to the software suite using the mobile application which is downloadable from Play Store/AppStore for easy configuration.

The readers are certified to support concurrent Tags, with built in WiFi fault tolerance.

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CERTIFICATIONS AND REGULATIONS

The Wifi Reader device has undergone following compliance;
RoHS compliance, CE certification, FC and ISO-27001-2013 standard.



TECHNICAL SPECIFICATIONS

S.No	Parameter	Specification
1.	Network Interface	WIFI IEEE802.11b/g/n
2.	Bluetooth	BLE5.0/2.4GHz
3.	CPU	ARM® Cortex® @240MHz
4.	DRAM	8MB
5.	Flash Memory	16MB
6.	Power Input	100-240V 0-5A 50-60Hz 22-32VA
7.	Power Output	2Pin 2.1mm 5v,2A DC
8.	Dimensions	8.4cm: 8.8cm: 3.1cm
9.	Weight	58grams
10.	Operating Temperatures	-40°C / +70°C
11.	Bluetooth Range	20 Meters

INSTRUCTIONS FOR USE

Power Schematic: Connect and power the device as shown below.



Please power up your device continuously using the DC adaptor 5V, 1A.

LED Indication: (Visible on top of enclosure)

Red LED ON --> Configuration is not successful

Red LED OFF --> Configuration is successful

OPERATING INSTRUCTIONS

Installation Steps

1. Drill two holes on the false ceiling 36.5 mm apart
2. Drill a cable channel with 9 mm diameter for running the Power adapter wire.

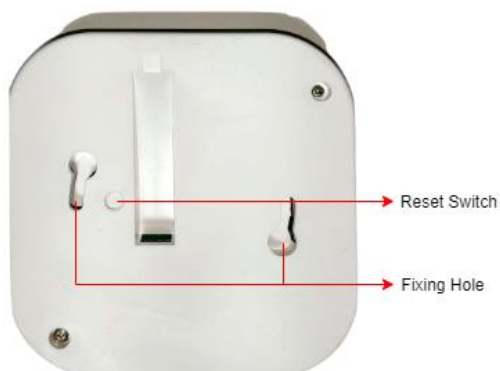
3. Fasten the screws in nails with 15 mm distance from the false ceiling
4. Connect the power adapter to the power behind the false ceiling and run the cable through the 9mm channel.
5. Connect the 2pin DC jack cable to the reader
6. Place the reader fixing hole to the screws in false ceiling and twist to lock firm.

Direction of Reader Antenna

The antenna of the reader is in alignment with the balloon icon on the reader case. It is ideal to face the antenna to open indoor space for better signal reception.



Wifi Reader Top View



Wifi Reader Bottom View



Wifi Reader Side View

Network Requirements

OvitagTM Readers supports WIFI networks in IEEE802.11 b/g/n with WPA/WPA2 security settings. The indoor locations where readers are placed should have good WiFi Signal for data upstream communication. The reader should be installed higher from floor level on the ceiling, so that the signals gets dispersed through the room.

Reader Installation Map

Readers have to be installed on suggested locations by qualified personnel for RTLS in false ceiling as per the following instructions on Floor plan applicable to the location. The direction of reader antenna is depicted in the floor map and the readers should be strictly aligned.

DOWNLOAD AND INSTALL MOBILE APP

You can setup the device through the TW Service Application for android or iOS devices.

Search for “TW Service app” in play store/ app store.



SYNCHRONIZING DATA

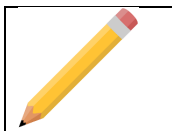
By using TW Service app, configure the gateway properties like SSID name, SSID Password, Port number and IP Address. Once the connection is verified successfully then the data will be synced and syncing information will be displayed in cloud system.

