

 **Warning**

Using the supplied equipment in a manner not specified by Sunrise Telecom may impair the protection provided by the equipment.

 **Warning**

This is a Class 1 LASER product. Avoid looking directly at the Transmitter source. For added safety, turn off the laser when not in use.

End of Life Recycling and Disposal Information

DO NOT dispose of Waste Electrical and Electronic Equipment (WEEE) as unsorted municipal waste. For proper disposal return the product to Sunrise Telecom. Please contact our local offices or service centers for information on how to arrange the return and recycling of any of our products.



EC Directive on Waste Electrical and Electronic Equipment (WEEE)

The Waste Electrical and Electronic Equipment Directive aims to minimize the impact of the disposal of electrical and electronic equipment on the environment. It encourages and sets criteria for the collection, treatment, recycling, recovery, and disposal of waste electrical and electronic equipment.

RxT Platform Quick Manual

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1 Contact and Warranty

1.1 Customer Service

Sunrise Telecom Customer Service performs the following functions:

- Answers customer questions over the phone on such topics as product operation and repair.
- Repairs malfunctioning RxT promptly.
- Provides information about product upgrades.

The warranty period covering the RxT is one year from the date of shipment on hardware, software, accessories, and the battery.

A Return Merchandise Authorization (RMA) Number is required before any product may be shipped to Sunrise Telecom for repair. Out-of-warranty repairs require both an RMA and a Purchase Order before the unit is returned. All repairs are warranted for 90 days.

Please contact Customer Service if you need additional assistance:

Customer Service

Sunrise Telecom Incorporated

302 Enzo Drive

San Jose, CA 95138 U.S.A.

Tel: 1 408 360 2200 or 1 800 701 5208

Fax: 1 408 363 8313

Internet: <http://www.sunrisetelecom.com>

E-mail: support@sunrisetelecom.com

Offices

Sunrise Telecom offices are located around the world:

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info@sunrisetelecom.com.tw

1.2 Express Limited Warranty

This Sunrise Telecom product is warranted against defects in materials and workmanship during its warranty period. The warranty period for this product is contained in the warranty page on <http://www.sunrisetelecom.com>.

Sunrise Telecom agrees to repair or replace any assembly or component found to be defective under normal use during this period. The obligation under this warranty is limited solely to repairing or replacing the product that proves to be defective within the scope of the warranty when returned to the factory. This warranty does not apply under certain conditions, as set forth on the warranty page on <http://www.sunrisetelecom.com>. Please refer to the website for specific details.

THIS IS A LIMITED WARRANTY AND THE ONLY WARRANTY MADE BY SUNRISE TELECOM. SUNRISE TELECOM MAKES NO OTHER WARRANTY, REPRESENTATION OR CONDITION, EXPRESS OR IMPLIED, AND EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS.



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2 Platform Overview

2.1 Unpacking

To unpack and test a new test set:

1. Remove the packing list, test set, and accessories from the shipping container.
2. Inspect all parts and immediately report any damage to the carrier and to Sunrise Telecom.
3. Verify that all parts specified on the packing list were received.
4. Complete the Warranty Registration Card and return it immediately to Sunrise Telecom.

Sunrise Telecom must receive the Warranty Registration Card in order to provide software updates.

2.2 RxT Platform Notes

Press the blue **Alt** button and **F6** to move between the RxT module and the computer system desktop. See the hardware notes and graphic.

On the Windows desktop, access useful basic computer tools:

System: Access RxT system information and setups.

- **Brightness Control:** Set the screen brightness on the LCD Control popup window.
- **Volume Control:** Mute, increase, or decrease the speaker and microphone volume on the System Audio Control pop up.
- **Regional Setup:** Enter the current Date, Time, and select your Time Zone and the GUI language on the pop up window.
- **Network Setup:** Enter the local settings; these settings apply to RxT itself, NOT the test ports. Proceed carefully-changing these settings may cause the module to lose connection with the system.
- **Wireless Network Setup:** Configure a wireless Ethernet network connection.
- **GPS & Location Tags:** Get RxT location information via GPS data.
- **RxT Module GUI:** Restart the RxT module GUI.
- **Stop RxT Module GUI:** If RxT Tools does not respond, it may be they were already open. Use Stop RxT Tools to regain control, then try RxT Tools again..

Reference: Access helpful testing and technology documents, as well as a demonstration of the RxT GUI and the .pdf version of the Help system.

Apps: Access test supporting applications:

- **Fiber Scope:** Control an attached Sunrise Telecom Fiberscope, if the option was purchased. See the documentation which came with the Fiber Scope for operating instructions.
- **Remote Desktop:** Control RxT via a VNC viewer. To download the program

for the controlling Windows or Linux computer, visit <http://www.realvnc.com/products/free/4.0/download.html>.

- **Network Decoding:** Analyze saved results and file captures; see <http://www.wireshark.org/docs/> for help using the WireShark application.
- **Calculator**
- **Text Editor:** Launch a text editor.
- **MPlayer:** Launch a media player. See <http://www.mplayerhq.hu>.
- **RxT Tools:** Access key RxT system functions -
 - Software Option
 - Software Upgrade
 - Calibrate Touchscreen: Recalibrate the touch screen if screen response seems off. Touch each 'x'.
 - System Administrator
 - System Status
 - Software Recovery: Recover and continue the upgrade; use, for example, if power was lost while performing an upgrade. Press the appropriate button to upgrade the Platform or the test Module, as required.


