AN15033

i.MX Camera Software Pack (i.MX 95 15 mm x 15 mm FRDM)

Rev. 1.0 — 15 July 2026 Application note

Document information

Information	Content
Keywords	AN15503, i.MX 95 15 mm x 15 mm FRDM, camera software pack
Abstract	This document outlines the contents of the i.MX camera software pack for the i.MX 95 15 mm x 15 mm FRDM.

1 Introduction

The i.MX camera software pack includes camera drivers, libraries, calibration files, and Yocto recipes. These components enable customers to use selected off-the-shelf camera modules out of the box with the i.MX 95 15 mm x 15 mm FRDM internal image signal processor (ISP).

It describes steps for using supported camera modules, with the i.MX 95 15 mm x 15 mm FRDM ISP for the following supported BSPs:

• LF6.18.2-1.0.0

2 Hardware and software requirements

Table 1 describes the hardware and software requirements for using the software pack.

Table 1. Hardware and software details

Category	Description
Hardware	• NXP i.MX 95 15 mm x 15 mm FRDM • 22-pin/15-pin camera connector FPC cable • Supported camera modules • Display output (Monitor) and HDMI cable • Personal computer
Software	• Ubuntu 22.04 LTS (If building an image using Yocto) • Serial Terminal: Tera Term setup for Windows OS

2.1 NXP i.MX 95 15 mm x 15 mm FRDM

Figure 1 shows the top view of the i.MX 95 15 mm x 15 mm FRDM board.

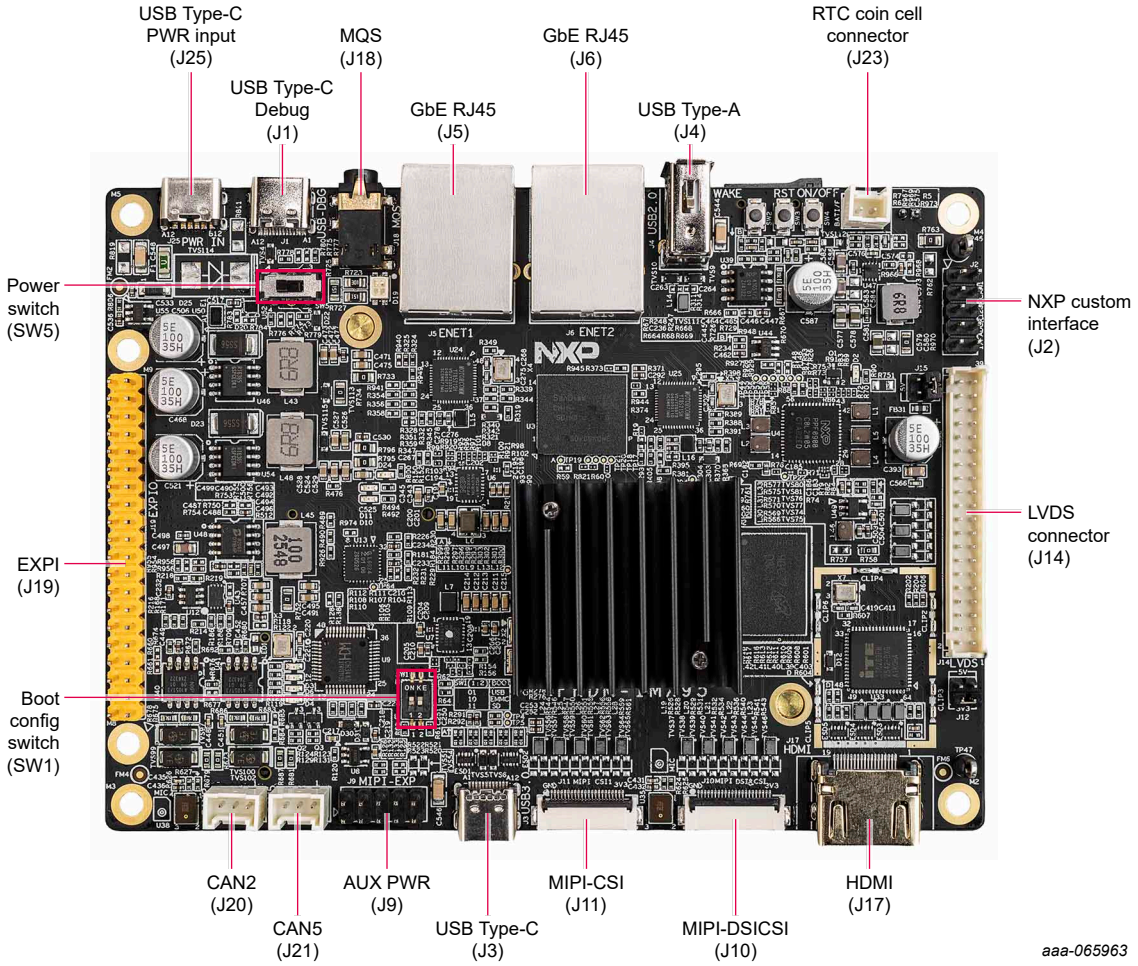

Figure 1. i.MX 95 15 mm x 15 mm FRDM board top view

Note: *For more information about the i.MX 95 15 mm x 15 mm FRDM board, refer to [FRDM i.MX 95 Development Board].*

2.2 Supported camera modules

The currently supported camera modules include a wide variety of features from Camera Expansion Interface compatible modules, which can be purchased on any online store.

