



**MedDream (version 8.2.0)**

**INSTALL MANUAL**

**of MedDream SendToPACS functionalities**

**version 2.7.0**

---

---

© 2023, Softneta UAB, Kaunas

All rights are reserved in the event of granting of patents or registration as a utility patent.

All names of companies and products mentioned in this user`s manual may be trademarks or registered trademarks. References to products of other manufacturers are for information purposes only. Such references are intended neither as an approval nor a recommendation of these products. Softneta UAB accepts no liability for the performance or use of such products.

Other brand names, software, and hardware names used in this user`s manual is subject to trademark or patent protection. The quoting of products is for informational purposes only and does not represent trademark misuse.

This Install Manual is protected by copyright. Unless expressly authorized in writing, dissemination, duplication or other commercial exploitation of this documentation set or communication of its contents or parts of it is not permitted. In case of infringement, the violator may be liable to pay compensation for damages.

Specifications due to technical developments are subject to change. This Install Manual is not subject to the revision service. Please contact the manufacturer or authorized dealer to request the latest edition of Install Manual.

---

# Table of Contents

<b>Table of Contents</b> .....	<b>3</b>
<b>Software Download</b> .....	<b>4</b>
<b>MedDream SendToPACS system requirements</b> .....	<b>4</b>
<b>Pre-installation information</b> .....	<b>5</b>
<b>Installation</b> .....	<b>6</b>
<b>Location and launching</b> .....	<b>8</b>
<b>License registration and product information</b> .....	<b>9</b>
<b>Configuration</b> .....	<b>11</b>
Main Settings .....	12
Device Settings .....	15
Worklist Settings .....	17
Monitoring Settings .....	19
<b>Installation verification</b> .....	<b>20</b>
Testing image converting and sending.....	20
Testing patient search in the Worklist test.....	21
<b>Security considerations</b> .....	<b>21</b>
API restriction.....	22
Firewall.....	22
Other programs .....	22
Access files from remote directory .....	22
<b>Figures</b> .....	<b>23</b>
<b>Index</b> .....	<b>24</b>

---

## Software Download

### WARNING

MedDream SendToPACS cannot guarantee the accuracy of calibration data received from the modality. Moreover, Softneta cannot guarantee that the manual calibration which is performed by users is done accurately.

MedDream SendToPACS user is responsible for all data usage, security and virus threat for installed computer.

MedDream SendToPACS user is responsible for any third party programs usage with MedDream SendToPACS on the same computer.

MedDream SendToPACS user must ensure that third party programs are not interfering with MedDream SendToPACS functionality.

If third party programs are interfering with MedDream SendToPACS functionality - computer user must stop or remove third party programs and do not use until MedDream SendToPACS is in use.

If third party programs are interfering with MedDream SendToPACS installation process - computer user must stop or remove third party programs.

Virus and other spyware programs must be removed before MedDream SendToPACS installation or further usage on the same computer.

MedDream SendToPACS software version can be downloaded from:

<https://www.softneta.com/products/meddream-dicom-converter/>

## MedDream SendToPACS system requirements

The minimal System (PC) requirements to run MedDream SendToPACS:

- CPU: 1 GHz or faster with support for PAE, NX, and SSE2
- RAM: 1+ GB
- Storage space: 1+ GB.
- Operating system: Windows 10, Windows 11
- Windows Firewall must be configured to allow software communication with other systems (see MedDream SendToPACS Configuration).

## Pre-installation information

SendToPACS software main function is to send DICOM files to remote archive (PACS). This requires to ensure network access from your personal computer (PC) (where is software installed) and PACS server. Ensure, that PC has access to software licensing server <https://lic.softneta.com>.

- Recommended to consult or ask for network/PACS administrator to ensure secure (recommended VPN) network access to PACS server.
- Common PACS requires to register DICOM device to accept incoming connection and files. Recommended to consult with PACS administrator to include MedDream SendToPACS software as device on PACS server. Software requirements to register as a new device on PACS:
  - AE Title – device title. See MedDream SendToPACS Configuration main settings,
  - Host/IP – device address. It will be PC host name or IP,
  - Port – device port. Not in use by SendToPACS, because it only sends DICOM files - add random port.
  - Enable other functionality: Modality Worklist C-FIND (if PACS server provides Modality Worklist and requires by doctor or institution workflow), Query/Retrieve C-FIND (if requires) information access.
- MedDream SendToPACS software supports Modality Worklist (MWL) and Query/Retrieve (Q/R) information access. Consult with PACS administrator if MWL provider or Q/R provider is a separate server and requires to register software access as new device.
- Consult with PACS administrator about PACS server supported DICOM files: Transfer Syntax UID, SOP Class UID. This information is provided in MedDream SendToPACS software **DICOM Conformance statement document**.
- Software can produce (convert NON-DICOM files) with transfer syntaxes:
  - 1.2.840.10008.1.2.4.50 (JPEG Baseline (Process 1)),
  - 1.2.840.10008.1.2.4.100 (MPEG2 Main Profile Main Level),
  - 1.2.840.10008.1.2.4.101 (MPEG2 Main Profile @ High Level),
  - 1.2.840.10008.1.2.4.102 (MPEG-4 AVC/H.264 High Profile / Level 4.1),
  - 1.2.840.10008.1.2.4.103 (MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1),
  - 1.2.840.10008.1.2.1 (Explicit VR Little Endian),
- Software can produce (convert NON-DICOM files) with SOP Class:
  - 1.2.840.10008.5.1.4.1.1.7 (Secondary Capture Image Storage),
  - 1.2.840.10008.5.1.4.1.1.104.1 (Encapsulated PDF Storage),
  - Can set other SOP class UID, but DICOM file content will be Secondary Capture Image Storage or Encapsulated PDF Storage.
- If using Q/R to find and get information about patient – consult with PACS administrator about what information model and level to use (see MedDream SendToPACS software **DICOM Conformance statement document**).
- Review MedDream SendToPACS software configuration settings for PACS, MWL or Q/R devices and ask PACS administrator detailed information. Basic information requires for device: AE Title, host name and port.
- MedDream SendToPACS software provides default modality OT(Other), but requires to ask PACS administrator to provide the Modality Code for supported type of images. Full list of Modality types can be found in <http://www.dicomlibrary.com/dicom/modality/>.
- Also, modality affect DICOM viewer software. Ensure, that produced DICOM files, with defined modality, can be displayed in DICOM viewer (make test).
- MedDream SendToPACS software provides multiple character set (review configuration settings) to query MWL or Q/R information and make DICOM file. Recommended to consult with PACS administrator to set correct character set encoding for PACS, MWL and Q/R devices in the software configuration.