Web Browser: Launch a Firefox web browser. Requires internet connectivity. In the Preferences screen, use the hard Esc button to close the window and enter Firefox. Use File > Quit to close the program.

File Manager: Access the Linux Gnome Nautilus desktop file management functions, including the tree view of all system files.

E-mail: Access a mail/calendar client. <http://www.claws-mail.org/> for information.

Power: Shut down (power off) or Reboot (restart) RxT; see also the hardware Power button.

Eject USB Drive/2: Safely eject a USB memory drive at USB1 or USB2. See the USB notes.

-  **Important Note** - Caution: External memory devices must be ejected properly, using the appropriate button, in order to safeguard your data. Failure to eject a drive properly may result in lost data.

2.3 RxT System Overview Graphic

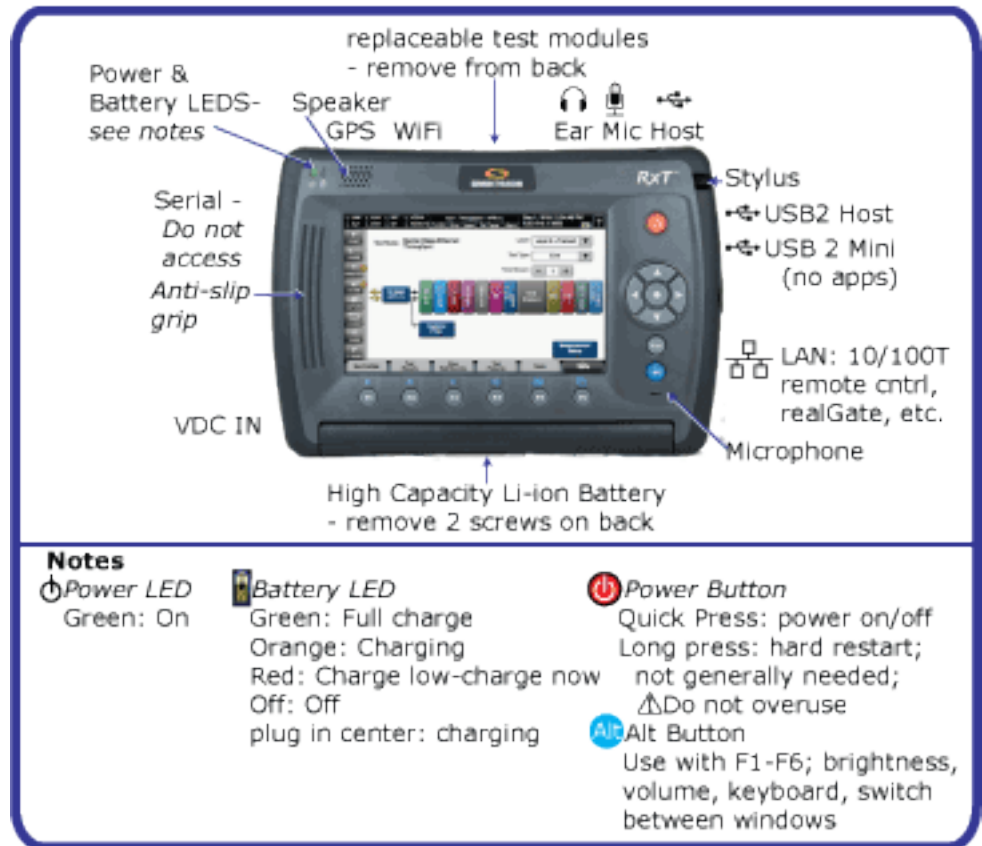



Figure 1 RxT Front Overview


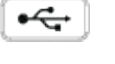



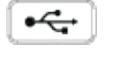

2.4 Hardware Notes



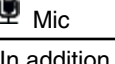


RxT is a touch screen test set; use your finger or a stylus to make selections. However, you may find attaching and using a mouse is fastest. Plug the power cord in on the right side, and press and hold the top round button for a few moments to turn the unit on (or off).


 No liquids. RxT has been designed to move water away from its vents, but it is not waterproof; avoid spills and liquids.

Press the red power button to power on. You will see a Sunrise Telecom screen, then the unit will pause on the RxT Platform desktop, then your test application will automatically launch.

| Ports - Right Side | |
|--|--|
|  USB 2 host port | USB 2.0 port |
|  Mini USB client | No user application. |
|  LAN | 10/100T Ethernet port. Use for a network connection; use for remote control, realGate, system updates. |

| Ports - Left Side | |
|---|--|
|  | Serial port; no user application. |
|  | Plug in the AC charger. See the Battery notes. |

| Non Test Ports - Top | |
|---|-----------------------|
|  USB 1 host port | USB 2.0 port |
|  Earphone | Plug in a headset. |
|  Mic | Plug in a microphone. |
| <p>In addition, the top of the unit features GPS and Wifi connectivity. Just in front on top is a built-in speaker.</p> <ul style="list-style-type: none">  Access test modules from the rear.  Access the battery pack from the rear. See the Battery notes. | |

 **USB Mouse Troubleshooting Hint:** For best functionality, use a ferrite mouse, or place a ferrite bead on the USB mouse cord.