- PiBiger Sony IMX 219 (FOV60 lens):
  - 8 MP (3280 × 2464 active resolution)
  - Current enabled resolutions are:
    - 1920 x 1080 30 fps
    - 3280 x 2464 30 fps

Figure 2. PiBiger Sony IMX 219

- Arducam Sony IMX 477
  - 12 MP
  - Current enabled resolutions are:
    - 3840 x 2160 at 15 FPS

Figure 3. Sony IMX 477 camera module

2.3 Camera FPC cable

The 22 pin (0.5 mm pitch) to 15 pin (1 mm pitch) FPC cable comes included with camera modules supporting the 22-pin camera connector interface.

Figure 4. 22 pin (0.5 mm pitch) to 15 pin (1 mm pitch) FPC cable

Figure 5. 22-pin 0.5 mm pitch FPC Flex Cable for DSI CSI

2.4 Flashing image to microSD card on i.MX 95 15 mm x 15 mm FRDM

Use either of the commands below, as needed on a microSD card with at least 16 GB capacity.

Use open source Flash tool application, for example, RUFUS.exe (https://github.com/pbatard/rufus/releases), balenaEtcher flasher tool (https://github.com/balena-io/etcher/releases) on Windows OS/Ubuntu.

OR

Use the `dd` command on Ubuntu:

1. Attach a microSD card into a PC running Ubuntu.
2. Change `sd<partition>` below to match the one used by the microSD card. Example commands with full/multimedia BSP images:

```
sudo dd if=imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs-<date-timestamp>.
wic of=/dev/sd<partition> bs=1M conv=fsync

zstdcat imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs-<date-timestamp>.
wic.zst | sudo dd of=/dev/sd<partition> bs=1M conv=fsync
```

OR

Use Universal Update Utility (UUU) to flash BSP images to a microSD card directly on i.MX 95 15 mm x 15 mm FRDM:

1. Download UUU (https://github.com/nxp-imx/mfgtools/releases).
2. Place the downloaded “uuu.exe” (for Windows OS) or “uuu” (for Ubuntu) in the same directory as the BSP image to be flashed.
3. Set i.MX 95 15 mm x 15 mm FRDM to download mode (01) using boot switch SW1.
4. Attach USB Type-C cable to USB port J3 in Figure 1 on i.MX 95 15 mm x 15 mm FRDM board.
5. Insert a microSD card in the microSD card slot.
6. Connect USB cable to Windows PC. Connect USB Type-C power (J25). Use power switch SW5 to Turn ON the i.MX 95 15 mm x 15 mm FRDM board.
7. Verify if i.MX 95 15 mm x 15 mm FRDM board is detected with UUU.exe:
   For Windows OS open CMD or PowerShell terminal:

   ```
   .\uuu.exe -lsusb
   ```

   For Ubuntu in terminal:

   ```
   .\uuu -lsusb
   ```

8. Copy the BSP image to flash in the same location as “UUU.exe” or “uuu” and execute the command to flash the microSD card.
   Example commands on Windows OS for “full” and “multimedia” BSP image:
   Note: *`imx-image-full-imx95evk.wic` is the common image file for all i.MX 95 boards. Select the correct `*.bin_flash_all` file for FRDM board.*

   ```
   \uuu.exe -b sd_all .\imx-boot-imx95-15x15-lpddr4x-frdm-sd.bin-flash_all .\imx-image-
   full-imx95evk.wic

   .\uuu.exe -b sd_all .\imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs-<date-time-
   stamp>.wic.zst
   ```

Example commands on Ubuntu for “full” and “multimedia” BSP image:

```
sudo uuu -b sd_all .\imx-boot-imx95-15x15-lpddr4x-frdm-sd.bin-flash_all .\imx-image-full-imx95evk.wic

sudo uuu -b sd_all .\imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs-<date-time-stamp>.wic.zst
```

9. After the flash is completed, set the i.MX 95 15 mm x 15 mm FRDM board to microSD/SDHC2 boot mode setting switch SW1 to (11).

2.5 Serial console setup

For Linux OS, the minicom is used to access the serial console of the host platform.

1. Connect the USB-C cable into the USB Type-C debug port on i.MX 95 15 mm x 15 mm FRDM board, and the other end to the PC. See J1 in Figure 1.
2. Open the serial console and login into the device.

```
ubuntu@ubuntu-desktop:/# sudo minicom -s -D /dev/ttyUSBx
```

`ttyUSB0` or `ttyUSB01` are the serial devices. The minicom setup configuration is as follows:

```
A - Serial Device      : /dev/ttyUSBx
E - Bps/Par/Bits       : 115200 8N1
F - Hardware Flow Control : No
G - Software Flow Control : No
```

3. Save and exit.

For Windows OS, any serial terminal, such as Tera Term or PuTTy is used to access the host platform.

