iSentry Firefly

Installation Guide

Version 2025R3_1.0

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Introduction

This document describes steps to install iSentry Firefly product on Windows and Linux along with the Deep learning models and their optimizations.

Deployment note

Windows

iSentry Firefly version 2025R3 on Windows contains ONE installer file.

It is highly recommended to also install the deep learning models for a full experience.

These models will be automatically installed during the installation of iSentry by calling iSentry Models installer, this installer can be called at any time as standalone installation and select a folder where the user would like to place the deep learning models.

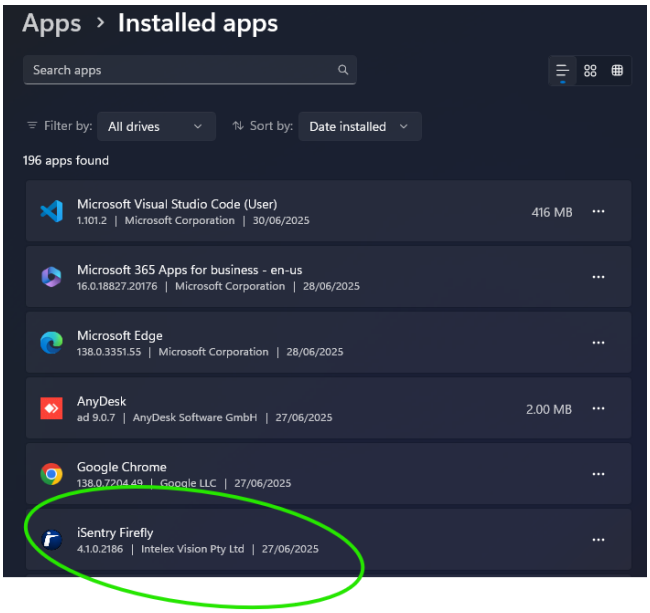
The user will only pick which models will be suitable for the available hardware (Openvino and/or NVIDIA).

The flow for installation can be depicted as:

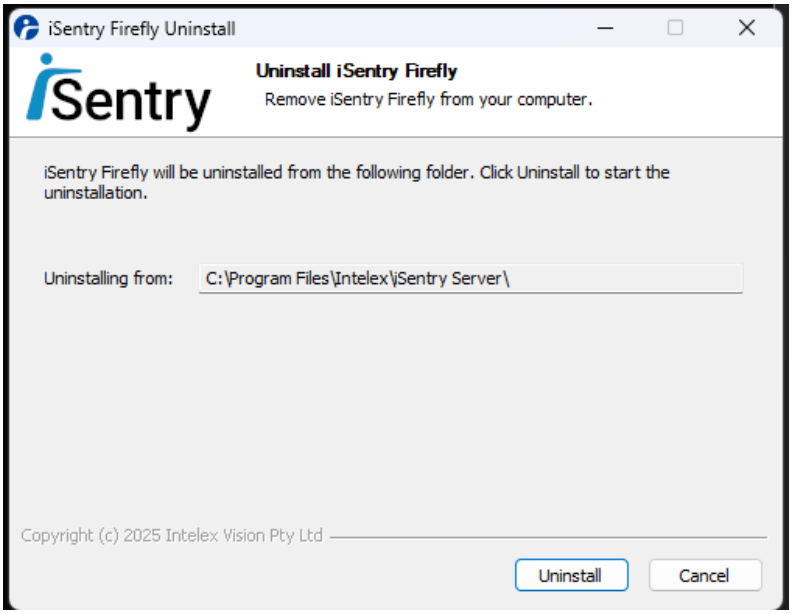
Uninstall previous version

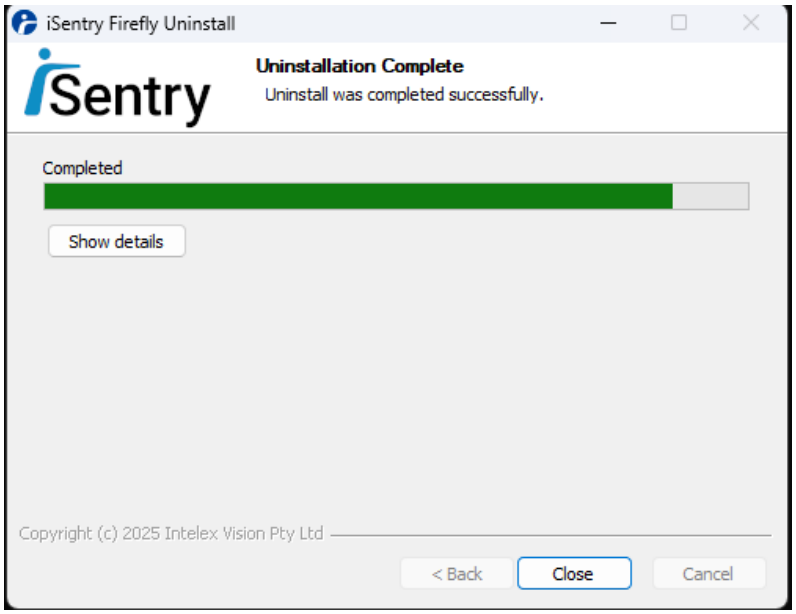
Please Skip this step if installing iSentry on a fresh machine.