Ports - Top

The top connector panel holds the test ports and a USB 2.0 host port.

- SFPs are hot-swappable. Handle the bale carefully, and avoid touching the end of the connector.

Front Buttons

See a graphic, “Figure 1 RxT Front Overview” on page 9.

| | |
|---|--|
|  | The red round top button is the power on/off button. Pressed briefly: The unit powers on, or, if on, the restart/reboot query window appears. Normal shut down. Hold several seconds: Forces a hard restart. |
|  | Start/Stop measurements; it takes a few moments for each action to occur. |
|  | Use the up, down and left and right arrowhead buttons on the right side of the chassis to move around in the screens. |
| ESC | Go back one screen. |
| Alt | Press the blue Alt button to use the alternative blue functions on the F-keys. F1, F2: Decrease or increase system volume. F3, F4: Decrease or increase screen brightness. F5: Bring up the on screen keyboard F6: Toggle between the RxT Platform and the RxT application, and any other open functions (e.g. the File Manager) |
| F1-F6 | Special function keys; press one to activate the function on the screen button directly above it. Used with the blue Alt key for system functions (see Alt above) |

External Storage

If you are using an external form of storage on the RxT (USB drive, etc.) (and have written files to the external volume), you must cleanly dismount the volume from RxT Platform before removing it, or the files may not be written safely to the external storage volume.

Use a desktop icon to safely remove hardware (eject the USB drive).



2.5 Battery

The battery charge status is represented by an icon in the Status Bar.

The hardware battery icon reflects charging status; green-full charge, orange-charging, red-low power; the plug icon indicates the unit is plugged in and charging.

The screen icon shows as green when the battery is fully charged, or connected to AC power. The green diminishes and red fills the icon as the available power decreases. When the battery is charging (note the plug icon within), the red will give way to green.

When there is approximately 10% battery life remaining, you will see a warning message pop up to remind you to plug in the power adapter.

At approximately 4% remaining power, RxT will pop up warning, save results for the test in progress, then shut down.

To replace the battery, remove the two screws at the bottom of the back battery cover. The screws will stay attached to the cover. Pull the battery pack out, then replace it with the new one. Replace the cover, and replace the screws, without overtightening.



Battery Care and Storage

Lithium Ion battery packs (also referred as Li-ion, secondary, or rechargeable) are small, compact, with high energy concentration, and ideal for providing long lasting power to portable test equipment in demanding applications. Li-ion battery packs contain Li-ion cells and battery monitoring & protection circuitry, both sealed in a plastic container or wrap that shall not be disassembled. For safety reasons these batteries packs and products containing them MUST be used, charged, and handled properly, according to the manufacturer's recommendations. Improper use can result in product damage, electrolyte leaks, serious injury, and fire hazard.

Sunrise Telecom's Li-ion battery packs are tested and certified to UN38.3 and related safety regulations.

Performance and life expectancy of batteries depend heavily on how battery packs are used. In order to ensure safety, be sure to carefully read and understand this document and to keep it handy. If you have any questions or concerns, please contact Sunrise Telecom Incorporated immediately at 1-800-701-5208 / 1-408-360-2200, support@sunrisetelecom.com or visit <http://www.sunrisetelecom.com/support>.

Lithium-Ion Advantages

- The biggest Li-Ion advantage batteries have is the improvements in cell voltage and capacity over nickel cadmium (NiCd) or nickel metal hydride (NiMH) batteries. Li-Ion batteries are therefore said to have a much higher energy density compared with NiCd or NiMH batteries. Unlike NiCd or NiMH batteries, Li-Ion batteries have no 'memory' effect. This translates into a more productive test set that can be used un-corded for longer periods or handle higher end applications, which are usually more demanding.
- Much lighter batteries, compared to the same capacity NiCd.
- No cadmium. As most people know, cadmium is highly toxic and is known to accumulate in biological systems, which is why NiCd batteries must be disposed of carefully and in the right places, following local regulations.

Charging and Storing the Battery Pack

For safety reasons, rechargeable battery packs are not fully charged when they are shipped. Please read the following instructions carefully:

- New battery packs need to be fully charged and discharged up to five times before performing at full capacity.
- Always use the Sunrise Telecom's charger that came with the device. Do not attempt to charge the battery pack by any other means.
- The portable instrument, its external chargers, and the battery pack itself continuously monitor the conditions of the cells for safety and maximum performance.
- Do not use the Sunrise Telecom's Lithium Ion Charger on other lithium batteries or on any other type of battery – fire or explosion may occur.
- Never modify or repair the charger supplied.
- Never use a NiCd charger or any other charger to recharge the Li-ion battery pack as this is very dangerous.
- Never charge your Li-Ion battery pack near heat or flammable objects.
- The required charging time will depend upon the remaining charge level of the battery, and will vary from product to product. Charging the battery while the test set is being used will increase the charging time. Required charging time may also increase at lower temperatures.
- The temperature range over which the battery can be charged is typically 0°C to 45°C (32°F to 113°F). Therefore, charging efforts outside the prescribed temperature range may automatically be blocked by the protection circuitry of the battery pack.
- If a battery pack can not maintain charge for long periods, even when it is being charged correctly, this may indicate it is time to replace the battery.
- If the product or battery pack becomes too hot to the touch during charging, disconnect and switch off immediately. Contact Sunrise Telecom.
- Do not charge battery packs if the battery has expanded or swollen in size, or if the battery cells have been punctured, even if this is the first time the battery is going to be charged.
- Do not charge or use the battery if any mechanical damage has occurred.
- Do not continue charging the battery if it does not recharge within the specified charging time. Doing so may cause the battery to become hot, rupture, or ignite. Please consult the product's manual and data sheet.
- Because batteries utilize a chemical reaction, battery performance will naturally deteriorate over time, even if stored for a long period without being used. In addition, if the various conditions such as charge, discharge, ambient temperature, etc. are not maintained within the specified ranges, the life expectancy of the battery may be shortened, or the device in which the battery is used may be damaged by electrolyte leakage.
- Storage: For long term storage, the battery pack should be stored at room temperature (around 20°C/68°F), charged at about 30 to 50% of its capacity. We recommend that spare battery packs are charged and used at least once per year to prevent over-discharge.