1. Connect the USB-C cable into the debug port (J1 from Figure 1) on i.MX 95 15 mm x 15 mm FRDM board and the other end to the PC.
2. Open a serial port console with the baud rate of 115200 and other serial port settings on the PC, as shown in Figure 6.

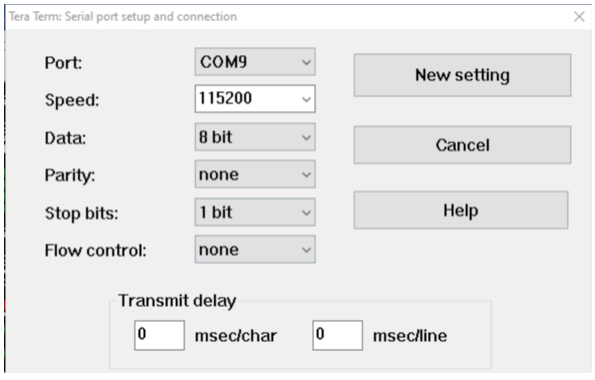

Figure 6. Serial port settings

3. When four COM ports are detected, open them all, and look for the Linux login prompt. Enter the login information on the console:

```
root@imx95-15x15-lpddr4x-frdm login: root
```

3 Enable Sony IMX 219 camera module

This section describes two ways to enable the IMX 219 camera module and steps to connect it with i.MX 95 15 mm x 15 mm FRDM board:

- Section 3.1 "Build i.MX 95 15 mm x 15 mm FRDM Yocto image with Sony IMX 219 camera module enabled"
- Section 3.2 "Enable IMX 219 using precompiled binaries"

3.1 Build i.MX 95 15 mm x 15 mm FRDM Yocto image with Sony IMX 219 camera module enabled

1. Perform Prerequisite for Local build.
2. To set up software pack repo, perform the following steps:
   a. Clone and checkout required BSP branch:

```
$ git clone https://github.com/nxp-imx-support/imx-camera-sw-pack.git
// FOR LF6.18.2_1.0.0 BSP
$ git checkout LF6.18.2_1.0.0
```

   b. Copy only *meta-imx95-isp-imx219* into the *sources* directory in your *Yocto_Directory*:

```
$ cp -r  imx-camera-sw-pack/sony_imx219_sensor/imx95-15x15-FRDM-LPDDR4x/meta-imx95-isp-imx219  imx_yocto-bsp/sources/
```

3. To build and flash the image:
   a. Navigate to the *Yocto_Directory*:

```
$ cd  imx-yocto-bsp
```

   b. Source the setup script to configure Yocto build system:

```
$ source sources/meta-imx95-isp-imx219/setup/setup-env-imx95-imx219 -b build
$ bitbake imx-image-multimedia
```

   c. After the build process is completed, BSP image file `imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs.wic.zst` is in this directory:

```
$ ls imx-yocto-bsp/build/tmp/deploy/images/imx95-15x15-FRDM-LPDDR4x imx-image-multimedia-imx95-19x19-lpddr5-evk.rootfs.wic.zst
```

   d. Flash this image on to the SD card using suitable step from Section 2.4.
4. The following set of commands are executed on the i.MX 95 15 mm x 15 mm FRDM board using a serial console terminal:
   a. Boot the i.MX 95 15 mm x 15 mm FRDM board with the serial console terminal open.
   While the board is booting, press any key on the keyboard when you see the prompt shown in on your terminal to pause U-Boot execution.

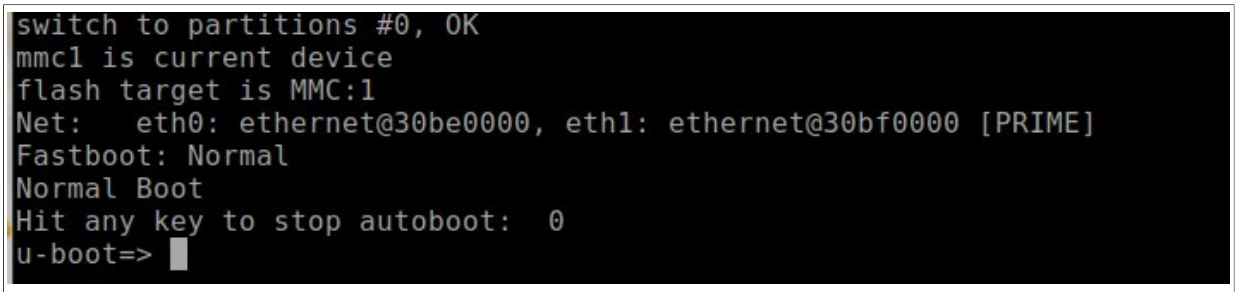

Figure 7. U-Boot prompt

b. Set U-Boot environment variable to set the device tree that enables camera sensor IMX 219 *imx95-15x15-frdm-imx219-isp.dtb*:

```
u-boot=> setenv fdtfile imx95-15x15-frdm-imx219-isp.dtb
u-boot=> saveenv
Saving Environment to MMC... Writing to MMC(1)... OK
u-boot=> boot
```

At this point, i.MX 95 15 mm x 15 mm FRDM board is fully enabled to run the selected camera module and output to HDMI monitor.

