

DatamedRcv™ DRCV02

Service Manual

Datamed LLC

DatamedRcv™ DRCV02 v3.2

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This product is not intended for home use.

REGULATORY

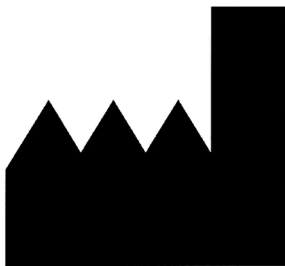
This product is not a medical device.

IMPORTANT LINKS

[System Requirements](#)

[End-User License Agreement](#)

[Support & Maintenance Plan Description](#)



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Microsoft Corporation	<i>Microsoft and Windows Server</i>
SafeNet Data Security Ltd.	<i>HASP</i>

INTENDED USE

This product is a software application intended to receive transmissions from any device that uses the Philips transmission protocol and write the data to a file. This product does not alter the transmitted data in any way. It is not intended to be used for any other purpose and attempting to use it for any other purpose is a violation of the EULA.

PROTECTED HEALTH INFORMATION (PHI) CONSIDERATIONS

The file that is received by this product may or may not contain PHI. As this product does not interact with the contents of the file except to receive and write it out, no data from the file is written to the log. If the file contains PHI then appropriate measures should be taken to ensure the security of the file. When planning the physical and electronic security of the installation, it is important to be aware of this data and plan accordingly. PHI may appear in the following locations:

- Debug Folder - If Debugging is enabled, the debug files are written here. The debug file will contain the raw data transmitted from the sender and therefore may contain PHI. This data is always encrypted.

SECURITY CONSIDERATIONS

Organizations should ensure that the Computer operating system is deployed, configured, and managed to meet the security requirements of the organization. As part of the planning process here are several recommendations and notes that should be factored in:

- It is recommended that this product be installed on a Computer with only software related to this one such as other Datamed® modules and related vendor-provided software.
- The organization is responsible for securing and maintaining the Computer that this product is installed on. DLLC does not restrict the antivirus products that can be used, nor are they validated. Likewise, OS patches are not restricted or validated.

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CHAPTER 1 - GETTING STARTED

The DatamedRcv™ DRCV02 Receiver Module (“**DRCV02**”) is a utility that receives LAN transmissions from compatible devices and writes the received data to a file. It is intended to be used with the DatamedFT™ EKG Format Translator. The program runs as a system service and will monitor a network connection (TCP/IP port) for incoming connections from Philips PageWriter® Touch/Trim/TC-Series cardiographs, Philips PIIC iX, or any device that uses this same protocol. As each EKG is received by DRCV02 it is written to the configured output folder. The DatamedFT™ Format Translator will pick up the file and translate it to the appropriate destination format and location. Each file is verified after being written and an error will be returned to the cart if there is a problem. DRCV02 can handle incoming requests from multiple supported cardiographs simultaneously.

All Datamed® Software is user-installed on a Computer provided by and maintained by the organization. DLLC does not require any direct access to the Computer. The organization is responsible for providing a technical resource with access to the Computer that will work with DLLC for the installation, configuration, updates, and any technical support. Under no circumstances will DLLC accept any unmonitored access such as VPN to the organization’s network or to the Computer.

IMPORTANT NOTE: Support must be maintained for continued operation of the software. As specified in the EULA, the license will expire 2 years after support expires. If it is allowed to expire then a License Reactivation Fee must be paid along with the support renewal to re-enable the software.

Definitions, Acronyms and Abbreviations

DRCV02	DatamedRcv™ DRCV02
DFT	DatamedFT™ Format Translator
DLLC	Datamed LLC
SL	Software License Key
HL	Hardware License Key
ACC	Sentinel Admin Control Center (web page)
Computer	A physical or virtual machine running a supported version of a Windows® operating system where the DLLC software is installed
Configurator	DRCV02 Configurator (on the desktop)
Start Menu	Windows® Start Menu

Start Menu Shortcuts (for files in the install folder)

<i>Install License Key Drivers</i>	Shortcut to <i>HASPUserSetup.exe</i>
<i>Sentinel License Utility</i>	Shortcut to <i>DatamedSentinelUtility.exe</i>

CHAPTER 2 - INSTALLATION

Requirements

- ❖ **License Key.** The licenses that are required for the applications to run are contained in a License Key which can be either software or hardware.
 - A Software License Key is activated on a specific computer and locked to that computer. This is normally used for VMs.
 - A Hardware License Key is a specialized USB device (dongle) that must be accessible to the application at all times. This is normally used for a physical computer but it can be used with a VM by assigning it to the VM in the VM host configuration, or it can be plugged into a USB-to-Ethernet adapter and connected with a special driver. It should be green or black and look like one of these:



When the key needs to be updated (for license additions and support renewals), it is updated via email - see *Updating the License Key* later in this chapter for instructions.

NOTE: The HASP driver must be v9.12 or higher.