- If you have spare (extra) battery packs, rotate the packs regularly, so they all stay active and avoid over-discharge. It is recommended to charge and use battery packs at least every three months. Battery packs shall not go without reconditioning (recharging) for more than six months.
- After extended storage battery packs may reach deep discharge state and/or enter into sleep mode. For safety reasons, Li-ion batteries in deep discharge state may take up to 24 hours to pre-recharge, before starting the regular fast charging cycle. Charging indicators (e.g. LEDs) may not turn on during the pre-charging state.

Using Battery Packs

For the expected performance of each individual battery pack and test set, please refer to their specific manuals and data sheets.

- Sunrise Telecom battery packs shall only be used with the Sunrise Telecom product for which they were intended to be used. Follow the product's low battery indication and warnings. Do not over discharge a Li-Ion battery pack. If the voltage does drop below specifications, and you can get your battery to take a charge, it may not give its full capacity and deterioration in performance will occur. This will invalidate all warranty claims.
- Do not discharge the battery pack using any device except for the specified test set it came with. The test set constantly monitors and controls the discharge rate to keep it within specifications. If used in devices aside from the specified devices, it may damage the performance of the battery pack, reduce its life expectancy, and if such device causes an abnormal current flow, it may cause the battery to become hot, rupture, or ignite, and could cause serious injuries.
- The temperature range over which the battery can be discharged is -10°C to 60°C (14°F to 140°F). Use of batteries at temperatures outside this range may damage the performance of the battery pack or may reduce its life expectancy.
- To avoid short circuits, make sure the battery pack's contacts are not exposed when transported outside the intended device (e.g. spares).
- Every deep discharge cycle decreases their capacity. Battery life will be extended by proper storage, and by charging the pack at least once per year to prevent over discharge.



Battery Pack Disposal

- Batteries must be recycled or disposed of properly.
- Follow local regulations and ordinances for the disposal batteries.
- Do not trash battery packs in the garbage can.
- Before disposing the battery pack or cells, insulate any exposed terminals with adhesive tape or similar material to prevent short circuits.

Shipping and Transportation (Air)

- Air transportation of Li-ion batteries is regulated in several countries, and by United Nations through the International Air Transportation Association (IATA) Dangerous Goods Regulations, among others. Please check local regulations and with the common carrier before shipping Li-ion battery packs or products containing relatively large Li-ion battery packs.
- As of January 1, 2008, the US Department of Transportation (DOT) through the Pipeline and Hazardous Materials Safety Administration (PHMSA) no longer allows loose lithium batteries in checked baggage.
- Sunrise Telecom’s Li-ion batteries are tested in accordance with specifications detailed in UN 3090 (UN manual of Tests and Criteria, Part III, subsection 38.3). This safety precaution safeguards against the shipment of defective battery packs.
- Do not ship or carry recalled or damaged batteries on an aircraft. Check battery information and instructions at Sunrise Telecom’s website or contact Customer Support at 1 (800) 701-5208 / +1 (408) 360-2200 or support@sunrisetelecom.com.
- If the original packaging is not available for shipping spare batteries, effectively insulate any exposed battery terminals by isolating the batteries from contact with other batteries and metal. Do not permit a loose battery to come in contact with any metal objects.

IATA Classification

Medium and large capacity Lithium-ion battery packs may be classified as Class 9 – Miscellaneous dangerous goods. Shipments of such products must be identified by a Class 9 label on the shipping package and may be considered restricted cargo in passenger aircraft. Individual Li-ion battery packs must be declared as:

- UN 3480 for Lithium-ion batteries or battery packs being shipped alone. If they are contained inside a piece of equipment or packed along with a piece of equipment, they must be declared as:
- UN 3481 for Lithium-ion batteries contained in equipment
- UN 3481 for Lithium-ion batteries packed with equipment.