Go to Add/Remove files and select iSentry Firefly:



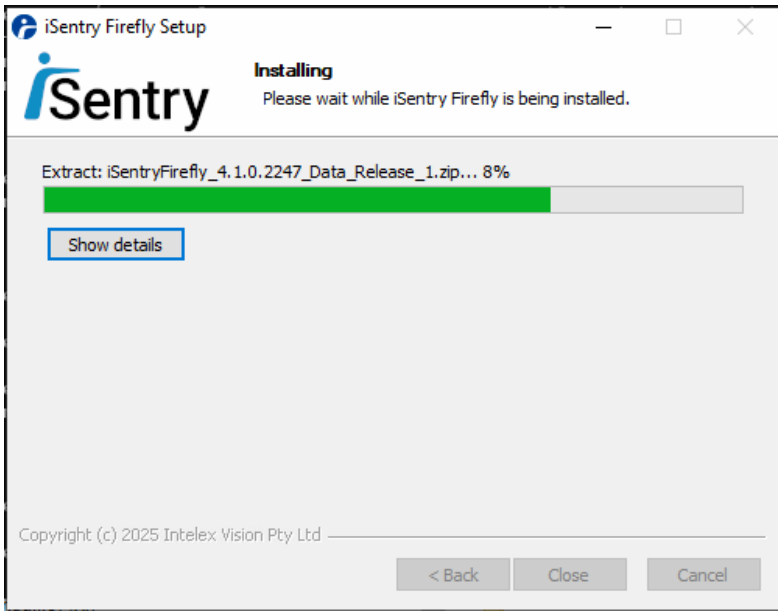
Click uninstall and wait until the process is complete,



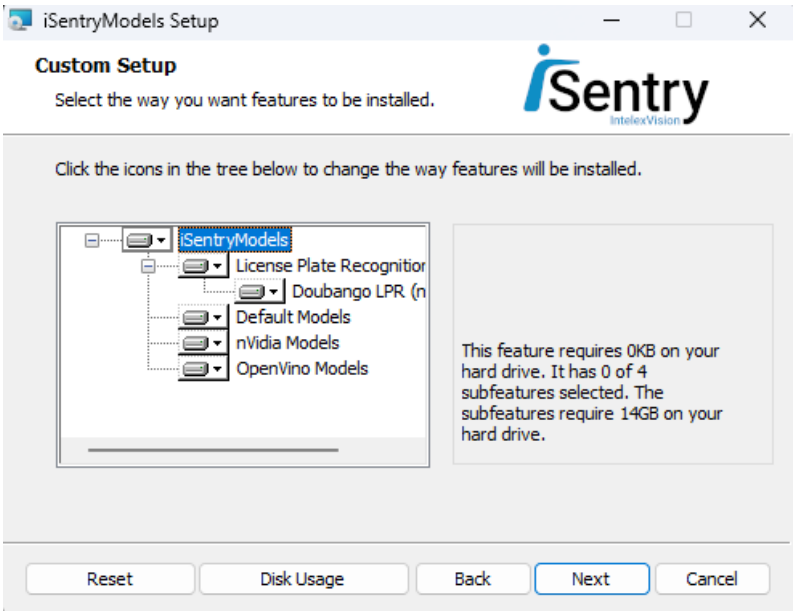

iSentry Firefly Uninstall
iSentry
Uninstallation Complete
Uninstall was completed successfully.
Completed
Show details
Copyright (c) 2025 Intelex Vision Pty Ltd
< Back
Close
Cancel

Install the standard iSentry Firefly build.

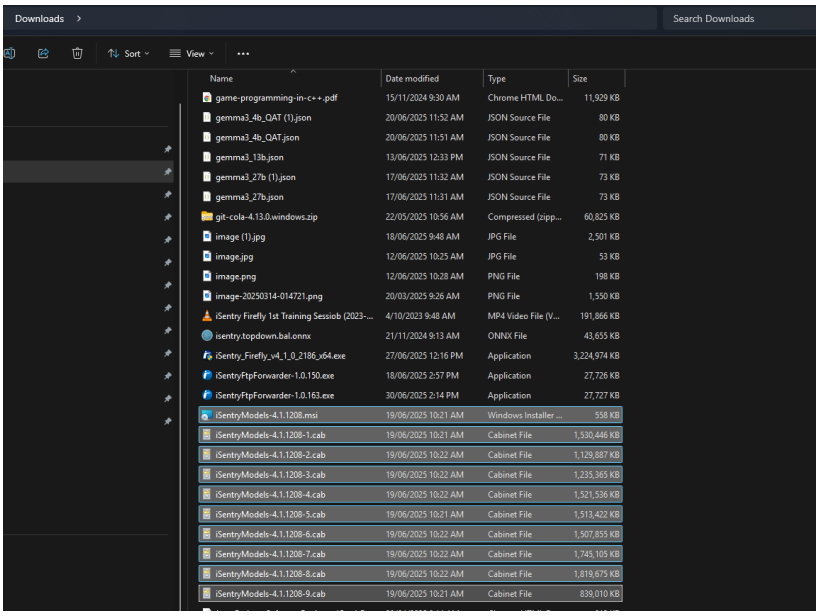
Double click the installation exe file (e.g: *iSentry_Firefly_v4_1_0_2186_x64)* and follow the setup wizard.



iSentry Models setup will be launched automatically. You have to select the type of installation determined by your hardware (Openvino or NVIDIA) and whether or not you will be using License Plate Recognition (LPR):