- Also, character set affect DICOM viewer software. Ensure, that produced DICOM files, with different character set encoding, will be displayed correctly in DICOM viewer (make test). Please see [http://dicom.nema.org/medical/dicom/current/output/chtml/part02/sect\\_D.6.2.html](http://dicom.nema.org/medical/dicom/current/output/chtml/part02/sect_D.6.2.html).

## Installation

To install MedDream SendToPACS software, login to windows. If you will try to install software where user do not have rights to perform new application installation - will ask Administrator rights to access this functionality. Due to this, please contact the PC's administrator or other person who has the Administrator rights to perform the installation.

To install MedDream SendToPACS software, execute 'MedDreamSendToPACSSetup-[version].exe' setup file. MedDream SendToPACS Setup Wizard will be launched.



**NOTE!** If you want to use provided License 'SendToPACS.lic' or settings 'settings.json', place the files in the same folder as setup executable file before launching the setup and system will be updated by license information.

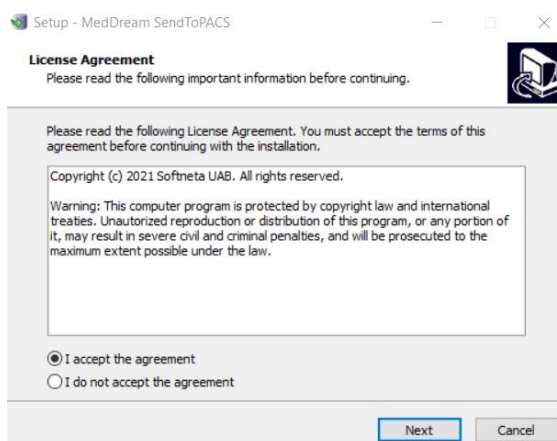


Figure 1. MedDream SendToPACS Setup Wizard: step 1

Follow Wizard instructions to install the software:

- Read and accept the License Agreement to proceed the installation.

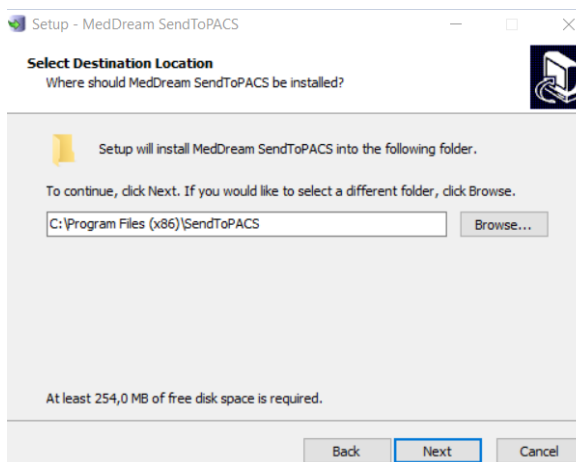


Figure 2. MedDream SendToPACS Setup Wizard: step 2

- Specify folder where you want to install software. By default, setup suggests to install the software into 'C:\Program Files (x86)\SendToPACS' folder.

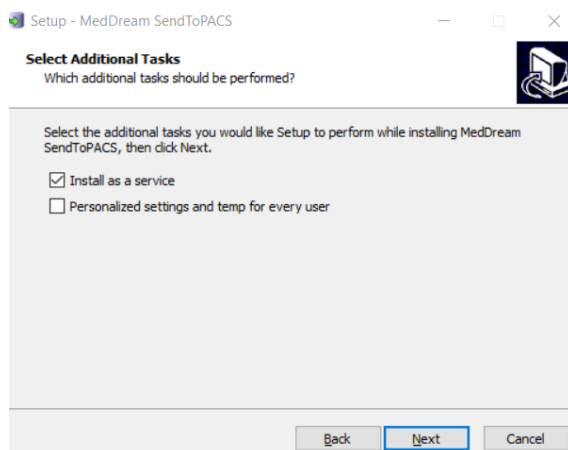


Figure 3. MedDream SendToPACS Setup Wizard: step 3

- Specify properties for system launch and temporary storage:
  - By default, setup suggests to install and run the system as windows service. Unmark the checkbox, if you want the system to run as regular application.



**NOTE!** SendToPACS software opens quicker, if installed as windows service.

- By default, setup stores the settings and temporary files in windows folder '*ProgramData\SendToPACS*' folder. Mark the personalized settings checkbox, if you want the settings and temporary files be stored for each user in windows '*Users[user name]\SendToPACS*' folder.

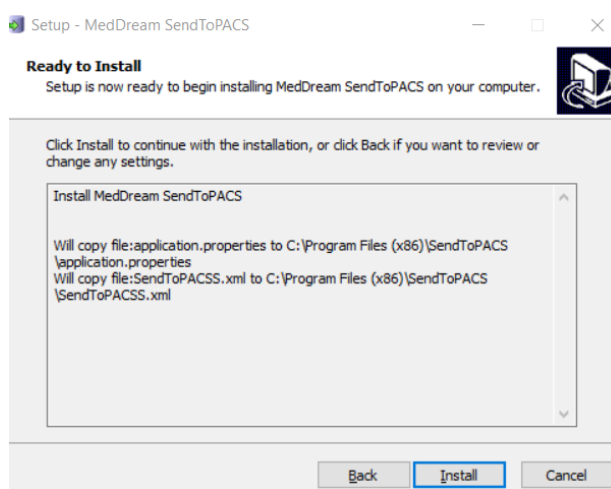


Figure 4. MedDream SendToPACS Setup Wizard: step 4

- Confirm the selections and start installation.

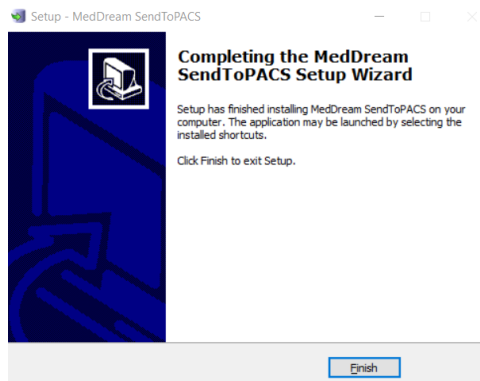


Figure 5. MedDream SendToPACS Setup Wizard: step 6

- Finish the installation. By default, setup launches the application. Unmark the checkbox, if you do not want the software to be started.