Li-ion (Secondary) Battery Category Definition & Restrictions

| Relative Capacity | Capacity Watt-hours | Equiv. Lithium Content (ELC) | UN38.3 Tested | Applicable Shipping Regulations |
|-------------------|---------------------|------------------------------|---------------|--|
| Small | <100 Wh | <8g | Yes | Ground: Non-restricted Air: Non-restricted |
| Medium | 100 to 312 Wh | 8g to 25g | | Yes Ground: Non-restricted Air: Fully-regulated Class 9 hazardous material |
| Large | >312 Wh | >25g | | Yes Ground: Fully-regulated Class 9 hazardous material Air: Fully-regulated Class 9 hazardous materia |

Note: Check with your carrier for any required forms, labels and local regulations. Li-ion battery pack capacity may be printed on the battery.

Product Registration and Calibration

- Registration is a very important step in the ownership of your instrument.
- For warranty and safety purposes all Sunrise Telecom products must be registered by the owner and/or end user.
- Customers would not only benefit from service notes and safety notifications, but from access to a wide range of improvements (e.g. software updates, new features, new documentation, etc.). Please follow the registration instructions that came with your product.
- Registration is the sole responsibility of the end user and owner. Products must also be registered, and contact information must be updated, whenever the end user, responsible person, or contact information changes.
- Customer and end user shall follow the recommended calibration, verification and/or preventive maintenance cycles for each specific product, to keep it under warranty and assure safety. During these procedures the battery pack will be checked for any sign of degradation, leakage or any other possible defect that may affect safety.
- Refer to the specific manual and data sheet for the suggested maintenance period.
- Copy of this document shall be kept with the product at all times.

Customer Service Contact Information

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Tel.: +1 (800) 701-5208 / +1 (408) 360-2200

Web: <http://www.sunrisetelecom.com/support>

Limited Warranty

SUNRISE TELECOM INCORPORATED WARRANTS ITS BATTERY PRODUCTS TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP, UNDER NORMAL USE AND IF PROPERLY INSTALLED, FOR A PERIOD OF ONE YEAR FROM DATE OF PURCHASE.

Notice: The information presented in this document is generally descriptive only and it is not intended to make or imply any representation, guarantee or warranty with respect battery packs. Please refer to individual product manuals and data sheets for specific information. This document is subject to change without notice. Contact Sunrise Telecom for the latest information

2.6 USB Drive Notes

USB drives, also known as thumb drives and USB sticks, etc., may be used with the RxT system. Plug them in in a host USB slot (see the diagram, “Figure 1 RxT Front Overview” on page 9). Several seconds after plugging a USB drive, a “Ready to use” message will appear (press **OK**).

To dismount a drive

Touch Eject USB Drive/Eject USB Drive 2 on the system desktop, as applicable, or

In File Manager, select usbdisk under the left-hand Places, then select File > Unmount Volume.

USB Drive Tips

If you see a “Device not recognized” message upon inserting the USB drive, remove it and reinsert it.

Make sure the drive is fully inserted into the port if it is not recognized.

Using a partitioned drive with RxT made lead to unexpected results. If so, use a nonpartitioned drive instead.

2.7 RxT Carrier & MTT Modules

The RxT Carrier Module (RXT2000A) is an intelligent module that accepts existing MTT modules and adapts their features to the new RxT. The RxT Carrier is always packaged with MTT modules in the RXT2xx0 and RXT2xxX series.

Frequently Asked Questions

Are all MTT modules supported by the RxT Carrier?

No, only a select number of MTT modules are currently supported.

What exactly is the RXT2xx0SW-GUI?

The RXT2xx0SW-GUI family of part numbers or orderable items includes:

- The delivery or factory installation of the Test Application's Graphical User Interface (GUI) required to operate an RXT2xxX test module.
- The licenses for any feature, hardware, or software options purchased for each particular module.

The RXT2xx0SW-GUI must be ordered for each individual module. For example, if you are transferring the licenses for 10 existing MTT modules, you must order 10 RXT2xx0SW-GUI.

What is "Forward Compatibility Mode"?

Forward compatibility mode is used to bring legacy MTT modules to the RxT platform, preserving most of their original GUI structure and functions.

The operation of the module stays familiar with that on the SSMTT platform, with added file management, realGATE support, USB import/export, bigger screen, touch screen features, and great usability improvements.

Once an RXT2xx0SW-GUI Test Application has been installed in an RxT Platform, will it be available to any RXT2xxX module combination inserted?

The GUI is installed directly in the RxT Carrier (not in the RxT Platform) to allow maximum portability and test module sharing. If a fully configured RXT2xxX module is inserted into a brand new RxT Platform, it will work right away. Each RXT2xx0SW-GUI only needs to be installed once on each RxT Carrier.

If I have already obtained the RxT GUI for an MTT module, can I just install it in multiple RxT Carriers?

Yes, you can install the Test Application GUIs for different module types into a single RxT Carrier.



- When an MTT module is inserted for the first time, the RxT will recognize it and ask the user to install the appropriate Test Application GUI for the new module.
- The GUI for each module type only needs to be installed once. However, the matching option file must be loaded for each individual module

Can the software options of an existing MTT module be moved to an RxT Carrier?

Yes, they are referred as the “Option File”.

For example, a customer received an RxT Carrier when they ordered an RXT2500 and now they want to move their existing MTT-38 to the RxT Carrier and keep the licenses (features) they originally ordered with their older SSMTT-C. They must order the RXT2380SW-GUI to convert the original features into an RxT option file and get a copy of the Test Application GUI to install.

Once an MTT module’s option file is loaded into an RxT Carrier, this RxT Carrier will remember the module in the future (no reinstallation required.)