For information on connecting the IMX 219 camera module to i.MX 95 15 mm x 15 mm FRDM board, see Section 3.3.

3.2 Enable IMX 219 using precompiled binaries

1. Download the software pack binaries for the required BSP and extract its contents:
   - For LF6.18.2_1.0.0 BSP: imx-camera-sw-pack-LF6.18.2_1.0.0-Binaries-i.MX95.zip
2. Perform Prerequistie for Use precompiled binaries.
3. Copy the binaries directory for the selected camera module onto the i.MX 95 15 mm x 15 mm FRDM board.
4. The following set of commands are executed on the i.MX 95 15 mm x 15 mm FRDM board using a serial console terminal:
   a. Once the binaries directory has been copied onto the board, give execution permission to the `copy_binaries.sh` script and run the script.
   This script copies binaries to the required locations on the board.

```
root@imx95-evk:~# cd sony_imx219_sensor\i.MX95\Binaries\i.MX95-15x15-FRDM-LPDDR4x
root@imx95-evk:~# chmod +x copy_binaries.sh
root@imx95-evk:~#  ./copy_binaries.sh
```

   b. Reboot the board and press any key on your keyboard when you see the prompt shown in Figure 8 on your terminal to pause U-Boot execution.

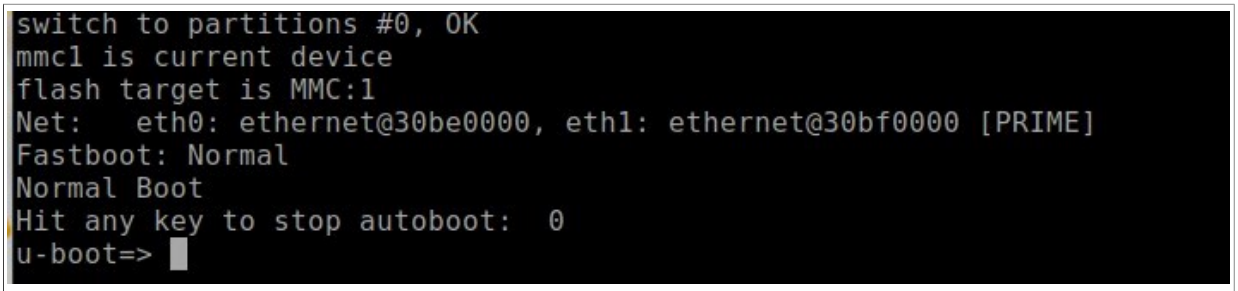

Figure 8. U-Boot prompt

c. Set the U-Boot environment variable to set the device tree to enable IMX 219 and IMX-MIPI-HDMI adaptor (adv7535) *imx95-15x15-frdm-imx219-isp.dtb*:

```
u-boot=> setenv fdtfile imx95-15x15-frdm-imx219-isp.dtb
u-boot=> saveenv
Saving Environment to MMC... Writing to MMC(1)... OK
u-boot=> boot
```

At this point, the board is fully enabled to run the selected camera module and output to an HDMI monitor.

3.3 Hardware connections for IMX 219 camera module

1. Power off the i.MX 95 15 mm x 15 mm FRDM board before connecting the camera module.
2. Connect RPI-CAM-MINISAS adaptor to IMX 219 camera connector to MIPI-CSI connector on i.MX 95 15 mm x 15 mm FRDM; use the 22 pin (0.5 mm pitch) to 15 pin (1 mm pitch) FPC cable.
   Check the contact direction on both sides of the FPC cable before power on to ensure that the power supply is not reversed.
   Match the circled Black stiffener side as a reference for connections as shown in Figure 9.