## Location and launching

You can locate and launch MedDream SendToPACS software from Windows Start Menu. Moreover, you can find MedDream SendToPACS by typing “SendToPACS” in “Search programs” input box (Windows 7/8/10).

You can locate the SendToPACS shortcut on Desktop and double click it to launch the software.

Usually MedDream SendToPACS is installed to ‘C:\Program Files (x86)\SendToPACS’ folder. So, the Software can be opened by executing ‘C:\Program Files (x86)\SendToPACS\SendToPACS.exe’ file.



**NOTE!** If software is installed as a service, the SendToPACS service should be running when launching the application.

By default, setup installs the SendToPACS service with automatic startup. However, if the startup type is changed, or service was stopped by other reason, you can start the SendToPACS service manually:

- If connection to the service cannot be established, the application will show an error message:

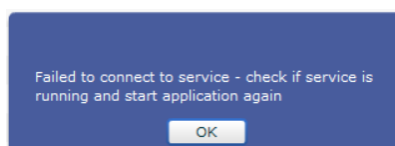


Figure 6. Error when connection to SendToPACS service cannot be established

- Go to windows services list by opening the windows services window or services tab in task manager window, and locate the SendToPACS service.
- Check the SendToPACS service status, and start it, if not running.



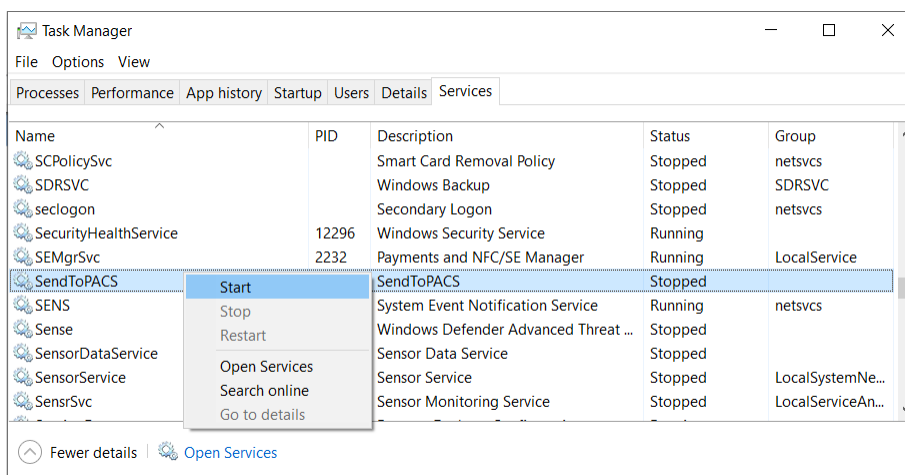


Figure 7. Error when connection to SendToPACS service cannot be established

You can launch the MedDream SendToPACS software from Context menu by selecting one or multiple files. Select files and open file's context menu with the right mouse button. Select the SendToPACS menu:

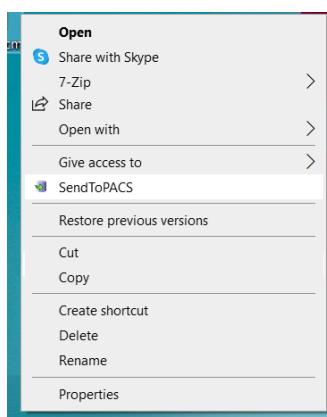


Figure 8. Launching SendToPACS program from Context menu



**NOTE!** Selected files is automatically added to MedDream SendToPACS file the list.

After software launching MedDream SendToPACS software must be opened in 1-10 seconds.

## License registration and product information

After Installation the users can use MedDream SendToPACS software in DEMO mode with DEMO restrictions. The demo notification window is displayed, if the system runs without registered license (in demo mode):

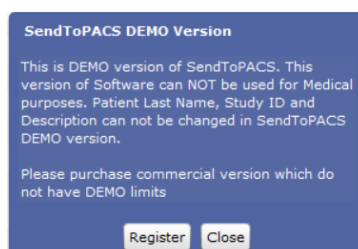


Figure 9. Demo version notification

User can register product or “Close” information windows and use software in DEMO mode.



**NOTE!** License registration is required for legal software use for Medical purpose.

---

To register license:

- If you have licence file, place it near the installation .exe and on installing process licencing will be adjusted automaticilly.
- Or
- Open license registration window in one of ways:
  - press the Register button in demo notification window,
  - or open the About window and press the Register button in it.
- Enter the license number that you were given by system administrator or system provider in license registration window, and press the Register button:




Figure 10. License registration window

- After the Register button is pressed, the system connects to the license server, verifies and get the license. The notification about successful license registration is displayed, and then user can view the registered license data in About window.



**NOTE!** Ensure that personal computer have access to <https://lic.softneta.com>.

---

To view the MedDream product information, open about window by pressing the SendToPACS logo or info button  in the header of the SendToPACS application window:

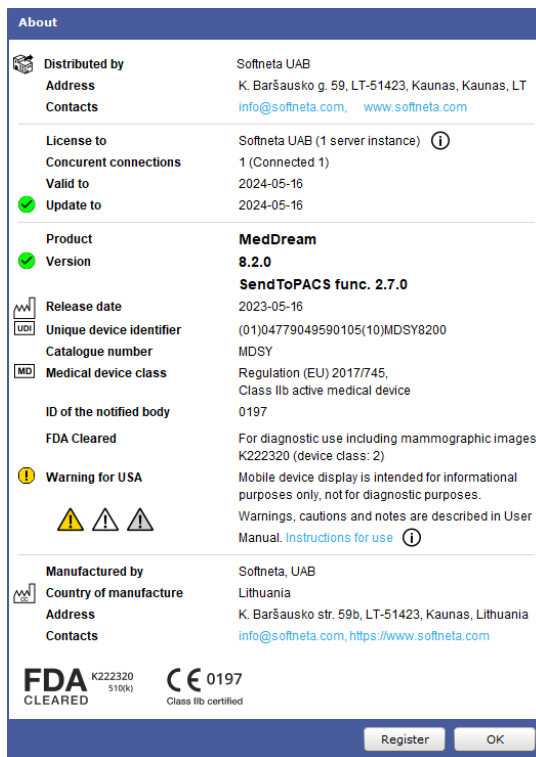


Figure 11. Product information in About window

The user can view the following information about the product:

- Product provides the official product name.
- Fields *Version*, and *Release date* holds information about the installed version.
- *UDI* – Unique Device Identification number.
- Fields *Medical device class*, *ID of the notified body*, and *FDA cleared* mark holds the products' certification data.
- Fields *Valid to* and *Updates to* indicates dates, until the current license is valid and will receive updates.
- *License to* and *Distributor* contains the information about organizations that owns or distributes the license of current product installation.
- Contacts of product manufacturer.