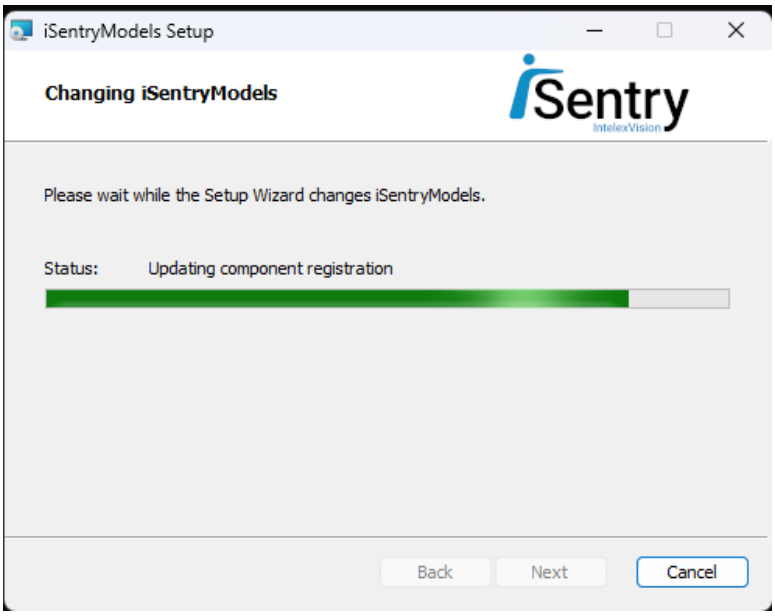


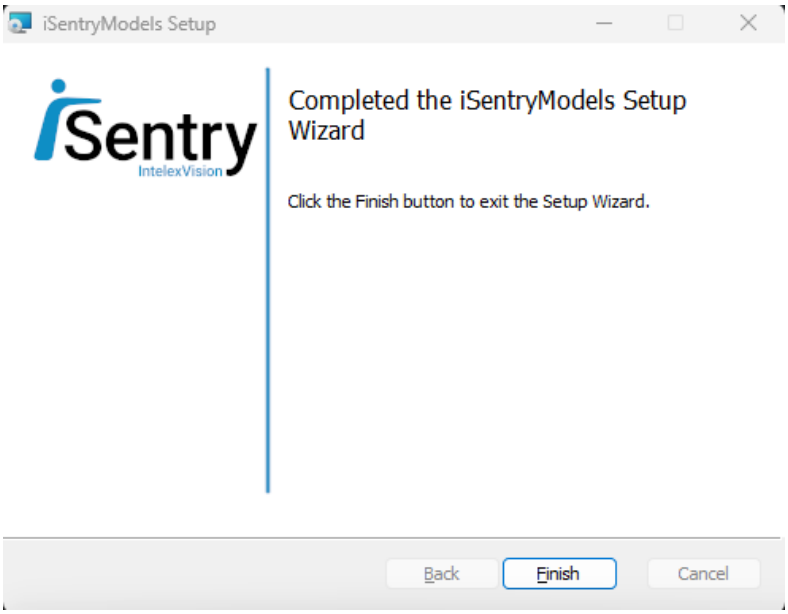
⚠Keep in mind additional files are required to be present in the same directory as the installer, these files are the one provided along the iSentry Models installer (the so-called .cab files, or cabinets):



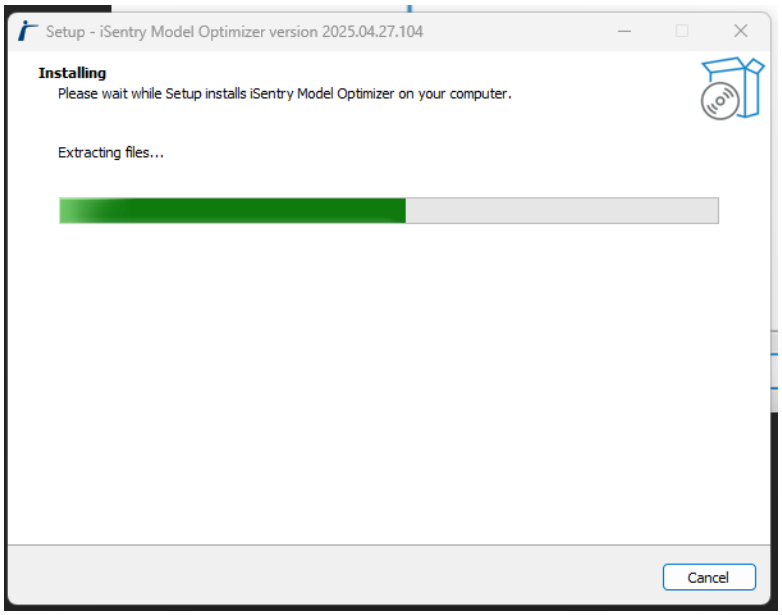
These files are required to progress with the installation of iSentry.

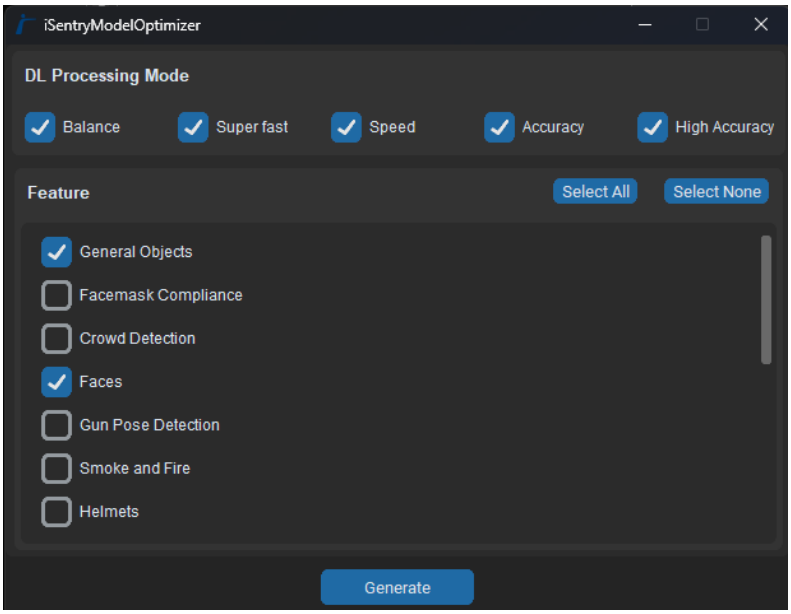
Wait for the installer to finish.