CONFIGURATION

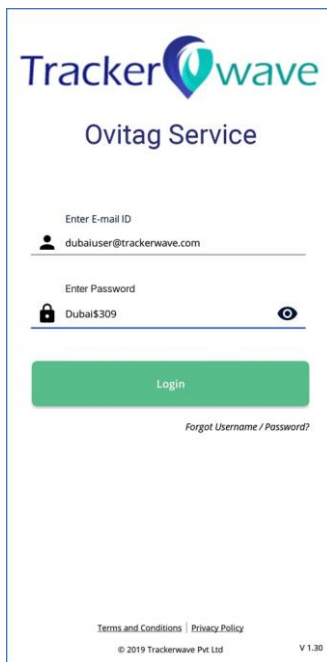
Configure Reader Using Service App

Pre-requisite: Enable the Bluetooth in smart phone, on which the TW Service app is installed.

Step 1: Open our Trackerwave service app, enter the username and password as given below and click Login.



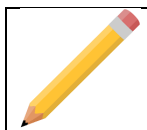
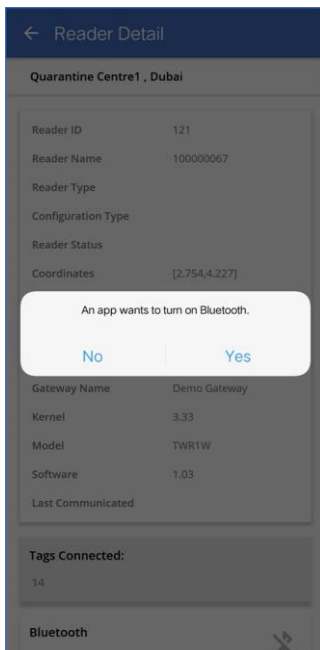
User name and password will be provided by Trackerwave Pvt. Ltd.




Step 2: Click the “Reader” tab to view the list of readers and select the reader device id to configure.



Step 3: Ensure that the selected reader is powered on and the user is within 5 meters distance from the reader. If Bluetooth is not turned on, then app promotes to turn on the Bluetooth.




Go back and reselect the reader then only the Bluetooth icon  has enabled.

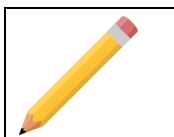
Step 4: The system displays the default gateway, SSID Name and Password configured for the customer's facility in the UI.



If the default configuration SSID Name and Password are correct, no need to edit in gateway near pen icon, follow the steps without edit any details - move to [错误! 未找到引用源。](#)

Step 5: Edit SSID Name and password by clicking on the edit icon (pen icon) as shown in below image.






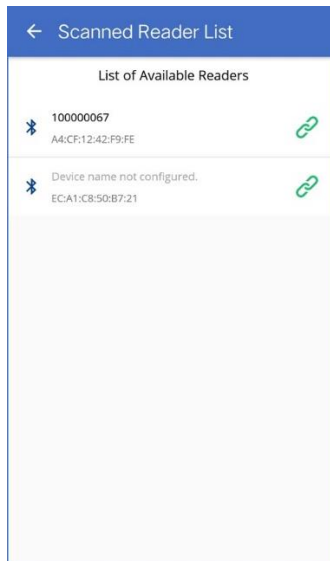
The WiFi SSID (CASE SENSITIVE), password (CASE SENSITIVE) and URL (gateway server IP address) should be entered as instructed by the account manager.

Step 6: “Gateway details updated successfully” message will be displayed once the details are edited.



Step 7: Now, go back and select the reader again so the new configuration will be updated. The updated configuration will be applicable to all readers no need to change every time.

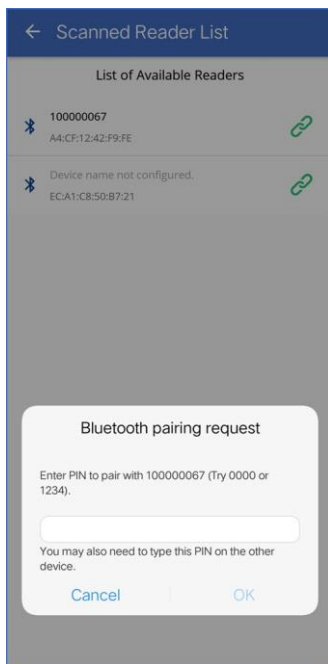
Step 8: Click on the Bluetooth icon  then it will scan the nearby reader's device id. The reader can be uniquely identified by the serial number behind the reader.



