

pITX-i.MX8M HAILO

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Revision History

Rev. Index	Brief Description of Changes	Date of Issue
1.0	First official version	2022-02-22
1.1	Version including DEMO setup	2022-03-09

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Kontron pitx-iMX8M HAILO

Requirements

- Kontron pitx-imx8m module
- Hailo module (in Starterkit pre-installed in M.2 slot on backside of piTX-iMX8M)
- Serial connection to the Kontron pitx-imx8m module
- uSD card
- USB camera (resolution: 1280 X 720)
- HDMI monitor

Documentation

- <https://hailo.ai/developer-zone/documentation/>
hailo.ai/developer-zone/documentation/

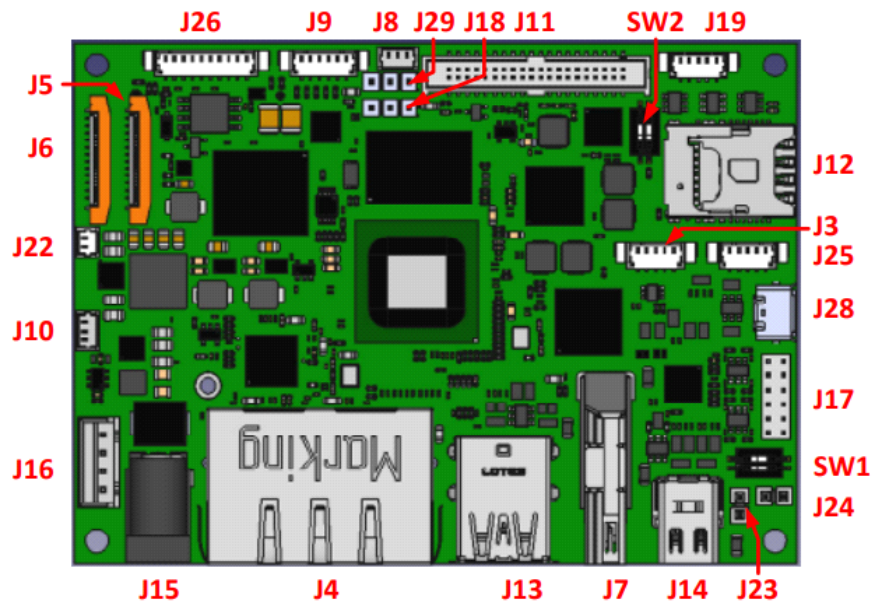


Figure 1: piTX-i.MX8M Module

2/ Download and install the demo image

The software image can be found on the Kontron customer section <https://emdcustomersection.kontron.com>. Please navigate to the product „pITX-imx8m“ and use the menu „Software & Demo Images“.

1. Attach installation media (uSD card) to Linux host computer and determine a device node by analyzing system logs::

```
$ dmesg | tail | grep sd
```

NOTICE

An SD storage should be greater than 2 GB.

2. Write the wic image to uSD card:

```
# bzcat <DEMO_IMAGE>.wic.bz2 | dd of=/dev/sdX bs=1M conv=fsync
```

NOTICE

sdX was determined on the previous step. Make sure you have chosen the right device. Writing to the wrong device may result in loss of data.

3. Configure serial connection on J19 port (Baudrate 115200), insert uSD card into J12 and power on the board.
4. Interrupt the boot process to enter U-boot command line by pressing any key.
5. Run the following command to boot from uSD card:

```
=> run bootcmd_mmc1
```
6. After board is started login as user root. No password is needed.

3/ Evaluation of the functionality

Check if hailo driver is loaded:

```
# hailortcli scan
```

Expected output:

```
Hailo PCIe Devices:  
[-] Device BDF: 0000:01:00.0
```

Detection example with camera stream:

```
# cd apps/detection  
# ./detection.sh --input <video device>
```

Depending on the camera specification it might be necessary to adopt the frame-rate in the file "detection.sh" in line 56.



About Kontron

Kontron, a global leader in embedded computing technology and trusted advisor in IoT, works closely with its customers, allowing them to focus on their core competencies by offering a complete and integrated portfolio of hardware, software and services designed to help them make the most of their applications.

With a significant percentage of employees in research and development, Kontron creates many of the standards that drive the world's embedded computing platforms; bringing to life numerous technologies and applications that touch millions of lives. The result is an accelerated time-to-market, reduced total-cost-of-ownership, product longevity and the best possible overall application with leading-edge, highest reliability embedded technology.

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