- ❖ **Software.** The installation package from DLLC which will be supplied via download link.
- ❖ **Computer.** This software should be installed on the same computer as DFT. The minimum specifications for the computer at the time of this printing are: 4GB RAM, 40GB HD, and a LAN connection. The following operating systems are supported: Windows® Server 2016, Windows® Server 2019, Windows® Server 2022, and Windows® Server 2025. The .NET 4.8 Framework (or higher) must be installed on this computer. Check the DLLC website for the latest changes to the system requirements.
- ❖ **LAN considerations.** The DRCV02 software receives transmissions via http or https depending on the configuration. The folder that is being written to is normally a local folder but may be remote. *If writing to a remote share, the DRCV02 service must be configured to run under a domain account with access to the share. If the Windows Firewall is turned on, make sure any required rules are added to allow the traffic to pass.*

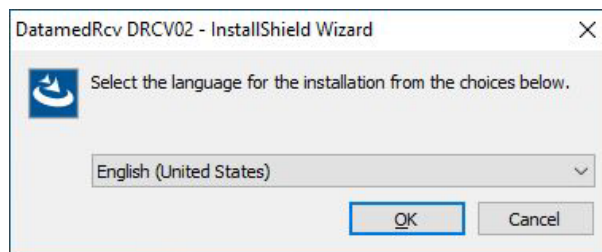
New Software Installation

These instructions are for a new installation where there is no prior version of DRCV02 installed. This can also be used if DRCV02 was uninstalled. The Configurator will need to be run after installation to configure the settings.

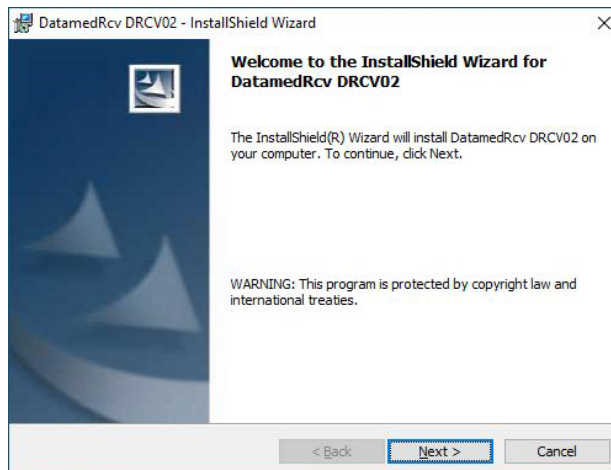
NOTE: *DRCV02 v1.x cannot be directly upgraded to v3.x. To upgrade from v1 to v3 follow the Updating instructions later in this chapter.*

Step 1: Install the DRCV02 software

- The installer will be delivered as a download link. After downloading, double click on *DatamedRcv_DRCV02_Setup_v3.x.x.exe*. The following screen should appear. Select the appropriate language and then click **Next** to continue.



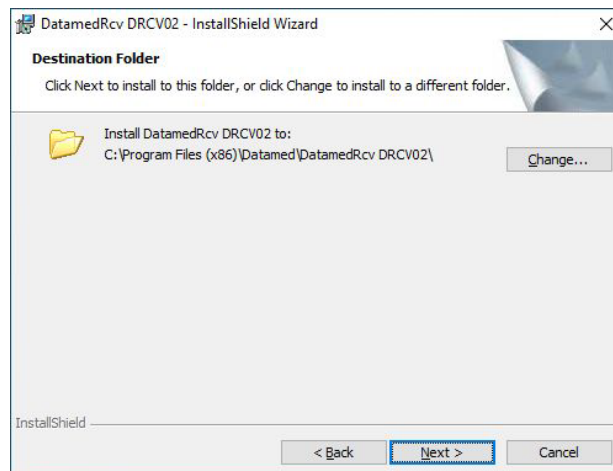
- The introduction screen will appear. Click **Next** to continue.



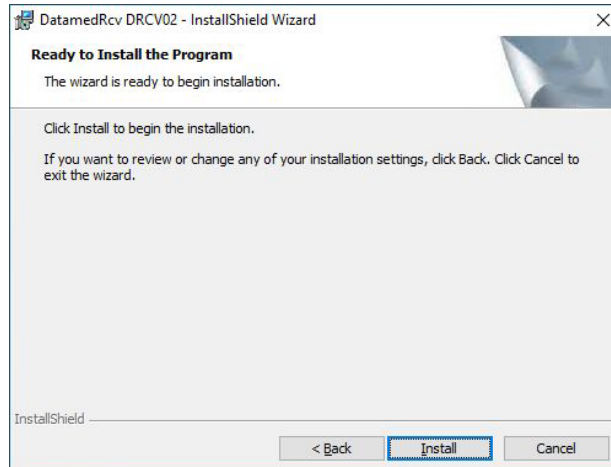
- Read the License Agreement carefully. **IMPORTANT: THIS EULA IS A BINDING CONTRACT BETWEEN THE ORGANIZATION (END USER) AND DATAMED LLC FOR THE USE OF THE SOFTWARE. THE TECHNICIAN INSTALLING THE SOFTWARE MUST HAVE THE AUTHORITY TO ACCEPT A CLICK-THROUGH CONTRACT ON BEHALF OF THE ORGANIZATION.** Once you confirm this authority and review the license, select *I accept the terms in the license agreement* and then click **Next** to continue.



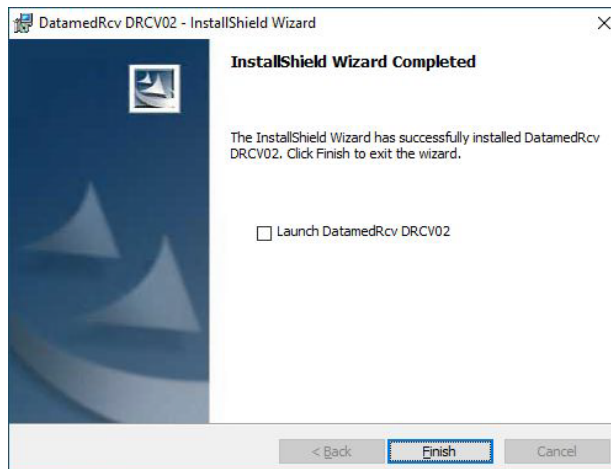
- Select the installation folder for the program (normally the default location) and then click **Next** to continue.