Option files are identified by the MTT module’s serial number and are not transferable to other MTT modules. Each MTT module must have its own option file loaded in the RxT Carrier being used; otherwise the optional (paid) features would not be available.

Can multiple MTT modules of the same kind be used with one RxT Carrier?

Yes, you can register multiple MTT modules of the same or different kind into one RxT Carrier. You must obtain and load the option files for each of the MTT modules.

Can option files be installed in multiple RxT Carriers?

Yes, the option file for a particular MTT module can be imported into all the RxT Carriers the customer owns. This is an important part of RxT’s module portability and sharing. You must have the target RxT Carrier and particular MTT module (exact serial number), go through the Test Application GUI installation process as prompted by the unit, and manually import the matching option file.

Can I buy multiple RxT Carriers for all their MTT modules?

Yes, you can match each MTT module to a dedicated RxT Carrier. This would offer maximum portability as the resulting RXT2xxX modules will carry all the licenses, configurations, test results, and reports, as well as remember the last configuration used (independent of the RxT Platform they are inserted to).

In this case, the module can be moved from platform to platform without having to install any software or import licenses.

Where are all the test-related files stored, on the RxT Platform or the RxT Carrier?

The RxT Carrier has its own storage memory. All test results, test reports, test profiles, protocol capture files, etc are stored in the RxT Carrier, and can be exported/imported to/from USB memory and realGATE.



2.8 Loading MTT Modules into RxT

Installing the Test Application GUI for a New MTT Module

Use this procedure if the particular type of MTT module has never been used before with the target RxT Carrier.

1. Turn the RxT Platform off.
2. Insert the new MTT module type in the RxT Carrier's slot, and make sure it is completely seated. This new combination is now referred as an RXT2xxX module. For example, if an MTT-38 is inserted in an RxT Carrier, the resulting combination will be referred as RXT238X.
3. Insert the RXT2xxX in the RxT Platform
4. Turn the RxT on.
5. Wait until the RXT2xxX splash screen shows up recognizing the module and asking for "New Module Installation". (If the test application GUI starts automatically, it would be an indication that the GUI was already installed, so follow the software update procedure instead)
6. Press the **New Module Installation** icon
7. Press **Version List**. Software versions available in the root of a local USB drive or Sunrise Telecom's public server will be displayed.
8. Select the latest (higher) software version available.
9. Check **Reboot**.
10. Verify that the AC/DC charger is plugged in (the battery icon on the top right of the screen shows an AC plug inside the icon).
11. Press **Install**, and wait for the whole process to finish. It may take a few minutes, depending on the network connection speed and the size of the installation package.
12. The unit should reboot when finished.
13. The Test Application GUI should start.
14. Follow the Option File loading procedure below.

Loading New MTT Option Files to an RxT Carrier

Adding or registering new MTT modules to an RxT Carrier is simple. Make sure the Test Application GUI for each particular module type is already installed in the RxT Carrier.

You may receive new Option Files via email, USB drives or download it from an FTP server. Load this opt file to the root of a USB drive.

- Turn the RxT off.
- Insert the MTT module with matching serial number in the RxT Carrier (MTT module and opt file name must contain the same serial number)
- Insert the RxT Carrier in the RxT Platform
- Turn the RxT on.

-
- Wait for the Test Application GUI to start.
 - From the Test Application GUI select **Tools** or press **F5** (use **F6** when in MTT Forward Compatibility Mode.)
 - Select **Software Option**.
 - Insert the USB drive containing the opt file in the RxT Platform, wait for it to be recognized, and press **OK**. The Option File matching the test module's Serial Number must be loaded in the USB drive's root.
 - Identify the section named "New Software Option Location" located at the bottom of the Software Option window.
 - Set the source as USB.
 - Press **LOAD**.
 - All the licenses originally purchased for the MTT module are now registered with this particular RxT Carrier
 - Repeat the process with any other modules you want to use with this RxT Carrier.



2.9 Software Options

To Install a New Option

1. Purchase a new RxT option from Sunrise Telecom; you will be asked to provide the RxT's serial number.
2. Sunrise Telecom will mail you an option file, with a name in the format: rxt-gigexxxxxx.opt, where xxxxxx is the serial number.
3. Go to the RxT Platform Desktop (blue screen) using Alt+F6.
4. Select **System**.
5. Select **RxT Tools**.
6. The screen will flash momentarily and a new section will open.
7. Insert an USB drive to the RxT Platform, wait for it to be recognized, and press **OK**. The Option File matching the system's Serial Number must be loaded in the USB drive's root.
8. Select the **Software Option** tool.
9. Identify the section named "New Software Option Location" located at the bottom of the Software Option window.
10. Set the source as USB.
11. Press **LOAD**.

Test options may be purchased from Sunrise Telecom. Contact Customer Service.

Is this option enabled?