After few minutes you will be presented with the iSentry Models Optimization:





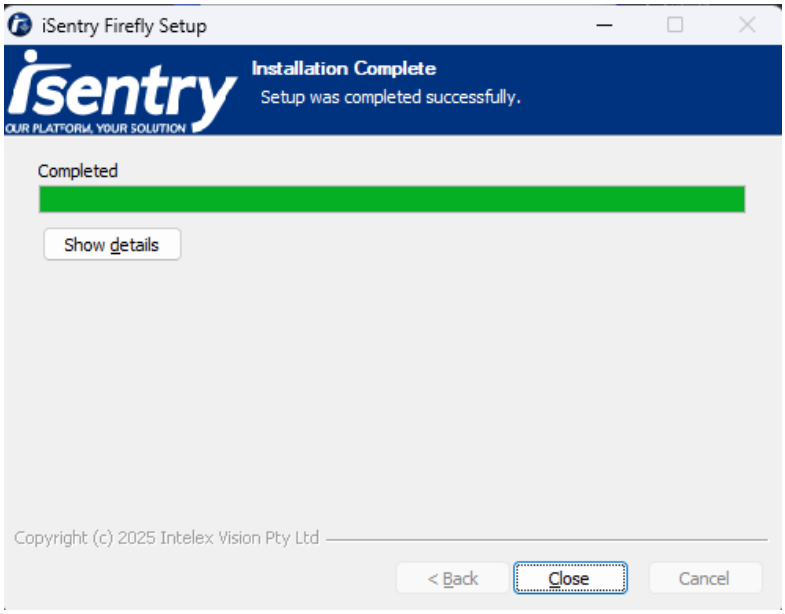
This tool allows you to optimize your models and accelerate their execution even further. Please keep in mind that building the engine for your models for your nVidia GPU is time consuming.

⚠ Allow more than 2 hours for all them to be generated.

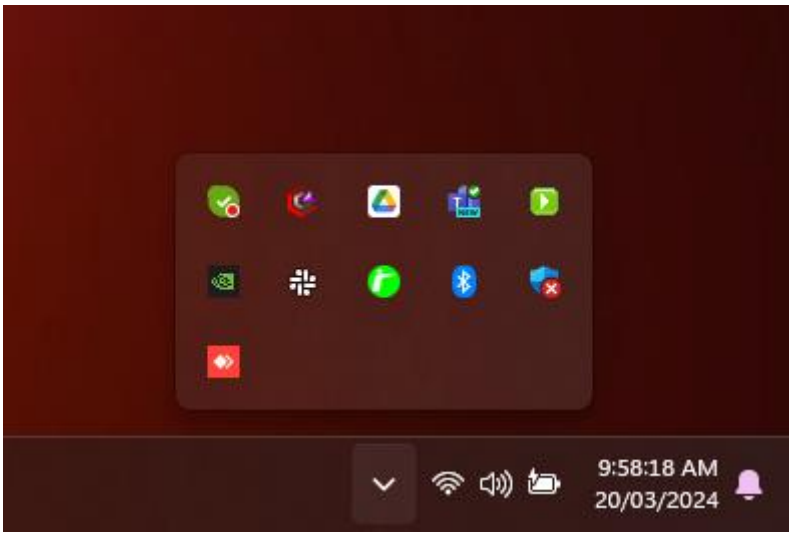
You can skip this or come back later to the Model Optimizer tool. To close is and finish the installation just close the window pressing X and iSentry Firefly fill start running.

Depending on the version you are upgrading from your Firefly you might or may not need to optimize the models again. The tool will check it for you, if you cannot wait, again, you can close it and come back later to generate the optimize version of your models.

See the icon tray:



Eventually the icon will turn green:



Post installation

GPU driver check

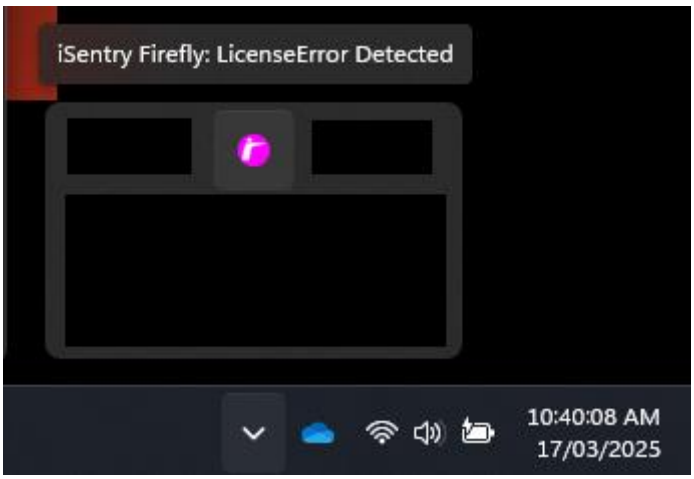
Make sure the latest Nvidia/Intel driver has been installed. This version of Firefly requires CUDA 12.

Firewall check

⚠ Make sure the inbound port 8123 and 8124 is allowed or make sure the app iSentryWebSettings.exe is allowed through Windows firewall.