- When ready, click **Next** to begin the installation. Installation should take no more than 1-2 minutes.



- Once installation is complete, this screen will appear. If you want to run the configuration utility (Configurator) immediately, check the **Launch DatamedRcv DRCV02** box. Note that you can't start the software until the license is activated. Click **Finish** to close the window.



Step 2: Install the License Key Driver

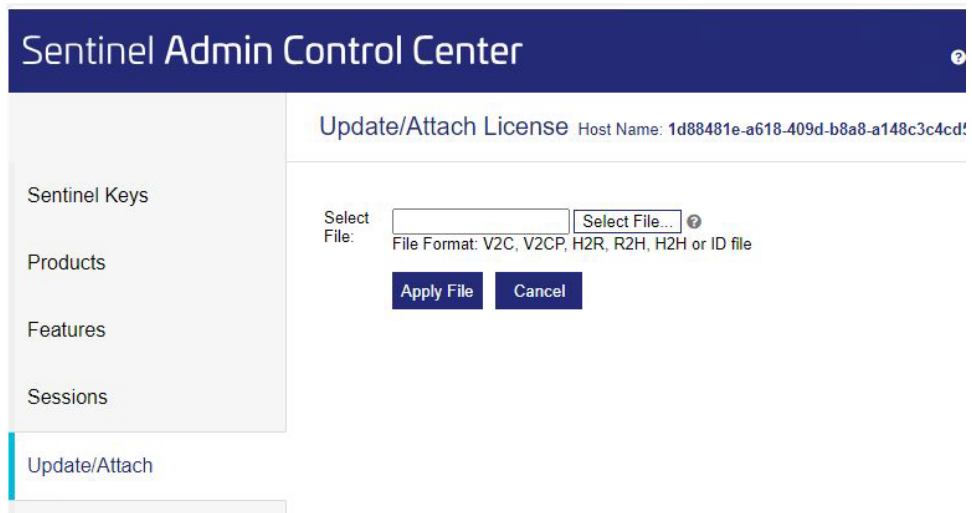
- The license key driver and the Software License Key (if applicable) will only be installed and activated once on the Computer, regardless of how many Datamed suite applications are installed. If the license has already been activated with a previous module such as DFT then skip to the next step.
- To install the license key driver, open the Start Menu and locate *DatamedRcv DRCV02* → *Install License Key Drivers*. Run this to install the full driver package. The driver includes a web-based interface called the Sentinel Admin Control Center (ACC) with tabs on the left side that allows a user to view the license key(s) and the license entitlements (products and features), apply license updates, and gather diagnostics. It will show license keys that are installed on the local Computer and also any other servers in the same subnet. To access the ACC (a) select *Sentinel Admin Control Center* from the Start Menu, (b) open a browser to <http://localhost:1947>, or (c) choose *Open Sentinel Admin Control Center* from the *Tools* menu in the Configurator.
- Here are some useful direct URLs for the ACC screens:
 - a. *Sentinel Keys*: http://localhost:1947/_int_/devices.html
 - b. *Update/Attach*: http://localhost:1947/_int_/checkin.html
 - c. *Diagnostics*: http://localhost:1947/_int_/diag.html

Step 3 Option 1: Activate a Software License Key

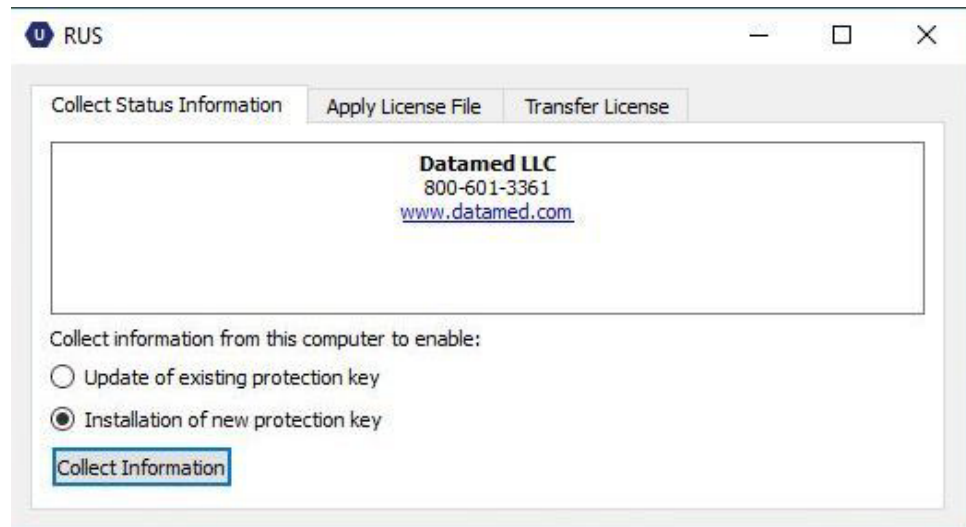
- This is a two-step procedure that requires coordination with DLLC and only takes a few minutes. The first step is to collect the license fingerprint and send it to DLLC, and the second step is to apply the activation file that we send back. It can be done using the web interface (ACC) or using a standalone utility. To use the ACC:
 - a. Open the ACC and go to *Sentinel Keys*. If the driver and DLLC library were installed properly then there will be a line with Location “Local”, Vendor “11974”, Key Type “Reserved for New SL Key”, and Configuration “SL”. Click the **Fingerprint** button to the right to generate a fingerprint file (.c2v). This will be written to the default download folder. Send that to support@datamed.com for activation.