- Checked: Option Enabled
- Not checked: Disabled

| Options Example | | |
|-----------------------------|------------------|--------------------------------------|
| Option | Type | Description |
| Wireless Network | System | Enable wireless networking. |
| Bluetooth | System | N/A |
| Remote User Access | System | Control RxT GE from a remote browser |
| Dual Port 1000Base-T [RJ45] | Test Ports | Optional hardware |
| Dual Port 1000Base-X [SFP] | Test Ports | Optional hardware |
| Dual Port 1000Base-FX/LX | Test Ports | Optional hardware |
| *Layer 3 & Advanced IP Test | Advanced Testing | Test option |
| *Multiple Streams (8) | Advanced Testing | Test option |

| New Software Option | |
|---|--|
| *Software test options must be loaded. You will be provided with an option key. Use the next selection to tell RxT where to find the software option key (for Step 7 in the procedure above). | |
| Item | Description |
| Destination* | Retrieves the file from an external USB drive or the Default Location (the RxT's internal hard drive). See the Hardware Notes. |
| Load | Activate the option; Press Load to have the RxT module look for and load your option key. |
| *Hardware Devices: Only one may be used at a time. | |

2.10 RxT Software Options - Location:xxx pop up window

Once you press load to retrieve your software option key, a Software Options window pops up. It shows all of the options qualified to work on this test set.

To enable options:

Check marks appear next to the installed options.

Check 'Accept new options'.

Close the window.

A popup window displays details about new options file.

- Part Number, Time Generated

Access this Software Options tab in the System menu.



2.11 System and Module Upgrade

View the system and module's current version as well as a list of other available versions, and install updates. For information on loading and upgrading MTT modules in the RxT Platform, see Loading MTT Modules into RxT.

RxT Platform's System Software Update

1. If using LAN, connect the cable from the RxT to the Ethernet data outlet.
2. Turn the RxT ON and wait until the Test Application Interface (GUI) shows the main test menu.
3. Use the QuickSwap function (**Alt+F6**) to access the system's desktop.
4. Confirm that you have Internet connection (LAN or Wi-Fi) by accessing Network Setup or Wireless Network Setup to verify that a valid IP address is shown and Wi-Fi shows CONNECTED status, then go back to the main system desktop screen.
5. Select **System**.
6. Select **RxT Tools**.
7. Select **Software Upgrade**.
8. Press **Version List**. If newer software versions are available in the server, they will all be displayed. Older software versions may not be shown for downgrade.
9. Select the latest (higher) software version available.
10. Check Reboot
11. Verify that the AC/DC charger is plugged in (the battery icon on the top right of the screen would show an AC plug inside the icon).
12. Press **Install**, and wait for the whole process to finish. It may take a few minutes, depending on the network connection speed and the size of the update.
13. The unit should reboot when finished.

RxT Test Modules' Software Update

Each module's Test Application GUI needs to be updated independently. Test Modules can be updated via Ethernet/Internet or USB Drive.

1. Insert the test module that needs to be updated in the RxT Platform.
2. If using LAN, connect the cable from the RxT to the Ethernet data outlet.
3. If using USB Drive, plug it in one of the USB ports and wait for confirmation that it has been recognized and ready to use.
4. Turn the RxT ON and wait until the Test Application Interface (module GUI) shows its main test menu.
5. From the Test Application GUI Press **Tools** or **F5** and select **Module Upgrade**.
6. Press **Version List**. If newer software versions are available in the server, they will all be displayed. Older software versions may not be shown for downgrade. If for some reason a downgrade is required, please contact Technical Support.

7. Select the latest (higher) software version available.
8. Check Reboot
9. Verify that the AC/DC charger is plugged in (the battery icon on the top right of the screen would show an AC plug inside the icon).
10. Press **Install**, and wait for the whole process to finish. It may take a few minutes, depending on the network connection speed and the size of the update.
11. The unit should reboot when finished.

Notes

- Wi-Fi does not reconnect during the boot up process. Go to \System \RxT Tools \Wireless Network Setup to reestablish a connection with an access point.
- LAN (DHCP) may not reconnect automatically if Ethernet cable is not plugged in during the boot up process. Go to \System \Network Setup to reestablish a connection.

2.12 System Administrator Setup

System Information

- Hardware Version
- Serial #
- MAC Address #

Module Information

- Hardware Version
- Serial #
- MAC Address #
- Port-1/2/3 MAC:

Activate administrator mode: When checked, a Password entry window pops up. Enter the administrator password.



2.13 System Status

Get details on RxT system performance. Press Tools > System Status.

| General | |
|------------------|--|
| Statistic | Meaning |
| File Usage | Percentage of system currently in use. |
| Memory Usage | Percentage of system RAM in use. |
| Temperature | Unit temperature; normal range is 0°C to 45°C. |

| Power | |
|---------------------|---|
| Statistic | Meaning |
| AC Power | On if the unit is plugged in; Off if it is not. |
| Total Charge | The percentage of charge remaining in the battery; see the Battery icon. |
| Time to Full Charge | When running on battery, approximately how long it will take to recharge the battery. |
| Remaining Time | When running on battery, approximately how long the battery will last. |

| Version Information | |
|----------------------------|---|
| Statistic | Meaning |
| System Version | RxT system version |
| System Serial No. | RxT system serial number |
| Module Version | 10GE module software version |
| Module Serial No. | 10GE module serial number |
| Module CPLD | Hardware history information; provide to Customer Service on request. |

2.14 GeoTrace GPS

Get RxT location information via GPS data and location tags. This is a Tools and system desktop feature (ALT + F6).

| | |
|----------------|---|
| Status | Signal quality status |
| Satellites | Number of satellites signal routed through. |
| GMT Date | GMT to local time converters may be found on the Internet. |
| GMT Time | GMT to local time converters may be found on the Internet. |
| Latitude | Location converters may be found on the Internet |
| Longitude | Location converters may be found on the Internet |
| Altitude | Measures the unit's distance from the center of satellite orbit. Set the altitude measure display to Meters or Feet. |
| Display Format | Set the latitude/longitude measure display to Degrees or Seconds. |

Map It: A location window pops up, showing you RxT's physical location on a map. You must be connected to the internet to use this feature.