Step 9: Click the pair icon on the right side of scanned reader id (select the reader id which you want to pair).

Step 10: Enter an allocated pair key (CASE SENSITIVE) to connect with Bluetooth as given below and click OK.

Pair Key: T6@cK



Step 11: Click the paired reader id, then the id will be displayed near Bluetooth icon in in reader page. Please ensure the selected reader and paired reader is one and the same.

Step 12: Please ensure the configuration of SSID Name, password and gateway IP Address are correct then click the Sync button. (without moving away from the reader).

Then “Reader details sent successfully” message will be displayed as shown in the below image.

←
Reader Detail

Software1.03

Last Communicated

Tags Connected:

14

Bluetooth

Connected
Reader Name : 100000067

Gateway

IP Addressdemos.trackerwave.com

Port1883

WiFi

SSID Nametwtest

Passwordtwtest@12345

Sync

Download Log

Test Sensor

Cloud Ping

Ping

Reader Detail sent successfully

Step 13: Configuration message will be sent via Bluetooth to the reader. The system shall show a confirmation message on successful reader update.

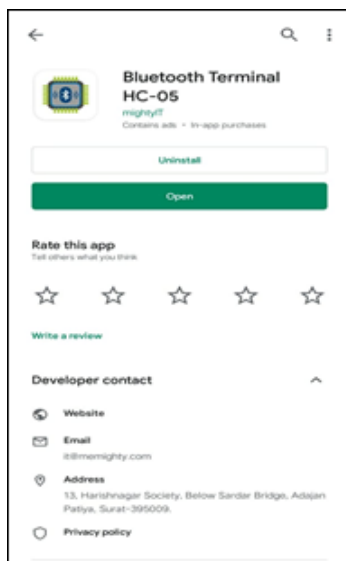
Step 14: Configure all readers with same setting one by one by pairing the reader one by one.

Step 15: Please ensure that all the readers are configured with appropriate WiFi and Gateway information.

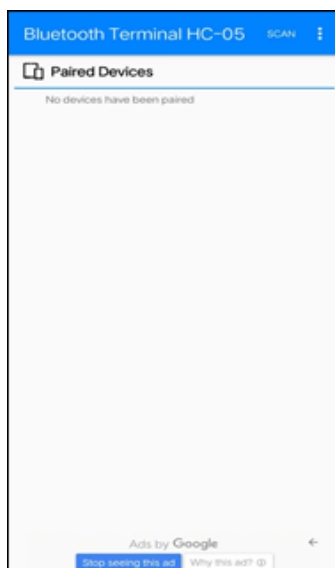
Configure Reader Using Bluetooth Terminal App

Bluetooth terminal app shall be used to configure the Trackerwave Gateway Readers, where Customer account and Service app has not yet made available, i.e. This could happen in case of a controlled Proof of Concept or trail.

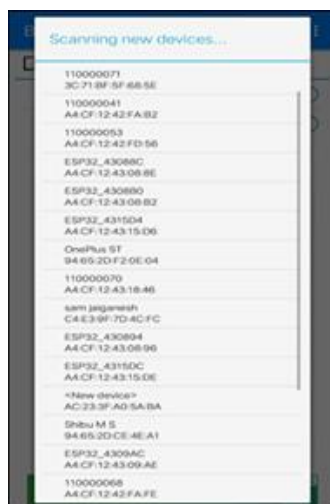
Step 1: Install the “BLUETOOTH TERMINAL” app from play store (android).



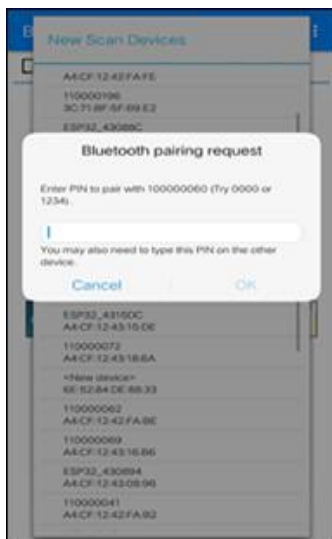
Step 2: Open the Bluetooth terminal and click the scan button.