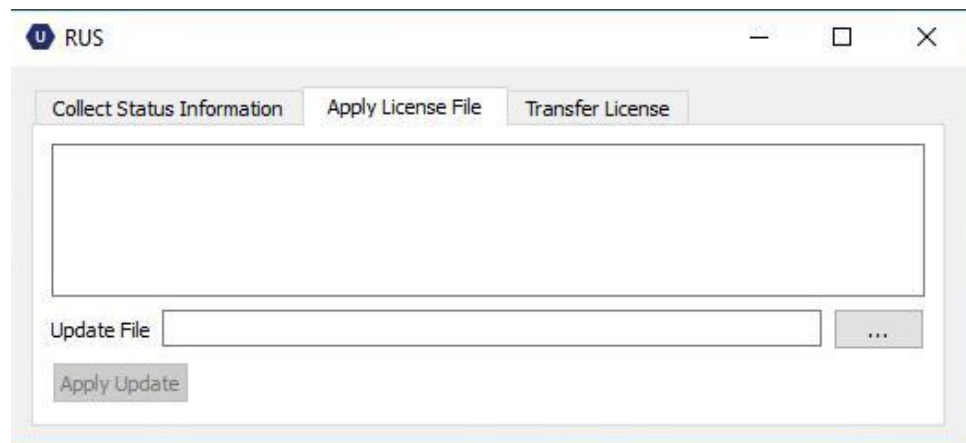
- b. When you receive the activation file (.v2c), open the ACC again and select Update/Attach on the left-side menu. Use Select File to browse to the activation file and then click Apply File. Notify DLLC support if there is an error message instead of a success message.



- To use the standalone *Sentinel License Utility*:
 - a. Open *Sentinel License Utility* from the Start Menu or from the Tools menu in the Configurator. On the *Collect Status Information* tab select *Installation of new protection key* and then press **Collect Information** to generate a fingerprint file (.c2v). Send that to support@datamed.com for activation.



- b. When you receive the activation file (.v2c), open the *Sentinel License Utility* again. On the *Apply License File* tab press the button with 3 dots at the bottom to browse to the activation file and select it, then click **Apply Update**. Notify DLLC support if there is an error message instead of a success message.



- Check to confirm that the license is activated and accessible. Open the ACC and go to *Sentinel Keys*. If the driver and DLLC library were installed properly then there

will be a line with Location “Local”, Vendor “11974”, and Key Type “HOST SL AdminMode”. The Key ID is specific to this Computer and should be checked for a match with the filename when applying an update. A Serial Number has also been assigned but is not visible in the ACC, only in the Configurator.

Step 3 Option 2: Install a Hardware License Key

- For a Hardware License Key, insert the hardware key into the USB port and confirm that the LED inside the key lights. If you are using a USB-to-Ethernet adapter follow the instructions that came with the adapter and install the driver, then configure it to point to the adapter and USB port.
- Check to make sure that the License Key is available. Open the ACC and confirm that you see the License Key in the list with Location “Local” and Vendor “11974”.

Step 4: Configure the software

- Start the Configurator and enter the desired settings. See *Chapter 3* for details.

Updating the Software

If DRCV02 v3.2 or higher is already installed, running the setup program will update it. The screens are the same as a new installation.

If DRCV02 v3.0 or v3.1 is already installed, the old shortcuts in the Datamed folder on the Start Menu must be manually removed before installing v3.2. It is normally here: C:\ProgramData\Microsoft\Windows\Start Menu\Programs. Locate “**Datamed**” in this folder and delete it. Then run the setup program normally to update in place.

If DRCV02 v1.x is installed, follow these steps:

- Stop the *DatamedRcv_DRCV02* and *DatamedRcv_DRCV02Start* services.
- Open the Configurator and copy all the settings down manually.
- Uninstall the old version. Reboot the server if prompted to do so.
- Follow the instructions above for a new installation, including installing the latest license key driver. A license update will be supplied if there is already a Software License Key installed.
- Start the Configurator and configure it with the settings you wrote down.