2.15 File Manager

The computer system runs on Linux, with a Gnome Nautilus shell. Application help can be found under the MultiMedia icon.

A few pointers for non-Linux users:

- Double clicking is not necessary; one click on an icon will open its feature.
- The main directory is /home/sunrise.
- Each application (such as a web browser or multimedia player) fills the entire screen; use **Alt + F6** to move between applications, and remember to quit each one when you finish using it.
- A hierarchial view of the files is available under Tree in the left side menu (the same location as the default Places).
- Use File > Open to browse for and open files.
- On the top menu bar, View includes zoom functions and a reset function.
- If you get lost, Back is usually available in the upper menu bar, which will take you back a screen; keep pressing Back until you get somewhere familiar.

2.16 Network Setup

Configure system settings if necessary. Access this window under System > Network Setup.

IMPORTANT NOTE: These settings apply to the RxT module's own LAN port, NOT the test ports. Changing these settings may cause the module to lose connection with the system.

| Ethernet Port | |
|----------------------|---|
| Parameter | Details |
| Admin IP | Enter the IP address for the RxT module. |
| Subnet Mask | Enter the subnet address for the RxT module, if appropriate. |
| Gateway | Specify the gateway address for the RxT. Used for static IP. |
| DHCP Enabled | RxT automatically retrieves the appropriate IP address when connected to a LAN. When enabled, the previous three items are grayed out. |
| MAC Address | View the LAN port's MAC address. |
| DNS servers | |
| Parameter | Details |
| Primary DNS Server | Specify the local primary (master) DNS server address. Enter an address directly, using the number pad which pops up. The secondary Server is a server that obtains information about a zone from a Primary Server via a zone transfer mechanism. Sometimes known as a Slave Server. |
| Secondary DNS Server | Specify the secondary (slave) DNS server address. |

| Advanced Configuration | |
|--|--|
| Parameter | Details |
| Speed and Duplex | Auto: Let RxT find the maximum settings. |
| 10Base T/Half, 10BaseT Full, 100BaseT/ Half, 100BaseT/ Full: Set RxT at a specific speed and duplex. | |

Press Apply to save the settings and close the window.

Press **Close** to close the window without saving changes.

2.17 Wireless Network Setup

Configure a wireless Ethernet network connection. On the system desktop, select Tools > Wireless Setup, or access through the computer desktop.

| Wireless Network: AP Settings | | |
|-------------------------------|-----------------|---|
| Parameter | Options | Details |
| SSID | | Use the soft keypad to enter the name of the wireless network. |
| Encryption Type | WPA, WPA2, None | Select the type of encryption to use to protect your data. |
| Network Key | | Enter the network key (password) if required. |
| AP MAC Address | | Enter the MAC Address of your Wireless Access Point, if required. |

Source IP Mode: Choose Dynamic (DHCP) or Static IP mode.

Press **Apply** to change the Source IP Mode. The settings will refresh.

| Static/DHCP Network Settings | | |
|------------------------------|--|--|
| Parameter | Options | Details |
| Admin IP | | Use the soft keypad to enter the address, when DHCP is Off. |
| Subnet Mask | | Use the soft keypad to enter the address, when DHCP is Off. |
| Gateway | | Use the soft keypad to enter the address, when DHCP is Off. |
| MAC Address | NA: DHCP Static: View the LAN port's MAC address. | |
| Primary DNS | Specify the local primary (master) DNS server address. | DHCP Enter an address directly, using the number pad which pops up. |
| Secondary DNS | Specify the secondary (slave) DNS server address. | DHCP The secondary Server is a server that obtains information about a zone from a Primary Server via a zone transfer mechanism. Sometimes known as a Slave Server. |

| Link Status | |
|---|--|
| View network status, and manage your connections. | |
| <i>Network Name</i> | <i>Common language name of the network.</i> |
| Status | Network connection status: CONNECTED, DISCONNECTED. |
| Leased Time | View elapsed lease time; the amount of time that a network user/client will be allowed to remain connected to the router using their current dynamic IP Address. |
| Scan | RxT scans for available wireless networks. |
| Connect | Connect to the located link. |

Network Buttons

| | |
|--------------------|---|
| Connect/Disconnect | <ul style="list-style-type: none"> • Highlight the network you want to connect to, then press 'Connect'. RxT 10GE will attempt to connect. • Disconnect from the network. |
| Scan | RxT 10GE scans for available wifi networks. An "Available" network can be connected to if you have the correct configuration ion. See |

Buttons

Scan: RxT scans for available wifi networks. An "Available" network can be connected to if you have the correct configuration ion.

Connect

- Highlight the network you want to connect to, then press **Connect**. RxT will attempt to connect.
- Disconnect from the network.

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