Step 3: Displays list of Reader device IDs.



Step 4: Select the reader device ID which you want to configure.

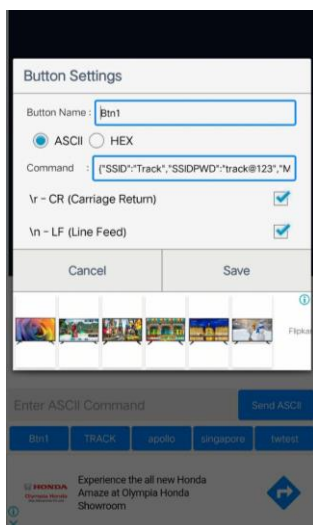


Step 5: Enter the below Password to connect with that device id.

T6@cK



Step 6: Once Bluetooth is connected long press “Btn1” or any other button and enter configuration message as below and click Save.



Step 7: By saving the configuration message on the app button, you can configure all readers with same setting one by one.

Step 8: Sample Configuration message (case sensitive).

```
{ "SSID": "TW", "SSIDPWD": "$JuNE2018", "MURL": "mqtt://demos.trackerwave.com", "MPORT": "1883", "MUSR": "twdemo", "MPWD": "demo@2018" }
```

OVITAG WEB APPLICATION

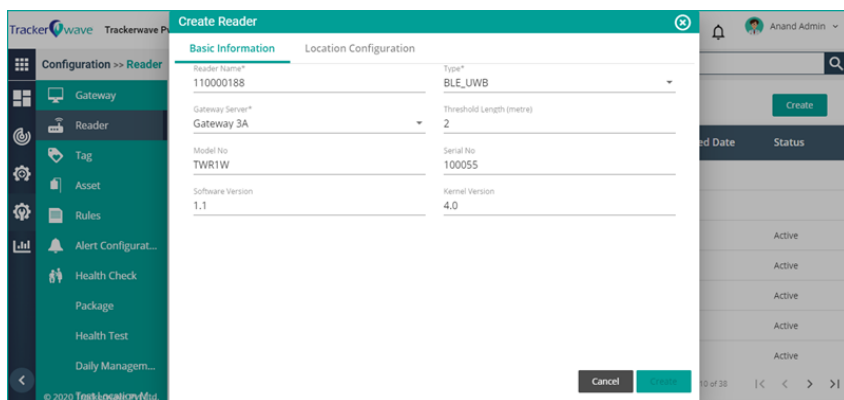
Ovitag allows management of Gateway Readers via the web application. User access to the portal is restricted via authentication.

For active directory integrated logins, please change/ reset the passwords as per the IT Practice/ Policy.



Create Reader

1. Click Create on the Reader Page.
2. Fill the Basic Information and Location Configuration on the Create Reader form.
3. Once the mandatory details are filled, click Create in the right bottom end of the Create Reader form, to save the Reader or click Cancel to leave the form.



Create Reader

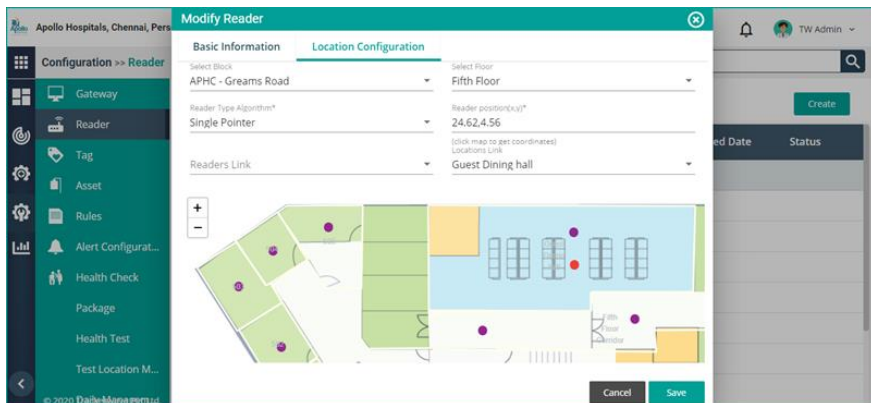
Basic Information | Location Configuration

Reader Name*	110000188	Type*	BLE_UWB
Gateway Server*	Gateway 3A	Threshold Length (metre)	2
Model No	TWRIW	Serial No	100055
Software Version	1.1	Kernel Version	4.0

Cancel Create

Edit/ Modify Reader

By double clicking on the reader, the Modify Reader dialog box opens. Once the Reader details are entered and saved in the application, assign the Reader against a floor plan by providing the exact reader position or by clicking on the actual location on the floor plan.