Uninstalling the Software

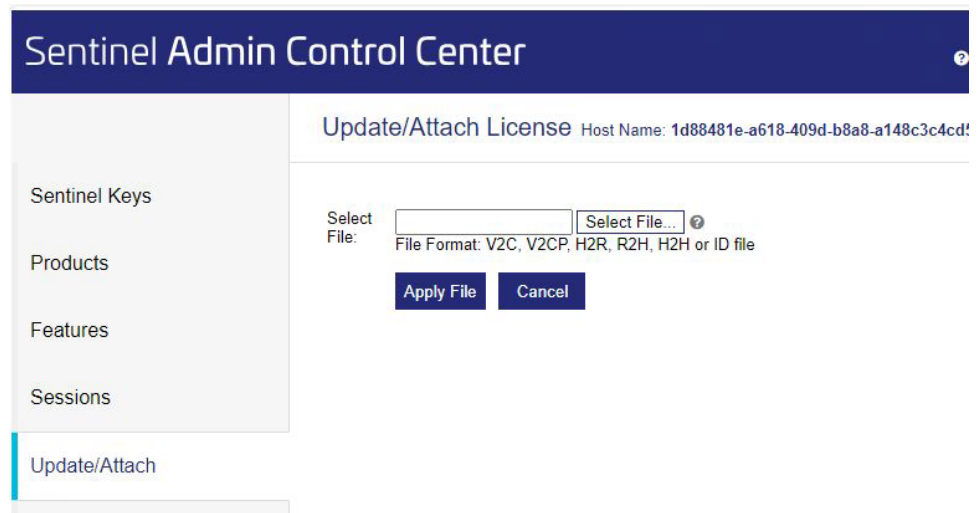
To uninstall DRCV02, do one of the following: 1) from the Start Menu locate *DatamedRcv DRCV02* → *Uninstall DRCV02* and select it; or 2) open *Control Panel*, choose *Add or Remove Programs*, select *DatamedRcv_DRCV02*, and press the *Remove* button. In either case the application will be removed. It may take a minute or two for the uninstall to complete. Note that only the application is removed - all ECG files and logs will remain as well as the License Key Driver.

Updating the License Key

When support is renewed or licenses are added, the License Key must be updated. DLLC will email a license update file (.v2c) which needs to be applied. This can be done using the web interface (ACC) or using the standalone Sentinel License Utility.

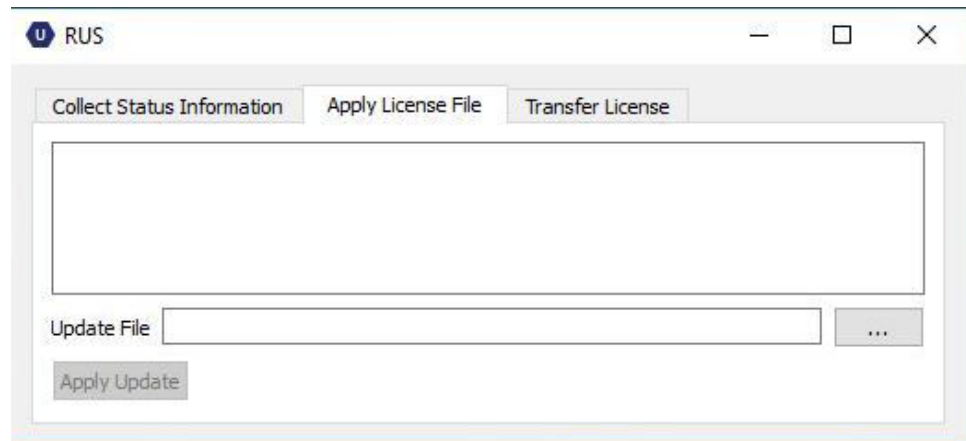
Applying an update using the ACC

- Open the ACC and select Update/Attach on the left-side menu (the direct URL is <http://localhost:1947/int/checkin.html>). Use Select File to browse to the activation file and then click Apply File. Notify DLLC support if there is an error message instead of a success message.



Applying an update using the Sentinel License Utility

- Open the *Sentinel License Utility* from the Start Menu or from the Tools menu in the Configurator. On the *Apply License File* tab press the button with 3 dots at the bottom to browse to the activation file and select it, then click **Apply Update**. There should be a success message, otherwise let us know if there is an error.



- Check to confirm that the license is activated and accessible. Open the ACC and go to *Sentinel Keys*. If the driver and DLLC library were installed properly then there will be a line with Location “Local”, Vendor “11974”, and Key Type “HOST SL AdminMode”. The Key ID is specific to this Computer and should be checked for a match with the filename when applying an update.

In some cases DLLC will need to collect a new fingerprint file from the Computer for a Software License Key. This can happen when there is a change to the computer that affects the “internal fingerprint” used by the license software. Collecting this fingerprint file (.c2v) can be done using the web interface (ACC) or using the standalone DatamedSentinelUtility. Once the file is collected it should be sent to DLLC.

- Open the ACC and select Sentinel Keys on the left-side menu. On the line with Location “Local”, Vendor “11974”, and Key Type “HOST SL AdminMode”, press the C2V button on the right side to generate the file.
- Open the *Sentinel License Utility*. On the *Collect Status Information* tab select *Update of existing protection key* and then press **Collect Information** to generate the file.

Post-Installation Notes

If this was an update the configuration settings will already be set up and should not need to be changed. For a new installation the configuration settings will need to be set up. Configuration settings are changed by using the Configurator utility. A shortcut to this utility will be found on the desktop, and it can also be found on the Start Menu under *DatamedRcv DRCV02* → *DRCV02 Configurator*. See *Chapter 3* for a complete description of the configuration settings.

We recommend setting the service *Startup Type* to **Automatic (Delayed Start)**. After installation open the *Services* applet, locate the *DatamedRcv_DRCV02* service, right-click on *Properties*, and change *Startup Type* to **Automatic (Delayed Start)**. An alternate method is to run this from the command line (note that the space after the '=' is required):

```
sc config DatamedRcv_DRCV02 start= delayed-auto
```

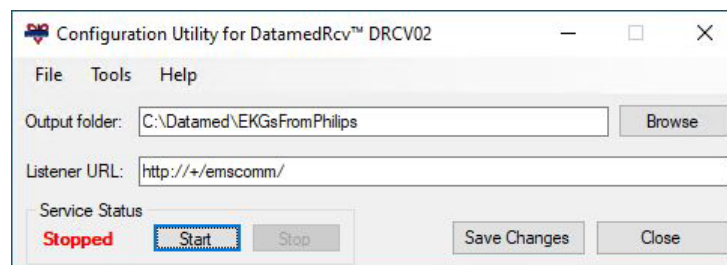
Note that the *DatamedRcv_DRCV02* service will not start automatically until the computer is rebooted. It can also be started interactively using the Configurator utility. An alternative method of starting the service is to open the *Services* applet from *Control Panel* → *Administrative Tools* and start *DatamedRcv_DRCV02*.