**NOTE!** *License to* and *Distributor* information is displayed only if the license is registered.

## Configuration



**NOTE!** Even in DEMO mode it is possible to do all the configuration and testing (after licensing all Configuration Settings will remain).

To view or edit configuration open the Settings window by pressing Settings  button in the header of the SendToPACS application window. The Settings window has four tabs:

- Main Settings – MedDream SendToPACS software settings;
- Devices Settings – remote PACS storage device list settings;
- Worklist Settings – remote Modality worklist, Query/Retrieve information (C-FIND) or based HTTP request device list settings;
- Monitor Setting – shared network or simple directories list to monitor for incoming files;
- Wi-Fi – Wi-Fi device (wi-fi SD card).

## Main Settings

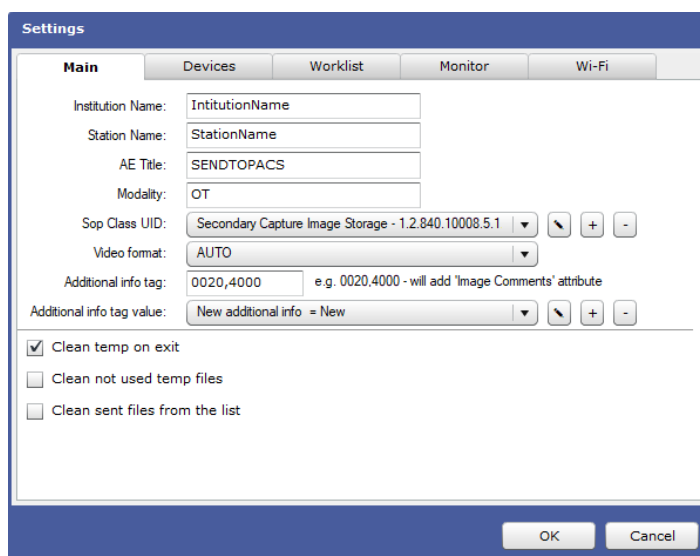


Figure 12. Main settings

The tab "Main" is opened by default when the Settings window opens, and the following properties may be viewed and configured in this tab:

- Institution name – by default is empty, but if filled – Tag (0008,0080) will be filled, and in created DICOM will remain created DICOM Institution name.
- Station name - by default is empty, but if filled – Tag (0008,1010) will be filled, and in created DICOM will remain created DICOM Station name.
- AE title - DICOM application Entity Title of MedDream SendToPACS software. The DICOM Application Entity Title uniquely identifies a service or application on a specific system in the network. It is required to identify sending software for the PACS server (or other DICOM receiving services). The proposed value is "SENDTOPACS", but the user may change it. The same AE title name must be registered into the PACS server (or other DICOM receiving services) AE List (as device).
- Modality – DICOM image type. It describes the source and purpose of the DICOM images. The Modality type can be specified freely, and it will be assigned to all images converted to DICOM. Several modalities, separated by commas, may be entered. The most common modalities are OT (Other), ES (Endoscopy), US (Ultrasound), XC (External-camera photography). The full list of Modality types can be found in <http://www.dicomlibrary.com/dicom/modality/>
- SOP Class UID – Storage Service Class identify the Composite IODs. System setup automatically adds three SOP Class UID values to configuration:

- *Secondary Capture Image Storage* SOP class with UID *1.2.840.10008.5.1.4.1.1.7* is configured for all files (\*). This SOP Class is set as default by selecting it in SOP Class UID drop-down list.
- *Encapsulated PDF Storage* SOP class with UID *1.2.840.10008.5.1.4.1.1.104.1* is configured for pdf files (PDF).



**NOTE!** The default SOP class is used for all the files, except the files for which the other SOP Class is explicitly defined, like PDF files with Encapsulated PDF Storage SOP class for files with (PDF) extension.

- *Video Endoscopic Image Storage* SOP class with UID *1.2.840.10008.5.1.4.1.1.77.1.1.1* is configured for all files (\*). By configuration, that is preset by setup, this SOP class is not used, as far as it is not assigned to a particular file extension, and is not set as default.

The user may change the SOP Class configuration:

- To set the other SOP class as default, expand the SOP Class UID list and press on the SOP Class that needs to be used as default SOP Class:

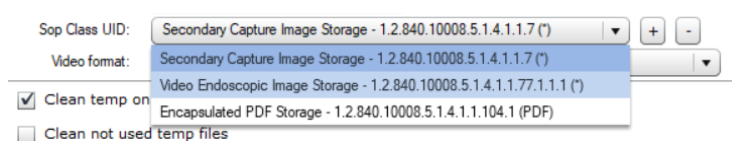


Figure 13. Changing default SOP class in main settings



**NOTE!** Only the SOP class, that is configured for all files (with (\*) or () marks at the end), may be set as default SOP class.

- To add SOP class to configuration, press add button  on the right side of the SOP classes list and enter SOP class data in the opened SOP class window:

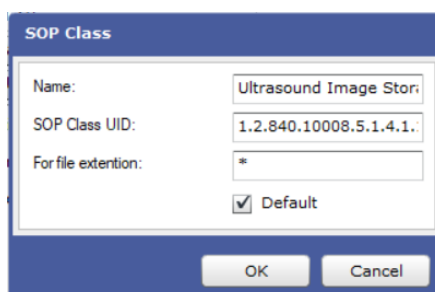


Figure 14. Adding new SOP class in main settings

Enter SOP class name and UID. See list of valid *SOP Class UIDs* and *Names* in: <https://www.dicomlibrary.com/dicom/sop/>.


Enter file extensions, if the SOP class should be used only for particular file types. Several values, separated by commas, may be entered in *For file extension* field. The star symbol '\*' should be entered, if the SOP Class is going to be used for all non-DICOM files. Check the *Default* check box to set the SOP Class as default.

Press OK button in order to create a new SOP Class in main configuration.

Because of the rules and restrictions for attributes of the information object (IOD) and DICOM service elements (DIMSE), that apply for each SOP Class, it is required to test, if a desired file type may be converted to the specified SOP Class and sent to particular device.