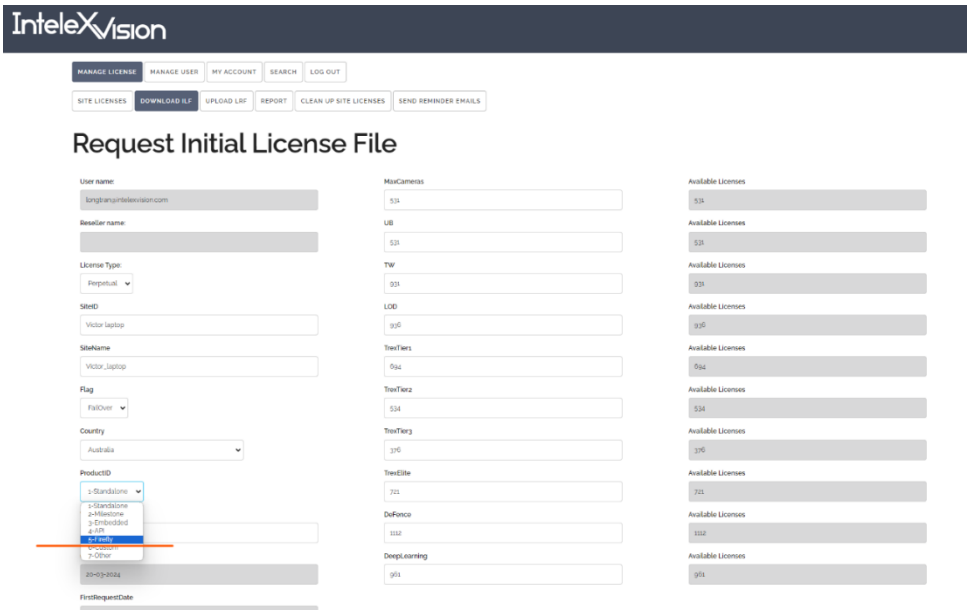
License

iSentry Firefly on windows can be licensed by local license or live licensing server (LLS). If you run iSentry Firelfy and you see a pink icon you have to license it.



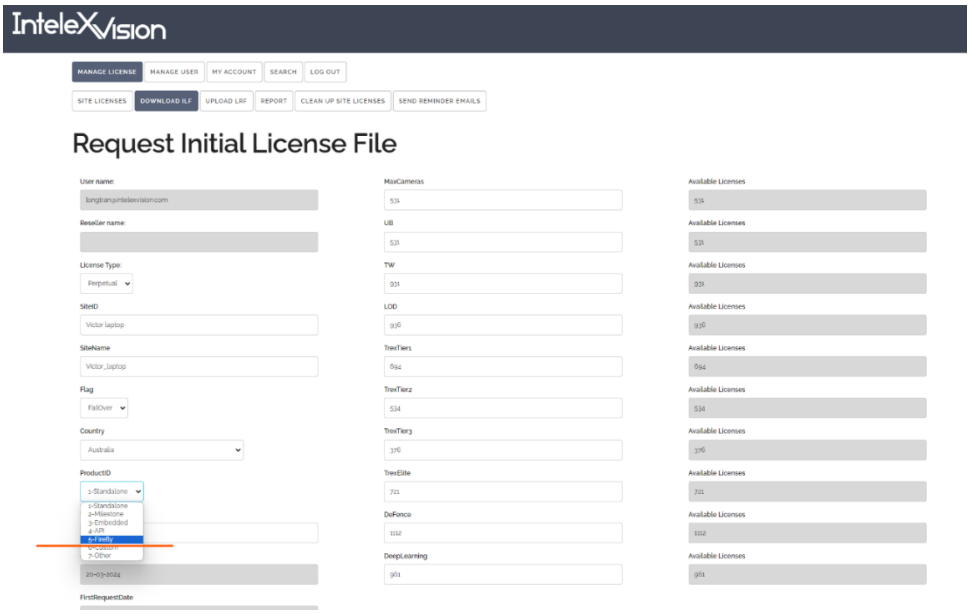
Please check relevant documents for details.

As per reference document start in:

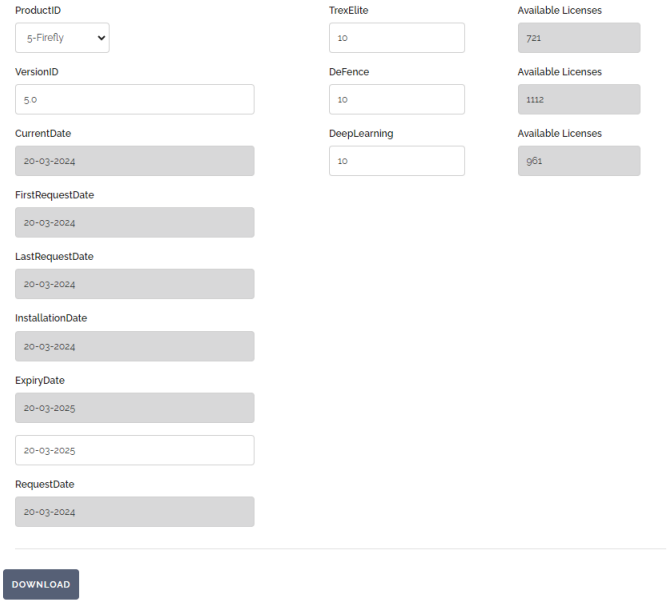


When doing LLS, the steps for Firefly are:

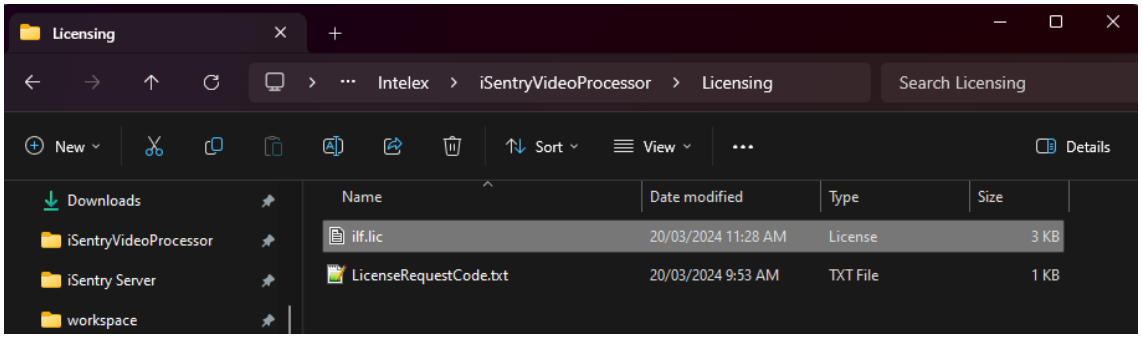
1) Select Firefly



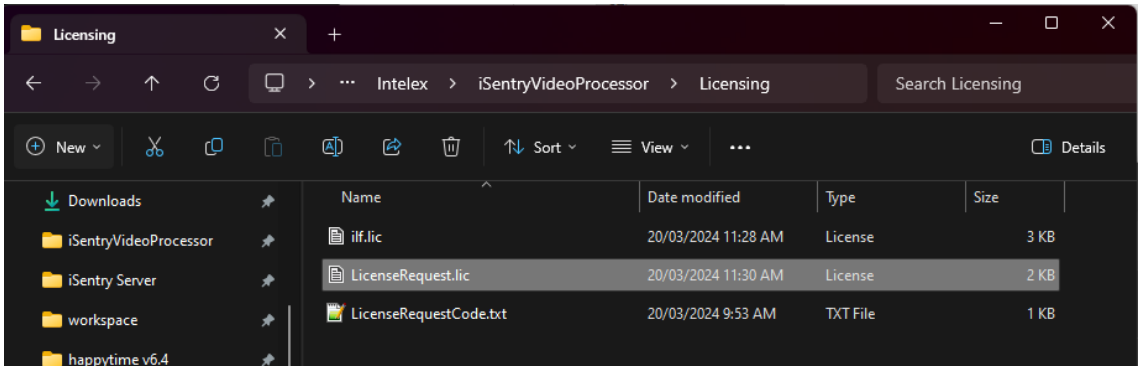
2) Download the file ilf.lic from the Portal by pressing “Download” button:



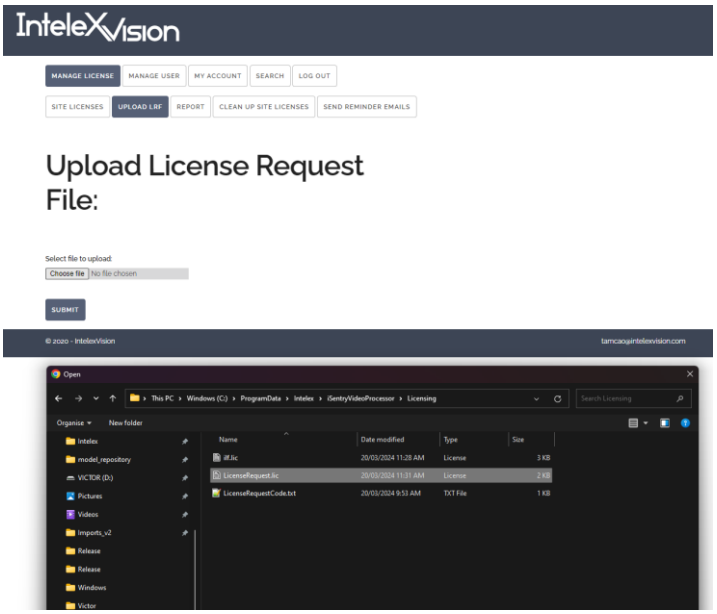
And place the file into default folder:
C:\ProgramData\Intelex\iSentryVideoProcessor\Licensing



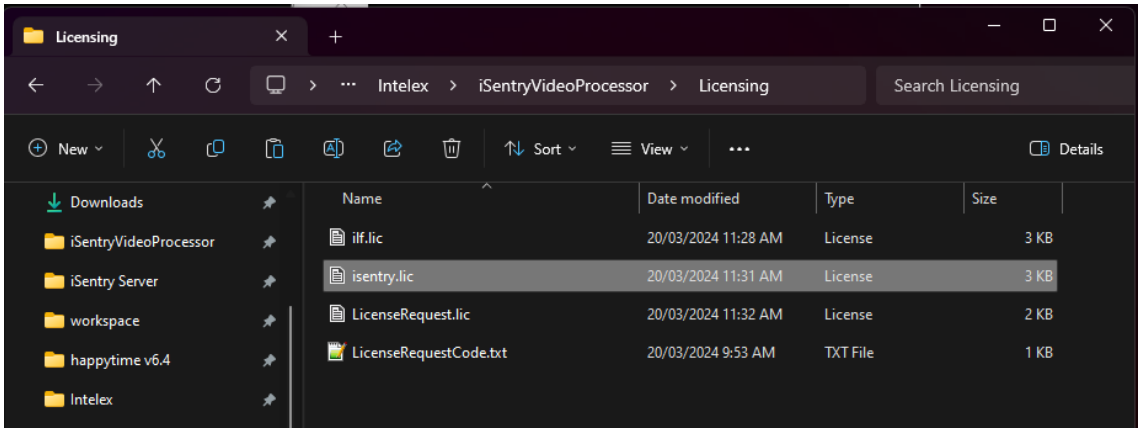
Then start Firefly from the iconTray icon and wait for the LicenseRequest.lic file to be generated:



This file should be uploaded to the Portal as detailed in the next image:



After pressing Submit button the isentry.lic (license) is downloaded and we can then move this file into C:\ProgramData\Intelex\iSentryVideoProcessor\Licensing to complete the licensing process of Firefly:



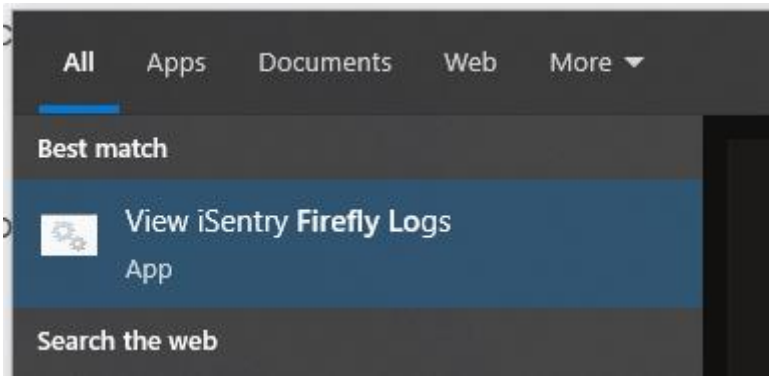
Configuration

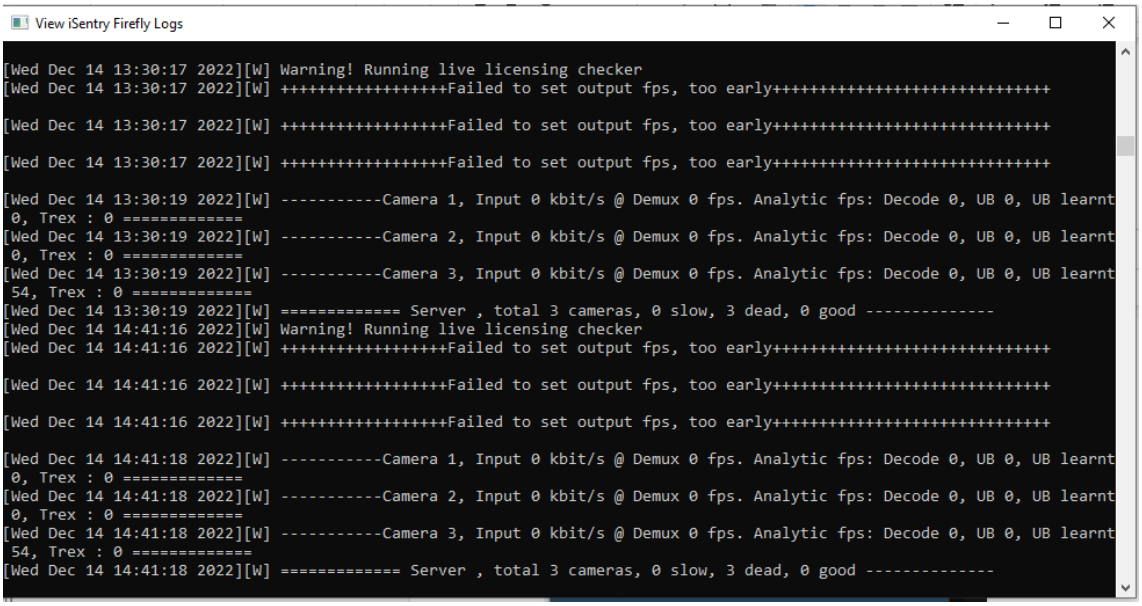
Access the iSentry Web Settings for configurations of

- Live licensing server
- Add camera
- Analytic
- Web client Integration

Check log file

There is a “live” console log equivalent that can be used to monitor or debug iSentry Firefly without the need to run it as console. To view it, from Start Menu, search for *View iSentry Firefly logs* and hit enter or click on the appropriate result





Linux

The installation in Linux systems lacks UI hence we have developed a docker release steps to make the experience smooth.

Docker properly installed is required prior to any further step.

Download images via docker hub repo

iSentry Firefly version 2025R3 is packed under docker image

Firefly images names list:

- Firefly image: isentryintelex/isentry:firefly-2025R3
- Web API/Settings: isentryintelex/isentry:webserver_2025R3
- Health Monitor: isentryintelex/isentry:autoheal