IMPORTANT NOTE: Normally this application is installed on the same computer as DFT and the output goes to a local folder which is DFT's Input Folder. If the output will be directed to a shared folder on a separate computer, the account that the *DatamedRcv_DRCV02* service runs under is critical to the proper operation. By default, the service will run under the Local System account and this account does not have access to the network, so it will not work correctly. In this situation, after installation and configuration it is very important to set the service to run with a domain (or workgroup) account. It will also be necessary to add the same domain (or workgroup) account to the folder that is being shared on the destination server.

Once the setup is complete and any accounts/permissions/shares have been addressed, the receiving process should be tested. The best way to do this is with DFT temporarily stopped. A cart should be configured and a test transmission done. As long as a file appears in the Output Folder (DFT's Input Folder) then this installation is complete.



CHAPTER 3 - CONFIGURING DRCV02

Once DRCV02 is installed, changes to the configuration settings can be done using the Configurator utility that is installed along with the service. Open the utility from the desktop shortcut or from the Start menu and it will automatically read the current configuration settings from the registry. When configuration changes are made, they must be saved and then the service must be restarted for them to take effect.








Window Settings

At the top of the window there are two items:

-  **Output folder.** The folder that incoming EKG files are written to. This must be the *Input folder* for DFT. If DFT is installed on the same computer (typical) then it will be a local folder. If DFT is installed on a different computer then this will be the network path to a share on the remote computer (`\\computername\sharename`). The *computername* can be specified as a name or IP address. The **Browse** button allows you to browse for the folder to use (or create one). **IMPORTANT NOTE:** If the *Output folder* is on a network share, the Log On account that the DatamedRcv_DRCV02 service is running under *must* have permissions to access that share. The default account for services is the System Account, which *does not* have network access permissions. The account can be changed by opening the Services applet from the **Help** menu and changing the properties for the DatamedRcv_DRCV02 service.
-  **Listener URL.** This is the Uniform Record Locator (URL) that identifies the location that the Philips cardiograph or PIIc iX (for IntelliVue® patient monitors) is transmitting to. The syntax of this value is: `“scheme://host:port/path/”`. The *scheme* can be “http” or “https” and all devices that are connecting to DRCV02 must use the same scheme. The *host* may be a DNS name, an IP address, or “+” to indicate this computer. The *path* is normally be “emscomm” but can be a different name if supported by all devices. The default value in this field is typical for use with both cardiographs and monitors and should only be changed if directed by DLLC personnel. Note that this URL must match






the URL configured in the cardiographs and/or PIIC iX but with the “+” changed to an IP address or host name.

At the bottom of the window there is a status indicator and four buttons:

-  **Service Status.** This shows the current status of the *DatamedRcv_DRCV02* service. There are several possible values: **Stopped** - indicates that the service is not running; **Running** - indicates that the service is running; **Starting** - which indicates that the service is in the process of starting; **Stopping** - which indicates that the service is shutting down; **Paused** - which indicates that the service was manually paused; and **Unknown** - which indicates a problem. The blue statuses are normally transitional so if the status remains for more than a couple of seconds then there is a problem. The most common reason for this condition is that the License Key is not present or accessible.
-  **Start.** This button will start the *DatamedRcv_DRCV02* service.
-  **Stop.** This button will stop the *DatamedRcv_DRCV02* service.
-  **Save Changes.** This button will cause all configuration changes to be saved to the registry. Previous settings will be discarded.
-  **Close.** This button closes the window. Any unsaved changes will be discarded.

Menu Options

The following menu options are available:

-  **File → Reload from registry.** Selecting this will cause any changes to be discarded and the settings on the screen reset to the saved values.
-  **File → Save to registry.** This is the same as clicking the *Save Changes* button.
-  **File → Import settings from file.** This will load configuration settings from a DRCV02 Settings (.dr2) file. This file is created by exporting the settings. Note that the settings are loaded into the window, but are not saved to the registry until the *Save Changes* button is clicked.
-  **File → Export settings to file.** This will save the configuration settings *as they exist in the window* (possibly edited) to a DRCV02 Settings (.dr2) file. This file should not be edited manually. Typically this functionality is used to send the configuration settings to DLLC for troubleshooting.
-  **File → Enable debugging.** In the event that there is a problem with the translator, DLLC support personnel may want to collect detailed technical information. After checking this option and restarting the service, files containing debugging information will be written to the *Output Folder*. This information should be sent to DLLC support for analysis. See *Chapter 6* for more details.

- ✚ **File → Exit.** This is the same as clicking the *Close* button.
- ✚ **Tools → Open Windows Event Viewer.** This will open the Event Viewer to the Application Event Log.
- ✚ **Tools → Open Windows Services Manager.** This will open the services applet so that you can access the properties for Windows services.
- ✚ **Tools → Open Sentinel Admin Control Center.** This will open the ACC web page using the default browser.
- ✚ **Tools → Open Sentinel License Utility.** This will run the *DatamedSentinelUtility.exe* utility in the installation folder.
- ✚ **Help → About.** This will open a window that displays information about the application and the license details.
- ✚ **Help → Open Datamed Website.** This will open datamed.com using the default browser.