**NOTE!** Other SOP Class UID can be used, but DICOM file content will be Secondary Capture Image Storage or Encapsulated PDF Storage

- To delete SOP class from configuration, select the not used SOP Class in Sop Classes list, and then press remove button  on the right side of the list.
- Video format – type of possible video converting files. Select a particular type by pressing on the item in expanded list of supported video formats:

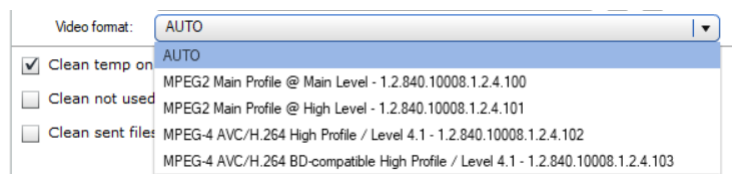


Figure 15. Changing video format in main settings

List of possible values:

- Auto – the default value, let the system to detect the video file type automatically,
- MPEG2 Main Profile Main Level 1.2.840.10008.1.2.4.100,
- MPEG2 Main Profile High Level 1.2.840.10008.1.2.4.101,
- MPEG-4 AVC/H.264 High Profile / Level 4.1 1.2.840.10008.1.2.4.102,
- MPEG-4 AVC/H.264 BD-compatible High Profile / Level 4.1 1.2.840.10008.1.2.4.103.



**NOTE!** See more detailed information and restriction (especially resolution) for video format according transfer syntax:

[http://dicom.nema.org/medical/dicom/current/output/html/part05/sect\\_8.2.5.html](http://dicom.nema.org/medical/dicom/current/output/html/part05/sect_8.2.5.html)

[http://dicom.nema.org/medical/dicom/current/output/html/part05/sect\\_8.2.6.html](http://dicom.nema.org/medical/dicom/current/output/html/part05/sect_8.2.6.html)

[http://dicom.nema.org/medical/dicom/current/output/html/part05/sect\\_8.2.7.html](http://dicom.nema.org/medical/dicom/current/output/html/part05/sect_8.2.7.html)

[http://dicom.nema.org/medical/dicom/current/output/html/part05/sect\\_8.2.8.html](http://dicom.nema.org/medical/dicom/current/output/html/part05/sect_8.2.8.html)

- *Additional info tag* – by default is empty, if user wants to add a comment in Study list - field must be specified which tag will be filled, for example TAG (0020,4000), in STUDY list extra column will be added with possibility to add comment.

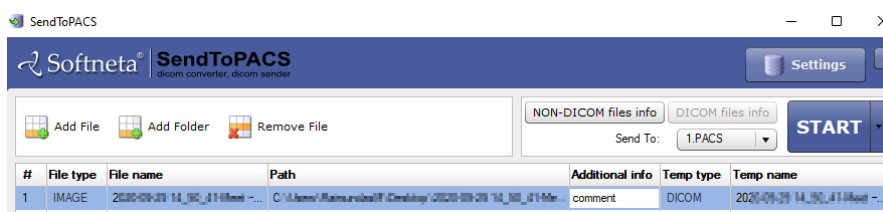





Figure 16. Extra field in Study list – additional info field for adding comments

- *Additional info tag value* - list of additional information values for non\_DICOM files. To edit, select the edit icon . To add a value, select  to delete . One of the values can be marked as Default.

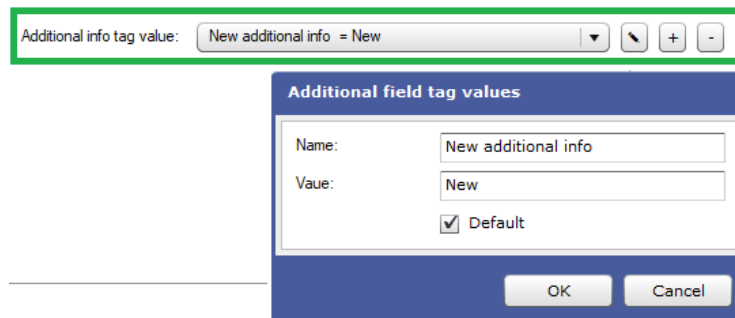


Figure 17. Additional info tag in settings

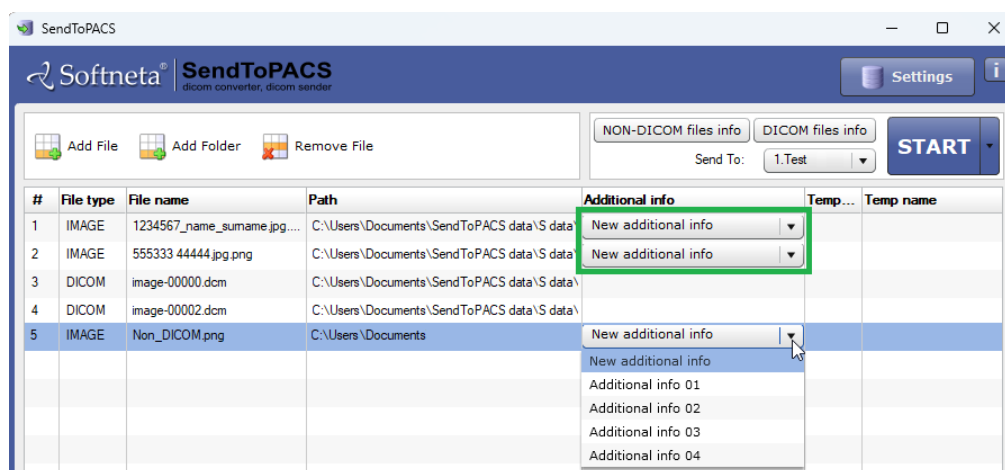


Figure 18. Additional info tag

- *Clean temp on exit* and *Clean not used temp files* options configures cleaning of the temporary storage. The application uses “temp” folder for storing the copies of the converted images of video files. Depending on system setup, the temp folder may be located either in ‘\ProgramData\SendToPACS\temp’, or ‘\Users\[user name]\SendToPACS\temp’. Use the options to configure automatic cleaning of *temp* folder:
  - *Clean temp on exit* – program cleans the content of temp folder when application is closed. The option is switched on by default setup, and the user should press the checkbox to change the value.
  - *Clean not used temp files* – program removes the temporary files as soon as they are no longer used by program. The option is switched off by default setup, and the user should press the checkbox to change the value.
- *Clean sent files from list* option should be used for configuring the automatic removing of successfully sent files from files list. The option is switched off by default setup, and the user should press the checkbox to change the value.

## Device Settings

The tab "Devices" is used to set the remote storage devices (PACS or other DICOM receiving service) that shall receive DICOM files.