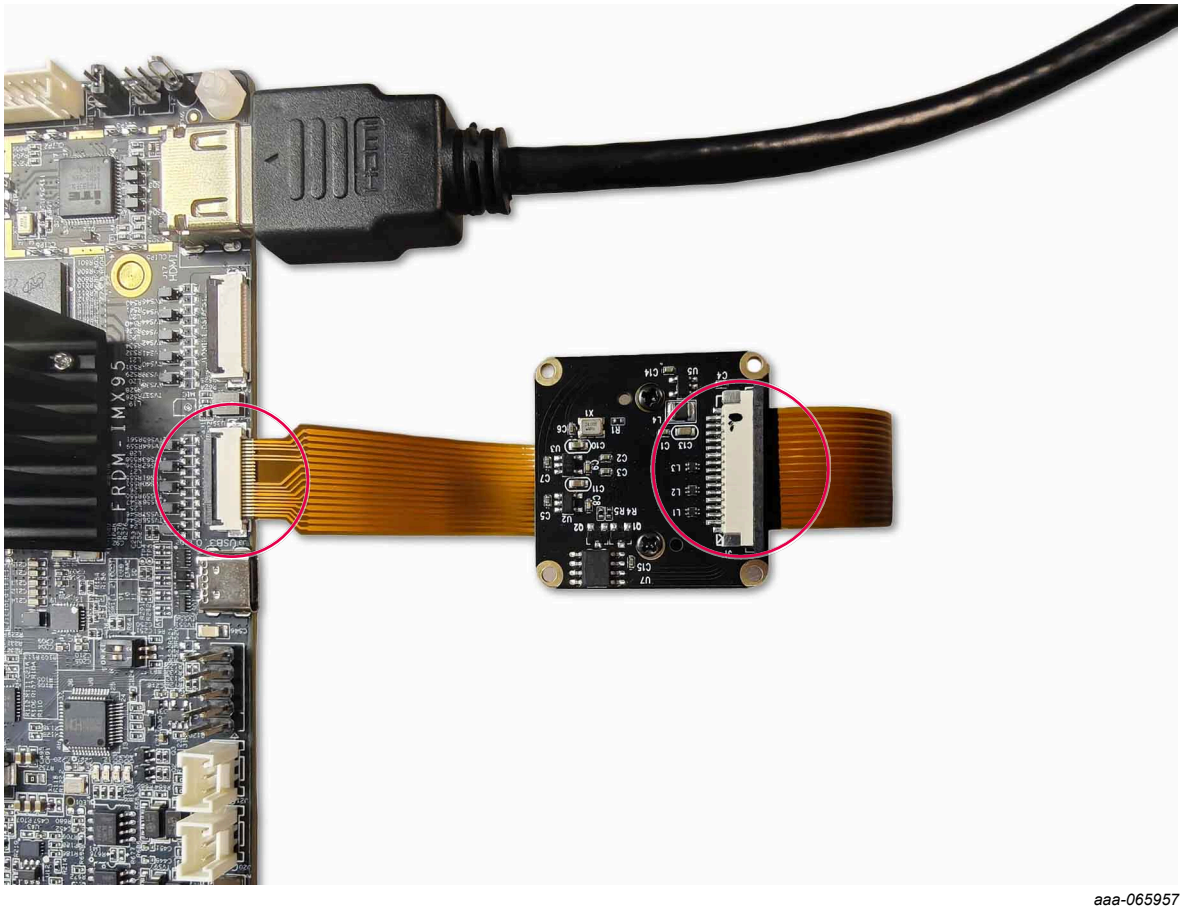

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Figure 9. IMX 219 connection with i.MX 95 15 mm x 15 mm FRDM board

3. Use the highlighted MIPI-CSI port to connect i.MX 95 15 mm x 15 mm FRDM board with the IMX219 camera module, as shown in Figure 10.
4. Connect an HDMI monitor using the highlighted HDMI connector on the i.MX 95 15 mm x 15 mm FRDM board.