CLEANING AND MAINTENANCE

1. Keep the product clean
2. Keep the product dry
3. Do not use household cleaners to clean the product.
4. Use an isopropyl alcohol (IPA) blend or just plain water to cleanup the device, keep in mind that you should never spray these materials directly onto the device. Instead, dip a lint-free or microfiber cloth into your cleaning solution of choice, then wring it out until it's just slightly damp.

SAFETY AND PRODUCT INFORMATION NOTES

Power Warning:

- Do not disassemble the device.
- Do not exceed voltage and power above 5 voltage and 2A.

MATTERS NEEDING ATTENTION

1. The Wifi reader has no waterproof effect on acidic and alkaline solutions, chemical reagents and other corrosive liquid. The damage or defects caused by misuse or improper use are not covered by the warranty.
2. The device has a waterproof level of IP65, do not expose to water.
3. Avoid dropping the device frequently
4. It is susceptible to damage when falling from 3 feet distance
5. Do not place any weight over the device, it may result in damage of device.

CAUTION



Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

WARRANTY INFORMATION

WARRANTY AND DISCLAIMER

Company shall use reasonable efforts consistent with prevailing industry standards to maintain the Services in a manner which minimizes errors and interruptions in the Services and shall perform the Implementation Services in a professional and workmanlike manner. Services may be temporarily unavailable for scheduled maintenance or for unscheduled emergency maintenance, either by Company or by third-party providers, or because of other causes beyond Company's reasonable control, but Company shall use reasonable efforts to provide advance notice in writing or by e-mail of any scheduled service disruption. However, Company does not warrant that the Services will be uninterrupted or error free; nor does it make any warranty as to the results that may be obtained from use of the Services. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION, THE SERVICES AND IMPLEMENTATION SERVICES ARE PROVIDED "AS IS" AND COMPANY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

HARDWARE WARRANTY

1. The contract includes hardware repair / replacement as necessary. Cost of any hardware replacement and / or repair will be covered as part of the guarantee period/Annual Maintenance Contract as applicable.

2. The contract also includes installation of software packages and hardware provided by Company and seeing that all devices are in working condition.
3. In case of hardware problems due to natural causes, we accept no liability against the same as it is unforeseen and unavoidable. We will however take measures to prevent the same and will rectify the problem in the scheduled remote support.
4. For all our hardware, we do not accept liability in case of damage or misuse and undertake the customer not to open/repair the same, without written permission.
5. Company is not responsible for slow internet speeds and / or disconnections from service. This should be taken up with the respective ISP, we accept no responsibility if calls are left pending / not completed due to breakdown of internet service from ISP.
6. The obligations of COMPANY under this contract excludes:
 - Damage due to accident, flood, neglect, misuse, use of non-standard electric power.
 - Alteration in the machines by persons other than Company personnel.
 - Damage due to shifting of hardware from one location to another.
 - In the event of any force majeure such as act of God, fire, storm, earthquake, explosion, strike, lockouts, industrial disputes, riots, accidents, floods, electrical surge, lightning, etc.

-Damage due to use of system in improper environmental conditions.

-Appropriate data backup strategy to be devised and owned by Customer. Necessary support shall be provided by Company.

-Immersion in water,

7. Company shall not be liable for any loss or damage, incidental, direct or consequential, arising out of malfunctioning or improper use of the equipment, in the scope of this AMC.