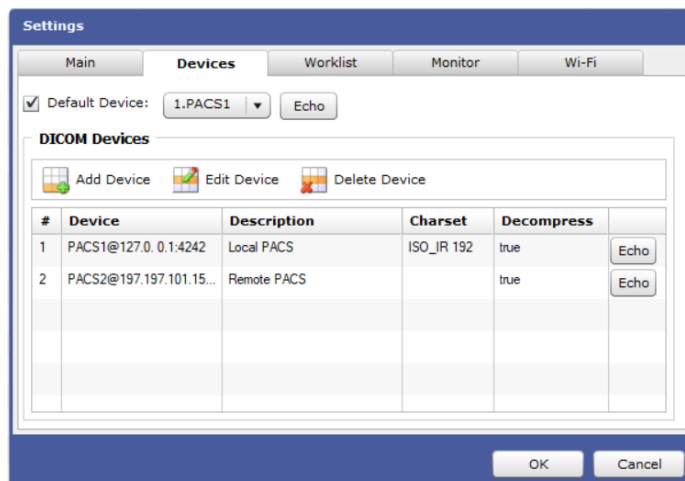


Figure 19. Device's settings

- To add a new PACS device, press the button "Add Device" and enter device data in the opened Device window:

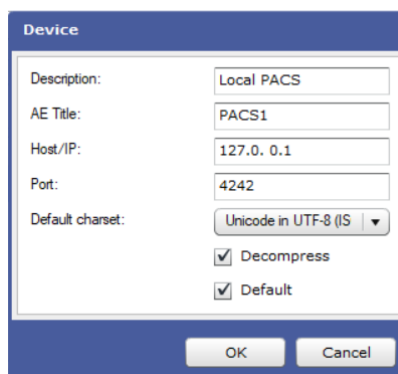



Figure 20. Window for adding or editing PACS device

- *Description* - the field "Description" is used to describe the PACS system so that the user could easily recognize which one of the PACS systems is used.
- *AE Title* - enter the AE title in the field. The AE title must be the same as the name of the PACS server (or other DICOM receiving service).
- *Host/IP* - the field is used to enter the network address for the PACS server. You can specify IP address, if IP address is static for the PACS. If PACS server have dynamic IP, then specify Host name.
- *Port* - the field "Port" is used to set the communication port with the PACS system.
- *Default charset* – the DICOM character set for encoding the textual values (names and strings) in DICOM file. *Default repertoire ()* is default character set. Expand the character sets list and press the other value to select it. Please see [http://dicom.nema.org/medical/dicom/current/output/chtml/part02/sect\\_D.6.2.html](http://dicom.nema.org/medical/dicom/current/output/chtml/part02/sect_D.6.2.html) .
- *Decompress* – mark the checkbox by pressing on it, if decompressed DICOM files should be sent to device (basically try decompress DICOM files pixel data – and change transfer syntax to Explicit VR Little Endian). The *Decompress* checkbox is not checked by default.
- *Default* – mark the checkbox by pressing on it to set the device as default automatically on creation.
- Press OK button in order to create a new device. The device is displayed in the list.
- To edit PACS device, select it in devices list, press the button "Edit Device" and change device data (will opened the same Device window, as described above).
- To delete the selected PACS device, press the button "Delete Device".



- To specify the default device, mark the *Default device* checkbox, and press the most common receiving device in "Default Device" drop down list. The specified device will be set as default in the Main window device selection drop down list.
- To check the device status, press the Echo button  for device - performed basic connection verification by DICOM protocol, and the message with connection status will be displayed.



**CAUTION!** Please make sure Windows Firewall, Antivirus or other software do not block MedDream SendToPACS communication. It is recommended to turn off all blocking services in the Configuration and testing phase, to be sure that software will not be blocked. Also, it is important to make sure PACS server is not blocking DICOM communication by checking whether the communication is allowed in both sides – MedDream SendToPACS PC and Receiving PC.

## Worklist Settings

The tab "Worklist" is used to set the Modality worklist or Query/Retrieve server devices.

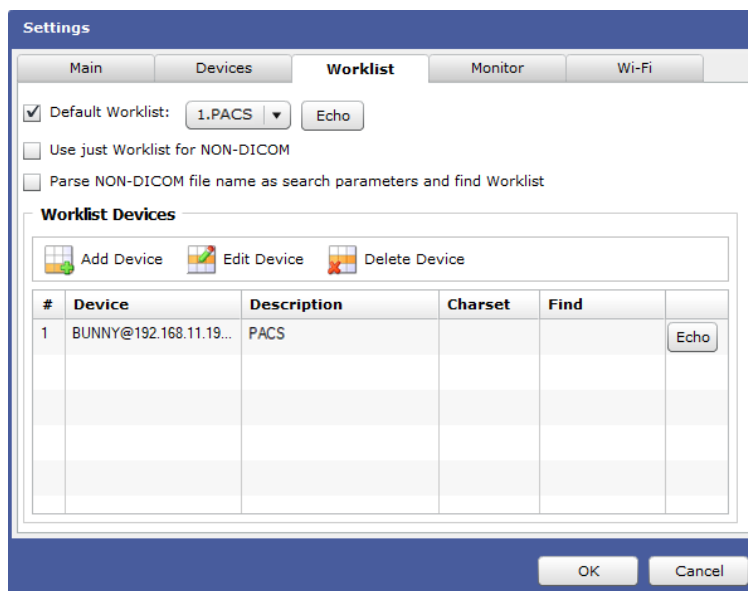


Figure 21. Worklist settings

- *Use just WORKLIST for NON-DICOM files* – by default is not selected, user must select in case wants to use ONLY Worklist for Non-Dicom files, in this case user will not be able to change any patient data manually. User on pushing *START* or *Non-DICOM files info* buttons will open Worklist window.
- *Parse NON-DICOM file name as search parameters and find Worklist* - when the attribute is selected, the system automatically extracts the patient ID from the non-DICOM filename, automatically fills in the search field and performs the search. The file can be opened by selecting "Add file", or "Add Folder", or *drag\_and\_drop*, or placed in the monitoring folder. A non-DICOM file name can be of different types:
  - can only be a sequence of numbers of the patient ID, e.g. "1234567.jpg";
  - may contain a sequence of patient identifiers and additional information following the underscore that the system will not use, e.g. "1234567\_name\_surname.jpg";
  - beginning with a text constant [**WLPID\_**]; in which case the system uses all the text following the constant as the patient ID. E.g.: "**WLPID\_**1234567\_name\_surname.jpg", the patient ID '1234567' will be extracted from the sequence of characters and entered into the search field.

