ADAPTIVE RECOGNITION

AUTOMATIC NUMBER PLATE RECOGNITION AND INDUSTRIAL CODE RECOGNITION

User Manual

ENGINE MANAGER PRO

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USER MANUAL

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INTRODUCTION

Engine Manager Pro is a utility for Windows and Linux based systems, that enables the management of all kinds of OCR engines for the CARMEN® ANPR and CARMEN® OCR Software's main module. This utility is part of the CARMEN® ANPR / OCR Software's download package, and it is automatically installed along with the software.

This document will detail the following:

- How to install engines on Windows and Linux systems
- How to use the Engine Manager PRO application
- How to remove/uninstall engines from Windows and Linux systems

This application can be found in the following folder:

- On Windows: "c:\Program Files\Adaptive Recognition\CARMEN softwares\EngineManagerPro\"
- On Linux: "\opt\gx64\EngineManagerPro\"

> **! Important**
>
> Please note, that this application is not available for ARM and CenOS6 packages on Linux.

ENGINE INSTALLATION

> **! Important**
>
> Before installing the engine(s) make sure that no other process on the PC is using CARMEN® ANPR / OCR.

Engines are to be downloaded from ATSS and arrive in a zip file. For example, the 2020 Q3 general engine: *cmanpr-gen-7.3.12.169_20Q3.zip.* This zip file contains 2 different folders:

- linux
- windows

> **Note**
>
> CARMEN® ANPR and CARMEN® OCR engines are the same from installation point of view so all the rest is true for the CARMEN® OCR engines as well.

INSTALLATION ON WINDOWS

In the "windows" folder in the zip file which you have downloaded from ATSS you can find the installer files. For example, the 2020 Q3 general engine: *cmanpr_gen_7.3.12.169_20Q3_x86.msi* or *cmanpr_gen_7.3.12.169_20Q3_x64.msi* – (32-bit and 64-bit versions). This folder also contains a text file which refers to this document and the previous version of it.

After locating the engine(s) in the selected download folder, simply double click on it to begin installation.
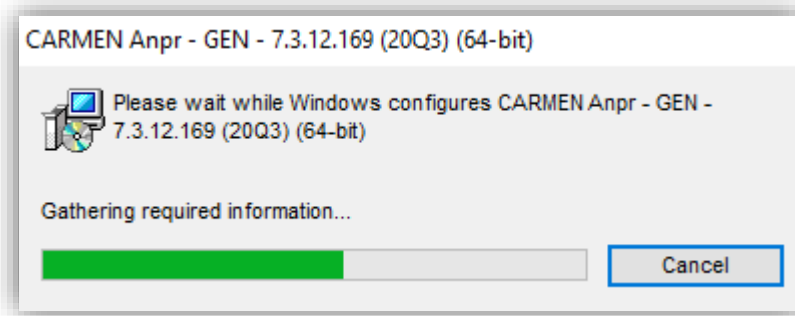
Click **yes** when asked for allowing app to make changes to your device.

> 📄 Note
>
> The newly installed engine will be the default engine.

To check the installed engine(s), open the **Engine Manager Pro** application (see chapter 2).

> 📄 Note
>
> You can locate **GXSD.DAT** in this folder: **c:/ProgramData/gx/**
> This file contains all of the installed engines and their properties. It is NOT RECOMMENDED to change this file manually, please use **Engine Manager Pro**, or the **Demo Applications** to do that.

> ❗ Important
>
> From 20Q3 engines vcredist (for Visual Studio 2015, 2017 and 2019) is a must on windows systems. You can download it from here.

INSTALLATION ON LINUX

In the "linux" folder in the zip file which you have downloaded from ATSS you can find the installer files separated in folders by architecture (arm, arm64, x64 and x86). For example, the 2020 Q3 general engine for x64 contains the following files:

Files in the package:
cmanpr-gen-7.3.12.169_20Q3-x86_64.tar.gz
_install_cmanpr-gen-7.3.12.169_20Q3-x86_64.sh
_uninstall_cmanpr-gen-7.3.12.169_20Q3-x86_64.sh

Where *"_install_cmanpr-gen-7.3.12.169_20Q3-x86_64.sh*" is the script for installing the engine and „*_uninstall_cmanpr-gen-7.3.12.169_20Q3-x86_64.sh*" is the script for uninstalling the engine.

The install script does all the necessary file copies to the relevant folders and inserts the engine properties into the gxsd.dat. The engine will be **set as the default engine**.
The uninstall script does the opposite. (For further information please check this chapter)

> 🗋 Note
>
> You can locate **GXSD.DAT** in this folder: **/var/gx**
> This file contains all of the installed engines and their properties. It is NOT RECOMMENDED to change this file manually, please use **Engine Manager Pro**, or the **Demo Applications** to do that.