8. Guarantee Period: Trackerwave provides 1-year Guarantee for Wifi Gateway Reader from the invoice date.

9. Warranty Period: Trackerwave gives **3 years** of warranty for Wifi Gateway Reader from the invoice date.

10. A ticket shall be raised at support@trackerwave.com or <http://support.trackerwave.com> for malfunctioning hardware or software services in guarantee or AMC period. As part of support process, the company shall courier replacement hardware devices upon the receipt of malfunctioning hardware devices, free of service or replacement cost.

11. A ticket shall be raised at support@trackerwave.com or <http://support.trackerwave.com> for malfunctioning hardware or software services within the warranty period. As part of support process, the company shall provide a service quote for maintenance of malfunctioning hardware devices, with service and shipping costs.

SUPPORT

If you have any queries regarding your equipment or the information in this manual, contact Trackerwave Pvt. Ltd. comments and suggestions regarding the content of this manual are appreciated. To submit comments, please contact info@trackerwave.com or visit <http://support.trackerwave.com>

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Unless otherwise stated on the face of the quote or invoice, product will be provided EXW from Trackerwave facility in Chennai, TN. Risk of loss will pass to Customer at Trackerwave facility in Chennai, TN. Trackerwave may indicate scheduled shipment or service dates for

certain items of the order. Trackerwave reserves the right to ship in advance of any date or time provided by Licensee for delivery, and to deliver in installments. Such dates are estimates only and may be subject to change by Trackerwave without liability. Licensee shall not be entitled to treat these Terms as repudiated in the event of such failure to deliver the Products. Tracker wave shall have no liability for direct, indirect, special, incidental or consequential damages due to failure for any reason to meet scheduled shipment dates. Trackerwave shall not be liable for any damage to or loss of product including any damage or loss in transit. Tracker wave is not responsible for liquidated damages.

10. INSPECTION, ACCEPTANCE, RETURNS.

Customer will thoroughly inspect each shipment of products promptly upon receipt. All products will be deemed to have been accepted fifteen (15) days after receipt, except for products for which Customer makes a written claim of non-conformance within such time. All products made the subject of such claim will be deemed to have been accepted fifteen (15) days after receipt of conforming goods. No products may be returned to Trackerwave except by prior authorization by Trackerwave. All such returns will be subject to Trackerwave's then-current return policies and procedures.

11.LIMITED WARRANTY.

Company shall use reasonable efforts consistent with prevailing industry standards to maintain the Services in a manner which minimizes errors and interruptions in the Services and shall perform the Implementation Services in a professional and workmanlike manner. Services may be temporarily unavailable for scheduled maintenance or for unscheduled

emergency maintenance, either by Company or by third-party providers, or because of other causes beyond Company's reasonable control, but Company shall use reasonable efforts to provide advance notice in writing or by e-mail of any scheduled service disruption. However, Company does not warrant that the Services will be uninterrupted or error free; nor does it make any warranty as to the results that may be obtained from use of the Services. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION, THE SERVICES AND IMPLEMENTATION SERVICES ARE PROVIDED "AS IS" AND COMPANY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

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NOTWITHSTANDING ANYTHING TO THE CONTRARY, EXCEPT FOR BODILY INJURY OF A PERSON, COMPANY AND ITS SUPPLIERS (INCLUDING BUT NOT LIMITED TO ALL EQUIPMENT AND TECHNOLOGY SUPPLIERS), OFFICERS, AFFILIATES, REPRESENTATIVES, CONTRACTORS AND EMPLOYEES SHALL NOT BE RESPONSIBLE OR LIABLE WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT OR TERMS AND CONDITIONS RELATED THERETO UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER THEORY: (A) FOR ERROR OR INTERRUPTION OF USE OR FOR LOSS OR INACCURACY OR CORRUPTION OF DATA OR COST OF PROCUREMENT OF SUBSTITUTE GOODS, SERVICES OR TECHNOLOGY OR LOSS OF BUSINESS; (B) FOR ANY INDIRECT, EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES; (C) FOR ANY MATTER BEYOND PRODUCT WARRANTY PERIOD; OR (D) FOR ANY MALFUNCTION BEYOND COMPANY'S REASONABLE CONTROL; OR

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FCC Warning

This device complies with part 15 of the FCC Rules. 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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.