Figure 22. The parsed parameter from the NON-DICOM file name for searching

- if the constant [WLPID\_] is followed by a sequence of numbers and characters separated by spaces, the entire sequence will be used for the search, not just the numeric value, e.g. "WLPID\_1234567 name surname.jpg"

Figure 23. The parsed parameter from the NON-DICOM file name for searching. All characters

- for other types of names, e.g. a sequence of numbers with spaces, e.g. "555 444.jpg", the system will not support the search parameter.
- To add a new Worklist device, press the button "Add Device" and enter device data in the opened Worklist window:

Figure 24. Window for adding or editing Worklist device

- Enter device and device connection data in fields *Description*, *AE Title*, *Host/IP*, *Port*, *Default charset* – see Device window in "Device" tab for detail description of the fields.
- Enter the default search criteria for the device in fields *Modality*, *Scheduled AE title*, *Default root model*, *Default model level* – the Patient Search window will be prefilled with these values.

*Modality* and *Scheduled AET* criteria apply only for Modality Worklist Information Model (*Default root model* value WORKLIST).



**NOTE!** Default model level apply only for Query/Retrieve Information Model (*Default root model* value is one off: STUDY; PATIENT; PATIENT\_STUDY).

- *Default* – mark the checkbox by pressing on it to set the device as default automatically on creation.
- Press OK button in order to create a new device. The device is displayed in device list.



**NOTE!** System supports querying patient information from HIS using external API. Contact support for details how to configure the external web service as worklist device.

- To specify the default device, mark the *Default worklist* checkbox, and press the most common receiving device in "Default Worklist" drop down list. The specified device will be set as default in the Patient Search window worklist selection drop down list.
- Use the buttons in Worklist tab to manage the worklist devices: check device status with "Echo", change device data with "Edit device", or delete device with "Delete Device" buttons. See "Device" tab for detail description of the operations.

## Monitoring Settings

The tab "Monitor" is used to manage the list of monitored directories (includes network drives). The files that are written to the monitored directory are automatically added to the files list in the Main window.



**NOTE!** This function is available for commercial license.

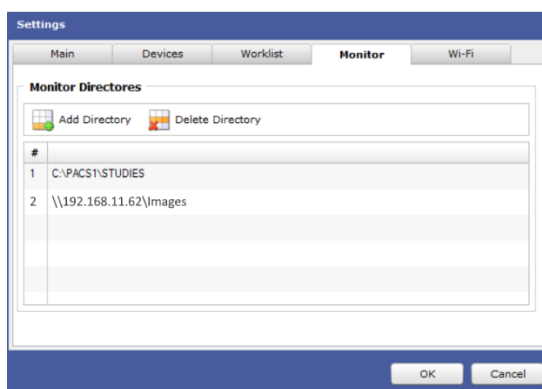


Figure 25. Monitored directories settings

- To add a new directory to the monitored directories list, press the button "Add Directory", and select the local directory or mapped network directory in the opened Browse window:

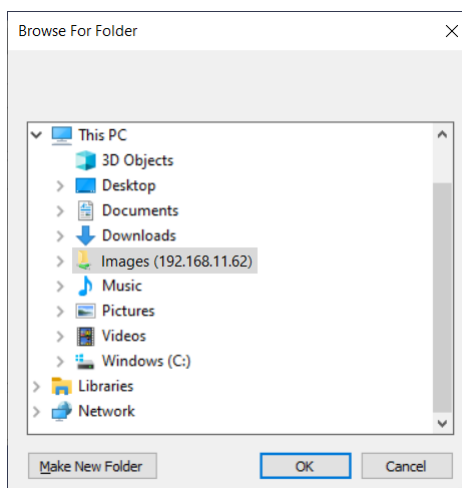


Figure 26. Browser window for selecting monitored directories

- To delete the selected directory, press the button "Delete Directory".

Network drives or mounted directories monitor period is 10s. Then you add file to the directory – file will be appended to the software list after 1-10s.



**NOTE!** If there are multiple files and copy process is in progress – software will try wait to finish update. MedDream SendToPACS will not remove files from directories and it is recommended to clean files after send.

## Installation verification

### Testing image converting and sending

To send images to the PACS server, start MedDream SendToPACS software. Then proceed the following steps in the Main window:

1. Press "Add File" button and select any supported image file (you can create the file with Microsoft MSPAINT or take the image from any medical device);
2. Enter required DICOM info for non-DICOM file.
3. Press "NON-DICOM files info" button to open NON-DICOM files info window;
4. Enter Patient and Study Data in opened window. It is necessary to enter at least Patient ID and Last name, Study Date, Time and Modality;
5. Press OK button, that closes the NON-DICOM files info window.
6. Select the DICOM device to which you will try to send image in Sent To dropdown list;
7. Press "START" button;
8. Firstly, the software will convert image to DICOM format. Then it will try to send image to the selected DICOM device. The opened Process status displays ongoing status. If you are using demo version, the sending is not performed automatically, and you will need to wait 30 seconds and press "Start" button in the sending dialog;
9. If all steps are successfully passed, the Process status dialog automatically closes and the successfully sent files are marked blue **1** | **IMAGE** | **brain.jpg**, or removed from the list, if configured to be cleaned after sending. In case of error, the Process status dialog is not closed and you will be able to view the process log and error description in it.

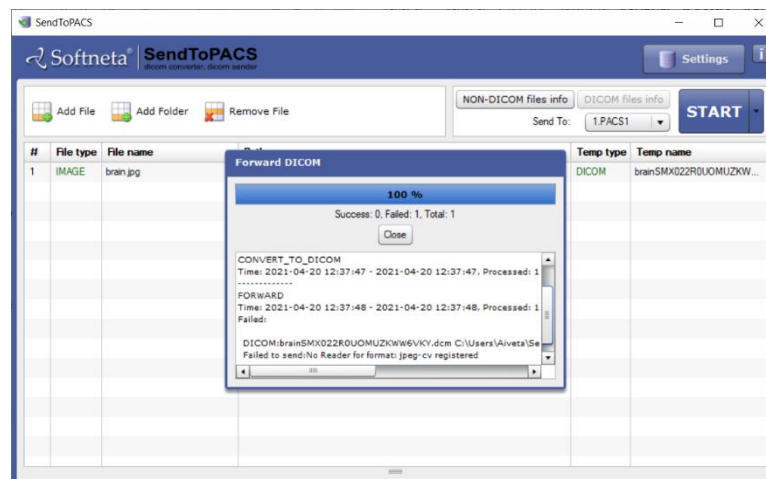


Figure 27. Image converting and sending test

## Testing patient search in the Worklist test

To search for a patient in the Worklist, start MedDream SendToPACS software. Then proceed with the following steps:

1. Add image, video or PDF file,
2. Press “NON-DICOM files info” button in the Main window to open NON-DICOM files info window,



**NOTE!** If in Worklist settings is marked “Use just Worklist for Non-DICOM”, user will get directly to Worklist window and Step 3 will be passed.