5. Power ON the board using switch SW5.

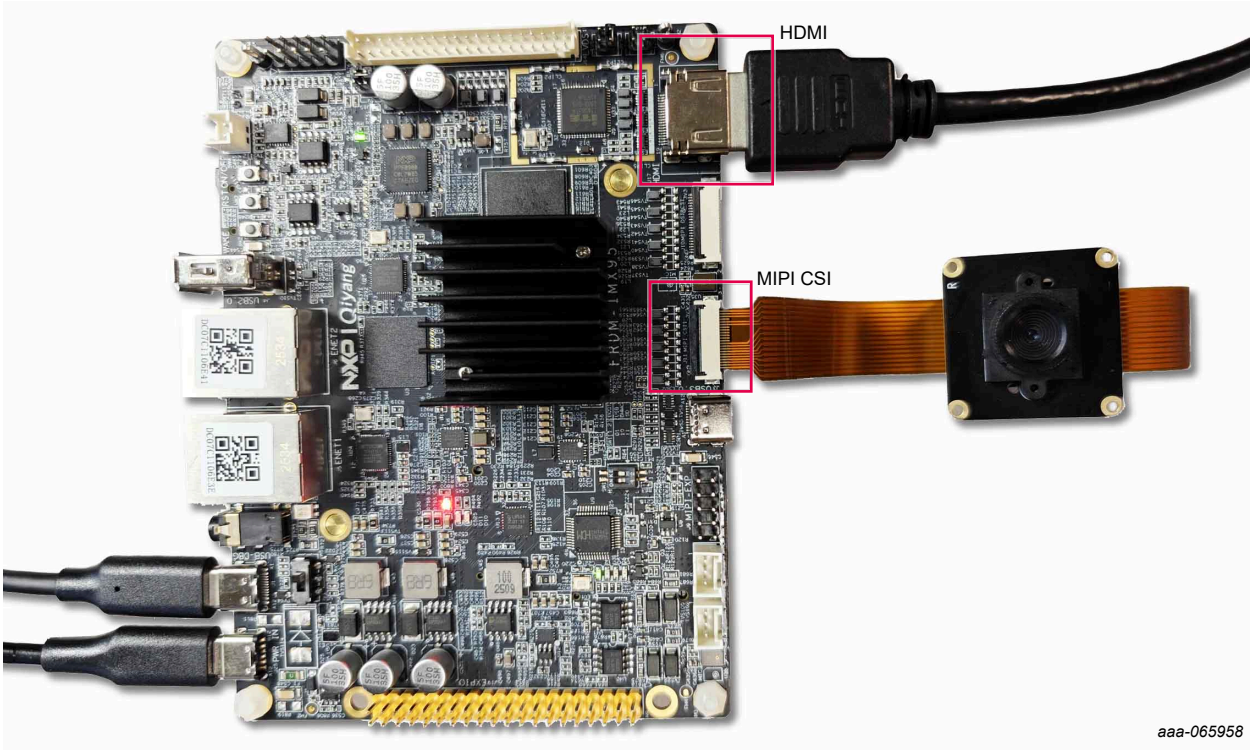


Figure 10. IMX 219 connection to MIPI-CSI on i.MX 95 15 mm x 15 mm FRDM board

3.4 Test IMX 219 camera module

After connecting the camera module, HDMI cable to the monitor, power on the i.MX 95 15 mm x 15 mm FRDM board.

- To test if IMX 219 camera module is detected, run the following command:

```
root@imx95-evk:~# cam -l
Available cameras:
1: 'imx219' (/base/soc/bus@42000000/i2c@42530000/imx219@10)
```

- Set the libcamera pipeline handler and uGuzzi IPA:

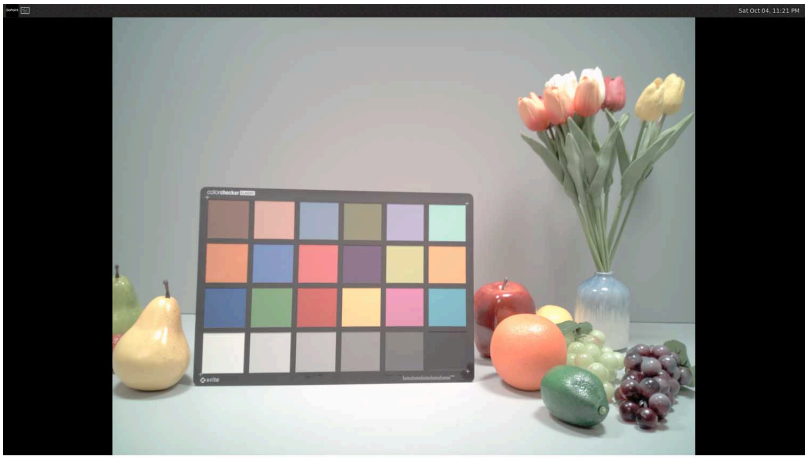
```
root@imx95-evk:~# export
LIBCAMERA_IPA_MODULE_PATH="/usr/lib/libcamera/ipa-nxp-neo-uguzzi/"
root@imx95-evk:~# export
LIBCAMERA_PIPELINES_MATCH_LIST='nxp/neo,imx8-isi,uvc'
```

- To stream camera on HDMI output, run gstreamer command:

```
Set camera to 3280x2464
root@imx95-evk:~# gst-launch-1.0 libcamerasrc camera-name=/base/soc/
bus@42000000/i2c@42530000/imx219@10 ! video/x-raw , width=3280, height=2464,
 format=YUY2 ! autovideosink

Set camera to 1920x1080
```

```
root@imx95-evk:~# gst-launch-1.0 libcamerasrc camera-name=/base/soc/
bus@42000000/i2c@42530000/imx219@10 ! video/x-raw , width=1920, height=1080,
 format=YUY2 ! autovideosink
```



aaa-063541

Figure 11. IMX 219 capture output

4 Enable Sony IMX 477 camera module

This section describes two ways to enable the IMX 477 camera module and steps to connect it with i.MX 95 15 mm x 15 mm FRDM board:

- Section 4.1 "Build i.MX 95 15 mm x 15 mm FRDM Yocto image with Sony IMX 477 camera module enabled"
- Section 4.2 "Enable IMX 477 using precompiled binaries"

4.1 Build i.MX 95 15 mm x 15 mm FRDM Yocto image with Sony IMX 477 camera module enabled

1. Perform Prerequisite for Local build.
2. To set up software pack repo, perform the following steps:
   a. Clone and checkout required BSP branch:

```
$ git clone https://github.com/nxp-imx-support/imx-camera-sw-pack.git
// FOR LF6.18.2_1.0.0 BSP
$ git checkout LF6.18.2_1.0.0
```

   b. Copy only *meta-imx95-isp-imx477* into the *sources* directory in your *Yocto_Directory*:

```
$ cp -r  imx-camera-sw-pack/sony_imx477_sensor/i.MX95-15x15-FRDM-LPDDR4x/meta-
imx95-isp-imx477  imx-yocto-bsp/sources/
```

3. To build and flash the image:
   a. Navigate to the *Yocto_Directory*:

```
$ cd  imx-yocto-bsp
```

   b. Source the setup script to configure Yocto build system:

```
$ source sources/meta-imx95-isp-imx477/setup/setup-env-imx95-imx477 -b build
$ bitbake imx-image-multimedia
```

c. After the build process is completed, BSP image file *imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs.wic.zst* is in this directory:

```
$ ls imx-yocto-bsp/build/tmp/deploy/images/imx95-15x15-lpddr4x-frdm/ imx-image-multimedia-imx95-15x15-lpddr4x-frdm.rootfs-<date-time-stamp>.wic.zst
```

d. Flash this image on to the SD card using suitable step from Section 2.4.