To check the installed engine, open the **Engine Manager Pro** application (see chapter 2).

ENGINE MANAGER PRO application

Once the CARMEN® ANPR / OCR Software and the recognition engine(s) have been installed open the Engine Manager Pro application.

On Windows: navigate to **Start / All Programs / ARH Inc. / Engine Manager** or type "Engine Manager" in the search box of your **Start Menu**.

On Linux: navigate to **/opt/gx64/EngineManagerPro/**
When you start the utility, the following window will appear:

❗Important

> If you want to take effect your modification in this application, you have to run it as an **administrator** or **root**, otherwise the application will not be able to save the changes into **GXSD.DAT** file!
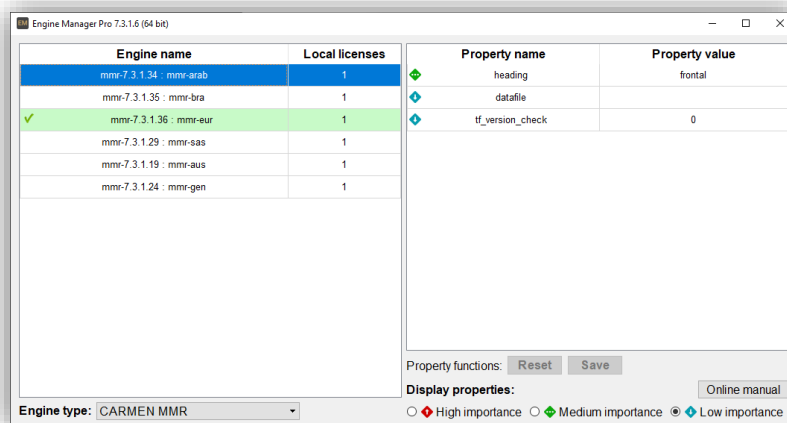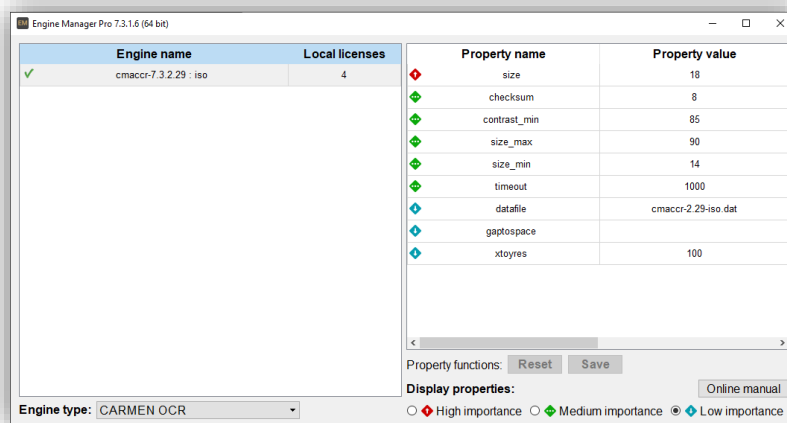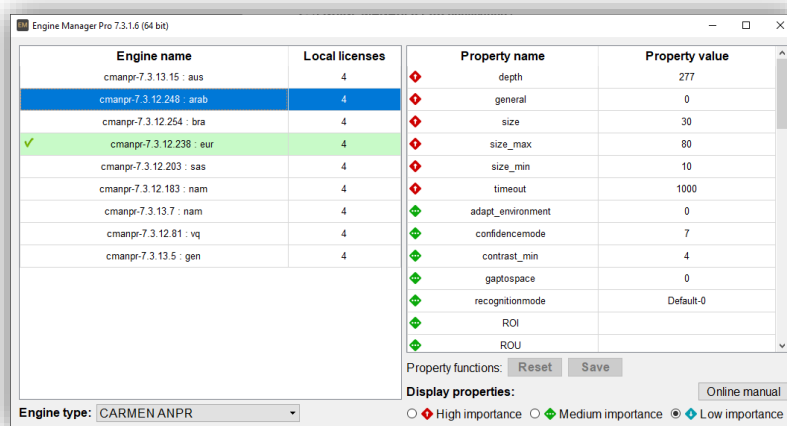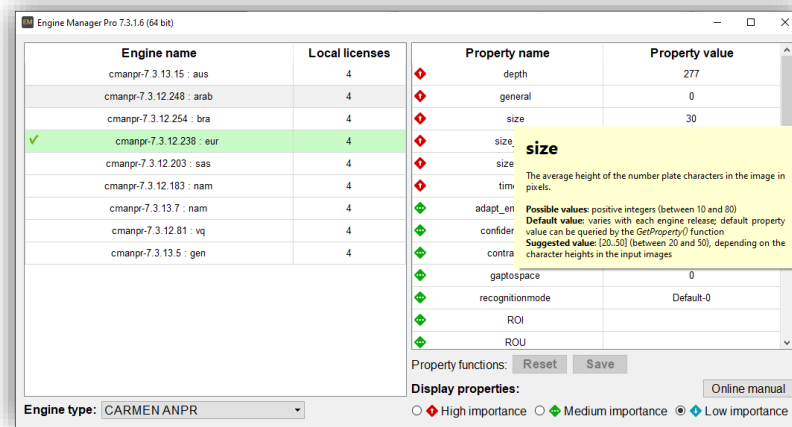