3. Press “Search” button which is located at the top left corner of the NON-DICOM files info window;
4. Select *Worklist* device from drop down list in the opened “Patient Search” Window;
5. Enter or modify the search criteria to search specific patient. For testing purpose, use least specific criteria to see all patients available, like check ALL Modalities checkbox, uncheck Date checkbox, or search only by date;
6. Press “Search” button to search in the Worklist server database;
7. Select the patient;
8. Select the patient from the results list, and press “OK” to close Patient Search window. Selected patient’s data will be inserted into corresponding Patient and Study information fields of the NON-DICOM files info window.

Accession	Patient ID	Patient Name	Sex	Birth Date	Requested Procedure Description	Scheduled Procedure Step Description
20042021-	TestID[SENDTOP]	testPatient testPatient	M	1999-10-15		

Figure 28. Patient search in Worklist test

## Security considerations

MedDream SendToPACS functionalities is stand-alone application and it is intended to communicate with background service via HTTP localhost. It ensures one application is running and one client can connect to background service. On application close – ensures, that log file and temporary files will be deleted.

---

## API restriction

MedDream SendToPACS functionalities background service offers separate functionality to search worklist (C-FIND), make C-ECHO to PACS device, convert (image, video, pdf) to DICOM and send files to PACS. This functionality can be accessed by defining basic authentication in application.properties file. Properties "api.username" and "api.password" should be generated: at least 12 characters with uppercase, lowercase, numbers, special characters, and not listed in <https://haveibeenpwned.com/Passwords>.

Also allows to restrict access by IP address. In application.properties file add property "api.allowIps" with the list of IP's. By default it always allows just local IP – 127.0.0.1.

## Firewall

MedDream SendToPACS functionalities installation allows to install already existing settings file (with configured PACS or Worklist devices). During installation it must have access to firewall to open required ports for configured devices. The same thing goes to when user changes settings via main application – will try to review ports on firewall.

If background application is running not as a service (will start after opening main application) and current user do not have access to firewall – user must add ports to firewall manually.

Licensing address <https://lic.softneta.com/> might need to be whitelisted in a corporate firewall, to ensure ability to register software.

When using API from remote computer, must open application port manually in firewall.

## Other programs

Must ensure, that other software (antivirus, firewall or other network monitoring programs) does not interfere:

- access to user profile directory <User directory>\SendToPACS or C:\ProgramData\SendToPACS.
- allow to run command prompt (updating firewall, running external applications or commands).

## Access files from remote directory

Application can run background service as a service (with administrator rights) and as application, what will start after opening main application. In either way, there is a possibility, that background service will not see shared files via network drive, because of the user. Main application or background service may be running on different user and do not have access to files. User must ensure, that running application and background service have rights to access files.

Also, there is build-in alternative way to access files – main application will copy all files from selected directory. User must not select large repository of files, that can bring "low space" or "no space" to user computer.

## Figures

Figure 1. MedDream SendToPACS Setup Wizard: step 1 .....	6
Figure 2. MedDream SendToPACS Setup Wizard: step 2 .....	6
Figure 3. MedDream SendToPACS Setup Wizard: step 3 .....	7
Figure 4. MedDream SendToPACS Setup Wizard: step 4 .....	7
Figure 5. MedDream SendToPACS Setup Wizard: step 6 .....	8
Figure 6. Error when connection to SendToPACS service cannot be established .....	8
Figure 7. Error when connection to SendToPACS service cannot be established .....	9
Figure 8. Launching SendToPACS program from Context menu .....	9
Figure 9. Demo version notification .....	9
Figure 10. License registration window.....	10
Figure 11. Product information in About window.....	11
Figure 12. Main settings .....	12
Figure 13. Changing default SOP class in main settings .....	13
Figure 14. Adding new SOP class in main settings .....	13
Figure 15. Changing video format in main settings.....	14
Figure 16. Extra field in Study list – additional info field for adding comments .....	14
Figure 17. Additional info tag in settings .....	15
Figure 18. Additional info tag .....	15
Figure 19. Device's settings.....	16
Figure 20. Window for adding or editing PACS device .....	16
Figure 21. Worklist settings .....	17
Figure 22. The parsed parameter from the NON-DICOM file name for searching .....	18
Figure 23. The parsed parameter from the NON-DICOM file name for searching. All characters .....	18
Figure 24. Window for adding or editing Worklist device .....	18
Figure 25. Monitored directories settings.....	19
Figure 26. Browser window for selecting monitored directories.....	19
Figure 27. Image converting and sending test.....	20
Figure 28. Patient search in Worklist test .....	21

# Index

<b>A</b>	
About window .....	9
Access files from remote directory .....	22
API restriction .....	22
<b>C</b>	
Configuration .....	11
<b>D</b>	
Demo message .....	9
Device Settings.....	15
<b>F</b>	
Figures.....	23
Firewall .....	22
<b>I</b>	
Installation.....	6
Installation verification .....	20
<b>L</b>	
License registration .....	9
Location and launching.....	8
<b>M</b>	
Main Settings .....	12
MedDream SendToPACS system requirements.....	4
Monitoring Settings.....	19
<b>O</b>	
Other programs .....	22
<b>P</b>	
Pre-installation information .....	5
Product information .....	9
<b>S</b>	
Security considerations .....	21
Software Download .....	3
<b>T</b>	
Testing image converting and sending.....	20
Testing patient search in the Worklist .....	21
<b>W</b>	
Worklist Settings.....	17





MedDream is manufactured by Softneta UAB.  
Medical device class: Regulation (EU) 2017/745  
Class IIb medical device  
FDA cleared K222320  
ID of the notified body: 0197  
Document version 1.0  
Date of issue: 2023-05-16  
Language: EN  
Softneta UAB  
K.Barsausko str. 59B  
LT-51423 Kaunas, Lithuania

**CE** 0197  
Class IIb certified

**FDA** K222320  
CLEARED 510(k)