CHAPTER 4 - DEVICE CONFIGURATION

The devices that communicate with this receiver utility currently are the Philips PageWriter® cardiographs, and the Philips PIIC iX (patient monitoring). This section is intended to provide some practical guidance for configuring these devices to send to DRCV02; however, this information is not from Philips and you should always consult the device's user manual or a Philips technician for definitive instructions. Also note that updates to the device firmware or software may render these instructions inaccurate.

Philips PageWriter® TC-Series Cardiographs

Configuration

1. On the main screen touch **Setup**.
2. Touch **Configure Cardiograph Default Settings**.
3. Touch the **Algorithm/Pacing** button at the top.
4. Under **Algorithm** select **PH110C** if that is an option, otherwise select **PH100B**.
5. Touch the **Filter** button at the top.
6. Under **Optional Filter** make sure the **Baseline Wander** filter is **ON**.
7. Touch **Exit**, and then **Yes** in the message screen to save these changes.
8. Touch **Configure ECG Network Settings**.
9. Touch the **LAN/WLAN Settings** button at the top. Check these settings and update them as appropriate.
10. Touch the **ECG Mgmt Systems** button at the top.
11. Touch the **Edit/Delete TraceMaster** button in the second row.
12. In the **Select TraceMaster Server** picklist, choose the default entry (typically **TMVUE**) and touch **Edit**. If there are no entries in the picklist, touch the **Create TraceMaster** button in the second row. The setup will be the same except you will name the entry when you save.
13. Set or update the following settings:
 - a. Set **System Type** to **ECG Management**.
 - b. Set **Connectivity Settings** to **Server Settings**.
 - c. Set the **Server URL** to <http://<IPAddress>/emscomm>, where <IPAddress> is the address of the computer running DRCV02.
 - d. The **User Name** and **Password** are not used for access control but must have a value entered. **Computer Name** should be set to the name of the computer running DRCV02.

- e. The four buttons on the right should all be OFF.
 - f. Under *ECG Mgmt Version - Filtered ECG*, choose ***Other EMS - XML 1.04.01*** (or one of the ***Other EMS*** selections if needed).
14. Touch ***Save Settings*** to save the changes. Touch ***Exit*** and then ***Exit*** again to return to the main screen.

Operation

- To take an ECG, enter the Patient ID demographics and then press the green ECG button to start the process. The cart can be setup to auto print/archive/transfer ECG out of the cart, or to do each step manually.
- If set to manual, after the ECG is recorded touch the ***Archive*** button to get to a screen of all the stored ECGs. On that screen you can transfer the ECG(s).

Philips PIIC iX

Configuration

- On the **System Configuration** screen, choose **ECG 12 Lead**.
- The **Destination (Export URL)** should be set to a complete URL with the following format: <http://ADDRESS/emscomm/>, where ADDRESS can either be the IP address or DNS name of the computer running DRCV02. Note that the “/emscomm/” is required and MUST match the setting in DRCV02.

If an installation is using Philips cardiographs and monitors and DatamedWL is installed to support order query functionality on the cardiographs, DRCV02 will be required to support the monitors. In this case the ADDRESS must also include a port to separate it from the cart traffic to DatamedWL, and DRCV02 should be configured to use the same port. For example: you could configure PIIC iX to use <http://10.10.10.27:50/emscomm/> and then configure DRCV02 to use <http://+:50/emscomm/>. Note that PIIC iX A.xx and B.xx will be fine by default, but for PIIC iX C.xx Philips will need to open the selected port in the firewall because it is locked by default. Check with DLLC or Philips before configuring this.

- The **Filter Before Export** checkbox MUST be checked. This will cause the ECGs to be output with the filters applied.

IMPORTANT NOTE ABOUT FILTERING

By default, Philips devices do not filter the ECGs. Because all ECG Management/Storage Systems expect filtered output, this can cause a discrepancy between an ECG printed from the cart/monitor and the same ECG displayed or printed on the computer. Philips has added a specific option in the TC-Series cardiographs and the PIIC to cause the ECGs to be filtered before output. This is very important and must be set. The instructions above describe how to do this. Note that the older Touch and Trim carts do not have this option, so the best way to get a match is to set the cart filters to 0.05 - 150Hz.

CHAPTER 5 - HTTPS

The devices that communicate with this receiver utility normally use HTTP protocol, but newer firmware/software versions also allow the use of HTTPS for secure communications. Check with the manufacturer if there are questions about whether the version of the device supports this. DRCV02 uses the native OS communication layer which means that no changes are needed other than changing the *Listener URL* from http to https.

Depending on the network architecture, a certificate may need to be installed on the device and/or the Computer. In many cases an SSL Certificate from a Third-Party Certificate Authority will be used, while in others a Self-Signed SSL Certificate is used instead. The organization's IT department must be consulted for any certificate configuration.

When configuring Philips PageWriter® TC-Series Cardiographs to use https, change the **Server URL** from http to https, and turn on the **Enable SSL** option.

When configuring Philips PIIC iX to use https, change the **Server URL** from http to https.