4. The following set of commands are executed on the i.MX 95 15 mm x 15 mm FRDM board using a serial console terminal:
   a. Boot the i.MX 95 15 mm x 15 mm FRDM board with the serial console terminal open.
   While the board is booting up, press any key on the keyboard when you see the prompt shown in Figure 12 on your terminal to pause U-Boot execution.

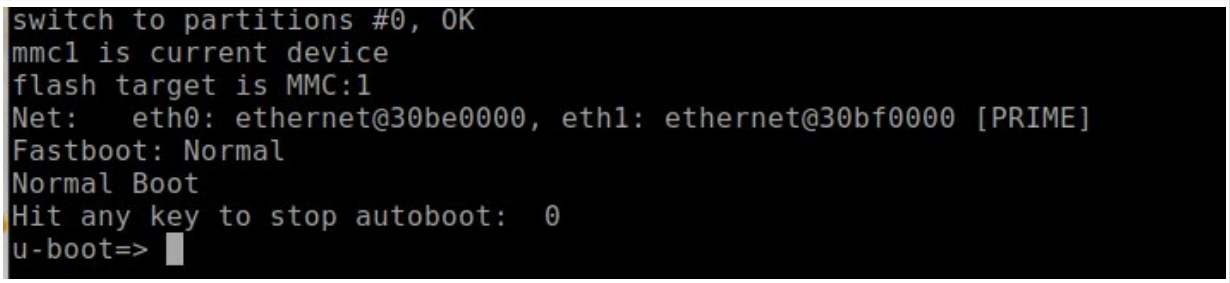


Figure 12. U-Boot prompt

   b. Set U-Boot environment variable to set the device tree that enables camera sensor IMX 477 *imx95-15x15-frdm-imx477-isp.dtb*:

```
u-boot=> setenv fdtfile imx95-15x15-frdm-imx477-isp.dtb
u-boot=> saveenv
Saving Environment to MMC... Writing to MMC(1)... OK
u-boot=> boot
```

   At this point, i.MX 95 15 mm x 15 mm FRDM board is fully enabled to run the selected camera module and output to HDMI monitor.

For information on connecting the IMX 477 camera module to i.MX 95 15 mm x 15 mm FRDM board, see Section 4.3.

4.2 Enable IMX 477 using precompiled binaries

1. Download the software pack binaries for the required BSP and extract its contents.
   - For LF6.18.2_1.0.0 BSP: imx-camera-sw-pack-LF6.18.2_1.0.0-Binaries-i.MX95.zip
2. Perform Prerequistie for Use precompiled binaries.
3. Copy the binaries directory for the selected camera module onto the i.MX 95 15 mm x 15 mm FRDM board.
4. The following set of commands are executed on the i.MX 95 15 mm x 15 mm FRDM board using a serial console terminal:
   a. Once the binaries directory has been copied onto the board, give execution permission to the `copy_binaries.sh` script and run the script.
   This script copies binaries to the required locations on the board:

```
root@imx95-evk:~# cd sony_imx477_sensor/i.MX95-15x15-FRDM-LPDDR4x/Binaries/
root@imx95-evk:~# chmod +x copy_binaries.sh
root@imx95-evk:~#  ./copy_binaries.sh
```

b. Reboot the board and press any key on your keyboard when you see the prompt shown in Figure 13 on your terminal to pause U-Boot execution