Engine name:
List of all successfully installed engines.

Local Licenses:
Available number of licenses for the given engine (Single: 1, Dual: 2, Quad: 4)

Property name / Property value:
Properties and their values for finetuning the engine. For quick information about the property, hover the mouse over it.

For detailed information about the properties, click "Online manual" button which will open this link in case of ANPR engines, this link in case of OCR engines and this link in case of MMR engines.

Engine type:
With this selector, you can filter the installed engines to show the ANPR regional engines (like EUR, CAS, NAF, etc...), the ORC related engines (like ACCR, UIC, ISO, etc ...) and the MMR regional engines (like EUR, CAM, etc ...).

Display properties:
With this selector, you can filter the engine properties by their importance or their impact to the recognition results.

Default engine:
After installing a new engine, that will be set as the default engine. It is highlighted with green and a checkmark is also visible to the left of the engine name.

Changing the default engine (which is currently in use):
If you want to change the default engine, right click on the engine which you would like to make as default and click "set as default".
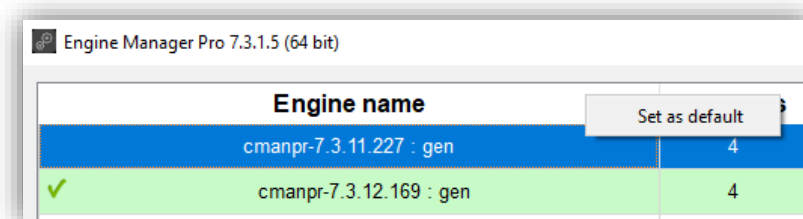
UNINSTALLING ENGINE(S)

> 🗋 Note
>
> After deletion of an engine which is the current default engine, the default engine will be the first found engine in the GXSD.DAT file.

FROM WINDOWS

Go to Windows ➔ Settings ➔ Apps & features: select the desired engine from the **Installed engines**. Once the engine that you would like to uninstall have been selected, click the [Uninstall] button to uninstall the selected engine.
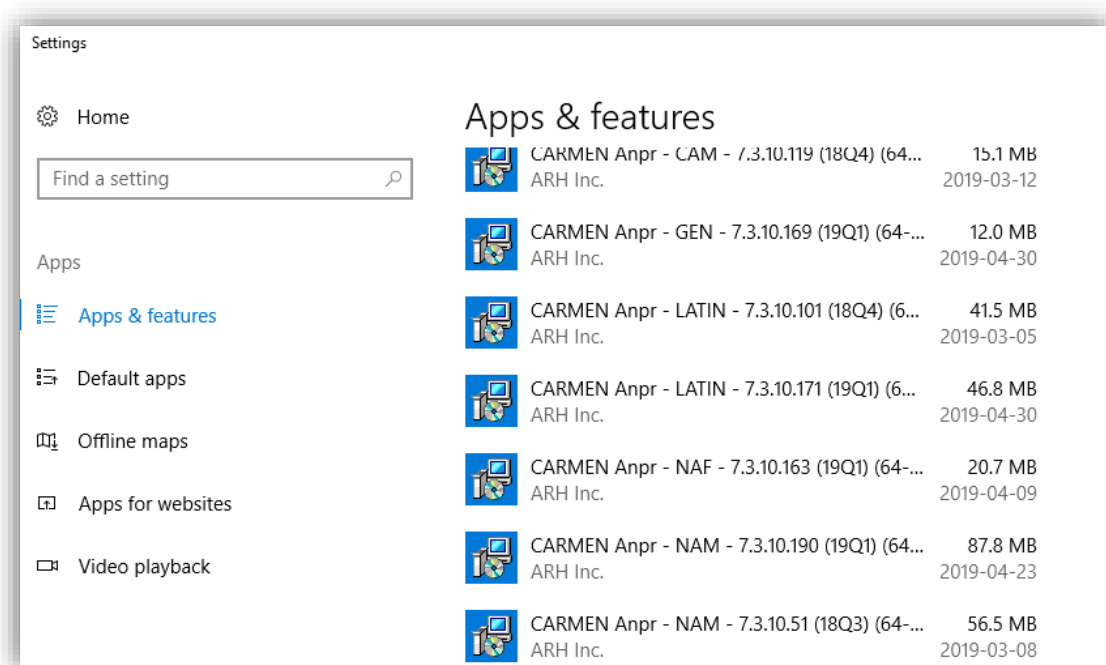
FROM LINUX

The „*uninstall_cmanpr-gen-7.3.10-169_19Q1-x86_64.sh*" is the script for uninstalling the engine.