DLLC personnel are not involved in the SSL configuration, but we have created a sample PowerShell script (*Datamed_Cert_Install.ps1*) that an IT administrator can use as a model for a script to create a Self-Signed SSL Certificate. A copy of this script can be requested from DLLC. ***Important Note: Hospital IT must examine the sample script to determine what part(s) are appropriate for use at the facility and take full responsibility for its use. DLLC disclaims any liability for use of the script, which is not intended to be run without review.***

CHAPTER 6 - TROUBLESHOOTING

When DRCV02 is installed, a new Windows™ service named *DatamedRcv_DRCV02* is created. The service continually monitors the License Key and if it is removed the service will log a message to the Event Log and stop processing. Once the key is connected again the service will resume processing. Note that if the License Key is not connected then the service will not start. The Configurator utility can be used to start, stop, and monitor the service.

The *Sentinel LDK License Manager* service was installed by the license key driver, and it must be running at all times. If the service is reporting that the license key is not present, it might be due to this service being stopped or unresponsive. This can generally be resolved by restarting the service or restarting the Computer. Then check the ACC web page to confirm that the license is available. If the license key needs to be updated, review the steps in the *Updating the License Key* section of *Chapter 2*.

If there is a problem, the first place to look is the **Event Viewer**, which can be accessed from **Control Panel → Administrative Tools** or from the *Tools* menu. Once the viewer is opened, select **Application** from the left side menu and the right side will be filled with the application event log. Double-clicking on any entry in the log will open a window that shows the details for the event. The **Type** column in the log will indicate whether this is an *Information* or *Error* message, and the **Source** column will indicate what service logged the entry. The *Information* messages are normal and for a normal startup there will be two or more from *DatamedRcv_DRCV02* depending on the configuration. The *Error* messages describe problems that have occurred. Reviewing the log entries will give insight into what is working and what is a problem. If the License Key could not be contacted, the service will log an Error message describing the condition.

After the startup message, there should be an event log message that gives the URL that the listener is monitoring and also the directory where files will be written. If a message that should be there is not present, check the configuration settings using the Configurator to confirm that the parameters are correct (see *Chapter 3* for details). In most cases there will be an error message that describes the problem. Most errors are self-explanatory and can be resolved by correcting the setting or condition that caused them.

Running Microsoft IIS on the computer with DRCV02 may prevent DRCV02 from initializing the port listener. If IIS must be run, make sure to verify proper operation after installation. To do this, turn on debugging and restart DRCV02 and then open the debug file that is written to the output folder. If the message says the port listener is running, turn off debugging and restart DRCV02 for normal operation. If the message says that it failed to start the listener, IIS may be preventing DRCV02 from attaching to the port. There are two things to try. First, change the *DatamedRcv_DRCV02* service to log on using a specific administrator account rather than the default Local System account. If that doesn't work and the Microsoft utility *httpcfg* is present, use the following at a command prompt to grant access to the specified URL:

```
httpcfg.exe set urlacl /u http://localhost/emscomm/ ; /a D:(A;;GX;;;WD)
```

Here are some other common issues and answers:

- **Symptom: The License Key cannot be located or is marked as Cloned**
 - The License Key is required for the *DatamedRcv_DRCV02* service to run. Whether the License Key is attached to the computer directly, attached to the VM's host computer, or connected by network, it must be accessible and a local driver must be installed. To verify that the key is connected, do one (or both) of the following:
 - Start the Configuration Utility and select *Help* → *About* on the menu. After a moment it should show the license information.
 - Open the ACC from the Start Menu, the Tools menu in the Configurator, or manually opening <http://localhost:1947> from a browser. Confirm that there is a line with Location "Local", Vendor "11974", Key Type "HOST SL AdminMode", and a value for Key ID.
 - For a Hardware License Key there is a light on the physical key that should be on if the driver is working.
 - If the Security Key still can't be located or is marked as Cloned in the ACC, contact DLLC support.
- **Symptom: No files are written**
 - If the service starts properly but no files are received when the originating device makes a transmission, then the communication needs to be checked. The most common reason is that the SERVER URL setting on the cardiograph does not match the *Listener URL* setting in the Configurator. Recheck both settings to ensure they match.
 - Another common problem is that there is a firewall interfering with the incoming transmission. Ensure that the appropriate port for http (or https) is open.
 - Check the permissions on the output folder to make sure that the service has write permissions.
 - DLLC support personnel may need to gather detailed information using the debugging facility. If directed to collect debugging information, follow the directions to enable debugging in *Chapter 3*. The debug file(s) will be created in the output folder and should be sent to DLLC.

DLLC support can be reached by email at support@datamed.com or by phone at either (800) 601-3361 ext 2 (within the US) or +1 901 672 6225 ext 2 (outside the US).

APPENDIX A - REGISTRY SETTINGS

If it is necessary to change the settings for DRCV02 after installation, the Configurator utility should be used. There is normally no reason to access the registry editor to make the changes. In the event that DLLC support personnel request it, you can open the registry editor by selecting Start → Run and then type “*regedit*” and press **OK**. When the registry editor opens, navigate the folders to HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\DatamedRcv_DRCV02.

Most of the settings must not be changed or the operation of DRCV02 will be affected. If any setting is changed *DatamedRcv_DRCV02* must be restarted.

APPENDIX B - END USER LICENSE AGREEMENT

The current End User License Agreement (EULA) can be found on DLLC's web site here: [datamed_eula.pdf](#). The following EULA was current at the time of this printing but is subject to being replaced by a more current version that is found on the website.

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