Sample docker-compose script .yml:

```
version: '3.0'
services:
   http_file_server:
      image: isentryintelex/isentry:webserver_${API_VER} # double check version
using docker images command
```

```
      healthcheck:
         test: curl --fail http://localhost:8123/ || curl -k --fail
https://localhost:8123 || exit 1
         interval: 1m
      volumes:
         - ${ISENTRY_PATH}:/usr/src/app/Intelex # CHANGE THE [ISENTRY_PATH] TO
A REAL PATH
         - "/etc/timezone:/etc/timezone:ro"
         - "/etc/localtime:/etc/localtime:ro"
         #- ./certs:/app/sslCerts
      ports:
         - 8123:8123
         #- 8124:8124 # uncomment if enable IV_ENABLED_WEB_LOGIN
      #entrypoint: /bin/bash
      environment:
         - IV_ENABLE_HTTPS_API=${IV_ENABLE_HTTPS_API}
         - ENABLED_WEB_LOGIN=${IV_ENABLED_WEB_LOGIN}
      restart: unless-stopped
   autoheal:
      restart: always
      image: isentryintelex/isentry:autoheal
      environment:
         - AUTOHEAL_CONTAINER_LABEL=all
      volumes:
         - /var/run/docker.sock:/var/run/docker.sock
   iSentryFirefly_1:
      image: isentryintelex/isentry:firefly-${FIREFLY_VER} # double check
version using docker images command
      container_name: iSentryFirefly_1
      environment:
         - SERVERID=ServerID_1
         - IV_ENABLE_HTTPS_API=${IV_ENABLE_HTTPS_API}
         - NVIDIA_VISIBLE_DEVICES=all
      volumes:
         - ${ISENTRY_PATH}:/root/Intelex
         - /dev:/dev
         - "/etc/timezone:/etc/timezone:ro"
         - "/etc/localtime:/etc/localtime:ro"
         - ./models:/app/bin/models
      restart: unless-stopped
      network_mode: host
      cap_add:
         - SYS_PTRACE
         - SYS_RAWIO
      privileged: true
      logging:
         options:
            max-size: "501m"
            max-file: "10"
      entrypoint: ./runVP.sh "${IV_DETECTOR}" "${MO_DL_MODE}"
${ENABLED_MODEL_OPTIMIZER}
      tty: true
      stdin_open: true

      runtime: nvidia  # enable for Nvidia containers, comment if running on
non nvidia machine
```

Example of config.txt file

The lines starting with # are comments

```
#############################################################################
# IMPORTANT! ISENTRY_PATH TO SAVE THE SETTINGS FILE and LEARNING DATA.
ISENTRY_PATH=/home/user/Intelex
#############################################################################

# FIREFLY VERSION
FIREFLY_VER=2025R3


# WEB SETTINGS VERSION
API_VER=2025R3

# SOME EXTRA FLAG 0: DISABLE, 1: ENABLED

## ENABLE HTTPS MODE
IV_ENABLE_HTTPS_API=0

# ENABLE WEB SETTINGS LOGIN. IF ENABLED, MAKE SURE PORT 8124 IS ENABLED IN DOCKER-
COMPOSE.YML FILE
IV_ENABLED_WEB_LOGIN=0

# RUN MODEL OPTIMIZER ONLY - REQUIRE FOR NVIDIA
=====================================================

#ENABLED_MODEL_OPTIMIZER=1

## use keyword to add model
IV_DETECTOR="objcl ppe weapon-pose fire fall fighting"

# OBJECT_DETECTION_COLOR:     objcl
# FACE_DETECTION:             face
# HELMET_DETECTION:           helmet
# COLOR_CLASSIFICATION:       carcolor
# FIRE_N_THINGS_DETECTION:    fire
# FACE_MASK_COMPLIANCE:       facemask
# ALL_IN_ONE:                 allinone
# OBJECT_DETECTION_GRAYSCALE: objcl.gray
# POSE_VERIFICATION:          pose
# ACTION_RECOGNITION:         action
# PPE_DETECTION:              ppe
# WHEELCHAIR_DETECTION:       wheelchair
# HOSPITAL_BED_DETECTION:     hospbed
# WEAPON_DETECTION:           weapon
# ONE_HAND_RAISED:            handraised
# OBJECT_DETECTION_TOPDOWN:   topdown
# CROWD:                      crowd
# FIGHTING_DETECTION:         fighting
# FALL_DETECTION:             fall
# WEAPON_POSE_DETECTION       weapon-pose


# list used deep learning mode here, separated by a space " ". bal: BALANCE, acc:
ACCURACU, sft: SUPERFAST, spd: SPEED, hacc: high accuracy
MO_DL_MODE="bal spd"

#=============================================================================
================
```

Single instance

- Check all of PRE-REQUISITIES requirement to run docker container with CUDA container toolkits
- Copy all needed Deep Learning Models to models folder. This can be done by running the Windows iSentry Models installer and copy from your Windows machine to the Linux machine (You can use vscode or WinSCP if you feel more comfortable than using a terminal)
- Edit config.txt file to changes
    - iSentry Path
    - Firefly image name
    - Web Settings docker image name
    - HTTP/HTTPS option
    - User Login option
    - If using model optimizer, edit:
    - IV_DETECTOR to add/remove detection models. E.g "objcl fire" will tell model optimizer to generate object detection and fire detection model
    - MO_DL_MODE to add/remove detection mode. E.g "bal spd" will tell model optimizer to generate balance models and speed models
- To run model optimizer, execute command below:

ENABLED_MODEL_OPTIMIZER=1 docker compose --env-file config.txt up

- To run Firefly, execute command below:

docker compose --env-file config.txt up -d

- To stop Firefly, run command below:

docker compose --env-file config.txt down

Multiple instances

- Check docker-compose-multi-instances.yml file for content of multiple instance script
- Run command

docker compose --env-file config.txt -f docker-compose-multi-instances.yml up -d

- Stop command

docker compose --env-file config.txt -f docker-compose-multi-instances.yml down

- NOTE: access websettings will require extra param ?ServerID=xx, e.g http://192.168.0.123:8123/settings?ServerID=1

Tips

Simplify docker command by rename config.txt to .env

You can simplify docker command FROM:

```
docker compose --env-file config.txt up -d
```

TO:

```
docker compose up -d
```

To rename config.txt to .env do move command:

```
mv config.txt .en
```