The uninstall script does all the necessary file deletion from the relevant folders and deletes the engine properties from the gxsd.dat.

ENGMAN
CONSOLE APPLICATION

On Linux you can find this application in this folder: **/opt/gx64/EngMan/**
On windows this application is not part of the installed package, please turn to AR support if you need this application.

If you run this application in Terminal, or Command Prompt: you will get the following help:
"Use: EngMan_x64.exe/EngMan_x86_64.out version | -h | -? | [[list {-lic} | getdef | setdef -e:engine] {-anpr} {-ocr} {-mmr} {-alltype}] {-json} {-o:outputfile}]
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Parameters:
===========
version   Displays the version information of the program.
-h, -?   Shows this help.

List   Lists the installed engines. If no -anpr, -ocr and -mmr switches added lists anpr, ocr
               and mmr engines too.
    -lic   checks the licenses for the engine

getdef   Gets the default engine.

setdef   Sets the default engine.
    -e:engine the name of the engine to set the default engine.

Global parameter (all commands except version and help):

-anpr   Runs the command on the anpr engines
-ocr   Runs the command on the ocr engines
-mmr   Runs the command on the mmr engines
-alltype   Runs the command on the anpr,ocr and mmr engines
-json   The program create json format output.
-o:outputfile The program redirects the output from display to the outputfile.

Some examples:
Gets the installed ANPR engines:
    Command: EngMan_x64.exe/EngMan_x86_64.out list -anpr
    Output: Engines (ANPR):
                ==============
                cmanpr-7.3.14.51 : arab
                cmanpr-7.3.14.101 : eur
                cmanpr-7.3.14.95 : nam

Gets the installed ANPR engines with license checking:
    Command: EngMan_x64.exe/EngMan_x86_64.out list -lic -anpr
    Output: Engines (ANPR):
                ==============
                cmanpr-7.3.14.51 : arab License: FOUND
                cmanpr-7.3.14.101 : eur License: FOUND
                cmanpr-7.3.14.95 : nam License: NOT FOUND

Gets the installed engines (ANPR, OCR, MMR) with license checking in json format:

Command: EngMan_x64.exe/EngMan_x86_64.out list -lic -alltypes -json

Output:

```json
{
      "Engines (ANPR)": [
            {
                  "Engine": "cmanpr-7.3.14.51 : arab",
                  "License": "FOUND"
            },
            {
                  "Engine": "cmanpr-7.3.14.101 : eur",
                  "License": "FOUND"
            },
            {
                  "Engine": "cmanpr-7.3.14.95 : nam",
                  "License": "NOT FOUND"
            }
      ],
      "Engines (MMR)": [
            {
                  "Engine": "mmr-7.3.2.31 : mmr-eur",
                  "License": "FOUND"
            },
            {
                  "Engine": "mmr-7.3.2.27 : mmr-arab",
                  "License": "FOUND"
            },
            {
                  "Engine": "mmr-7.3.2.32 : mmr-nam",
                  "License": "NOT FOUND"
            }
      ],
      "Engines (OCR)": [
            {
                  "Engine": "cmocr-7.3.2.100 : isoilu",
                  "License": "FOUND"
            } ,
            {
                  "Engine": "cmocr-7.3.2.84 : uic",
                  "License": "FOUND"
            },
      ]
}
```

Gets the default engines and write the result to the result.txt:

Command: EngMan_x64.exe/EngMan_x86_64.out getdef -alltype -o:result.txt

Output: The "result.txt" file in the same folder with the following content:

```
Default anpr:   cmanpr-7.3.14.51 : arab
Default mmr:   mmr-7.3.2.31 : mmr-eur
Default ocr:     cmocr-7.3.2.100:isoilu
```

Sets the default ocr engine:

Command: EngMan_x64.exe/EngMan_x86_64.out setdef -e:"cmocr-7.3.2.84 : uic" -ocr"

Output: nothing, but after checking the default 'ocr' engine with this command:
EngMan_x64.exe/EngMan_x86_64.out getdef -ocr the output will be:
Default ocr: cmocr-7.3.2.84:uic

Check the version of this application:

Command: EngMan_x64.exe/EngMan_x86_64.out version

Output: Engine Manager (console version)
Version: 7.3.1.5
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