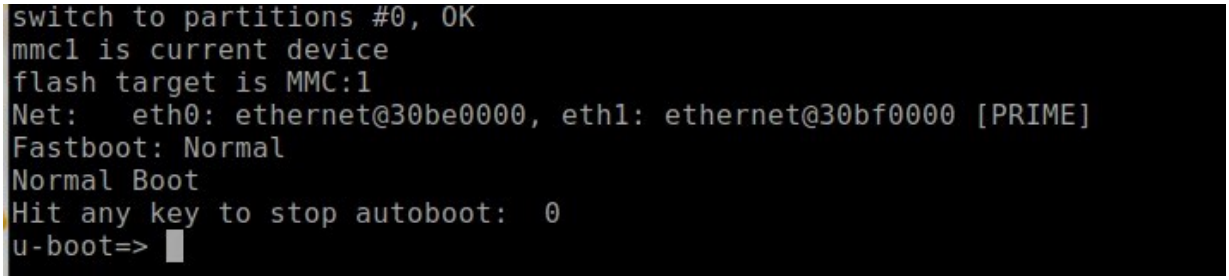


Figure 13. U-Boot prompt

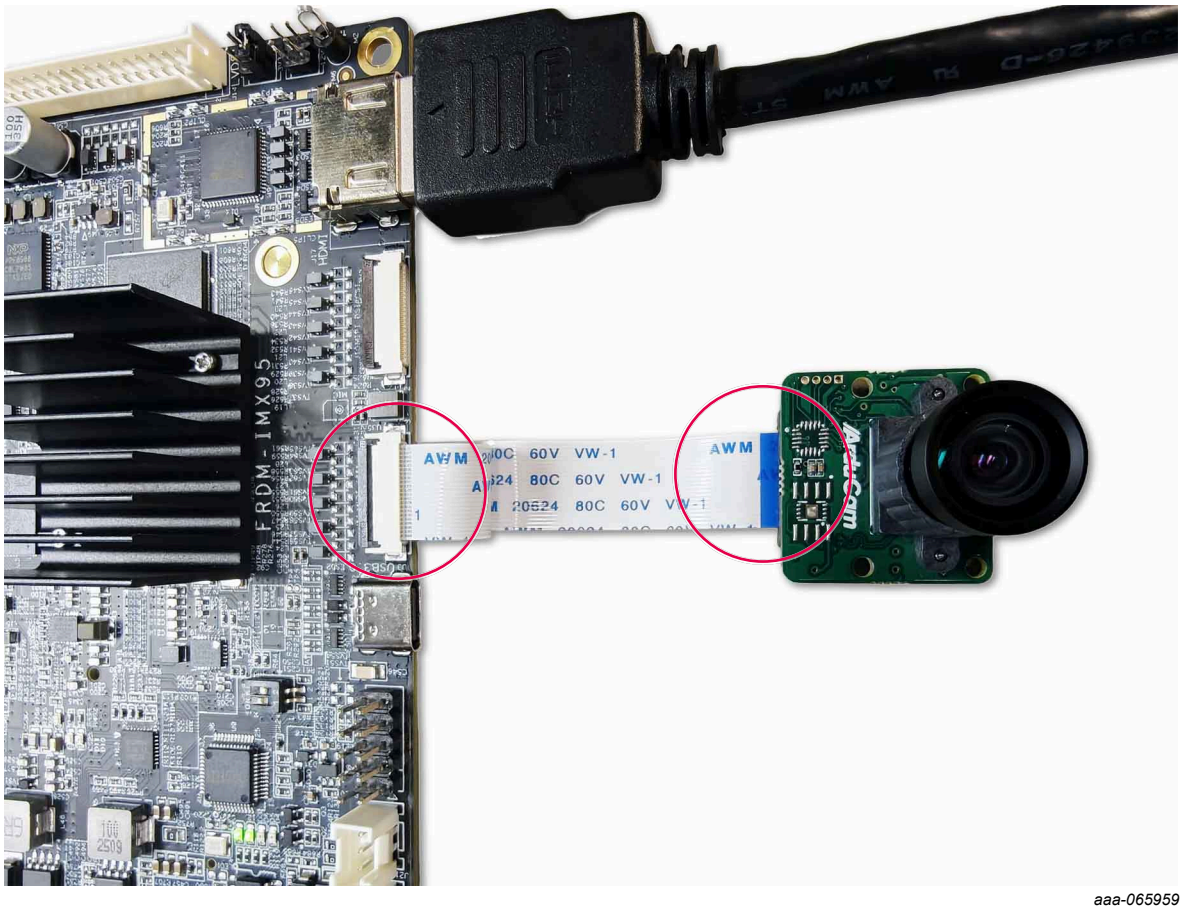
c. Set the U-Boot environment variable to set the device tree to enable IMX 477 *imx95-15x15-frdm-imx477-isp.dtb*:

```
u-boot=> setenv fdtfile imx95-15x15-frdm-imx477-isp.dtb
u-boot=> saveenv
Saving Environment to MMC... Writing to MMC(1)... OK
u-boot=> boot
```

At this point, the board is fully enabled to run the selected camera module and output to an HDMI monitor.

4.3 Hardware connections for IMX 477 camera module

1. Power off the i.MX 95 15 mm x 15 mm FRDM board before connecting the camera module.
2. Connect IMX 477 module to MIPI-CSI connector on i.MX 95 15 mm x 15 mm FRDM board. Use the 22 pin (0.5 mm pitch) FPC cable (Figure 5) included with the camera module.
   Check the contact direction on both sides of the FPC cable before power on to ensure that the power supply is not reversed.
   Match the blue stiffener side and the conductive contact sides as reference for connections circled in Figure 14.



aaa-065959

Figure 14. IMX 477 cable connection with i.MX 95 15 mm x 15 mm FRDM board

3. Use the highlighted MIPI-CSI port to connect to i.MX 95 15 mm x 15 mm FRDM board, as shown in Figure 15.
4. Connect an HDMI monitor using the highlighted HDMI connector on the i.MX 95 15 mm x 15 mm FRDM board.
5. Power ON the board using switch SW5.

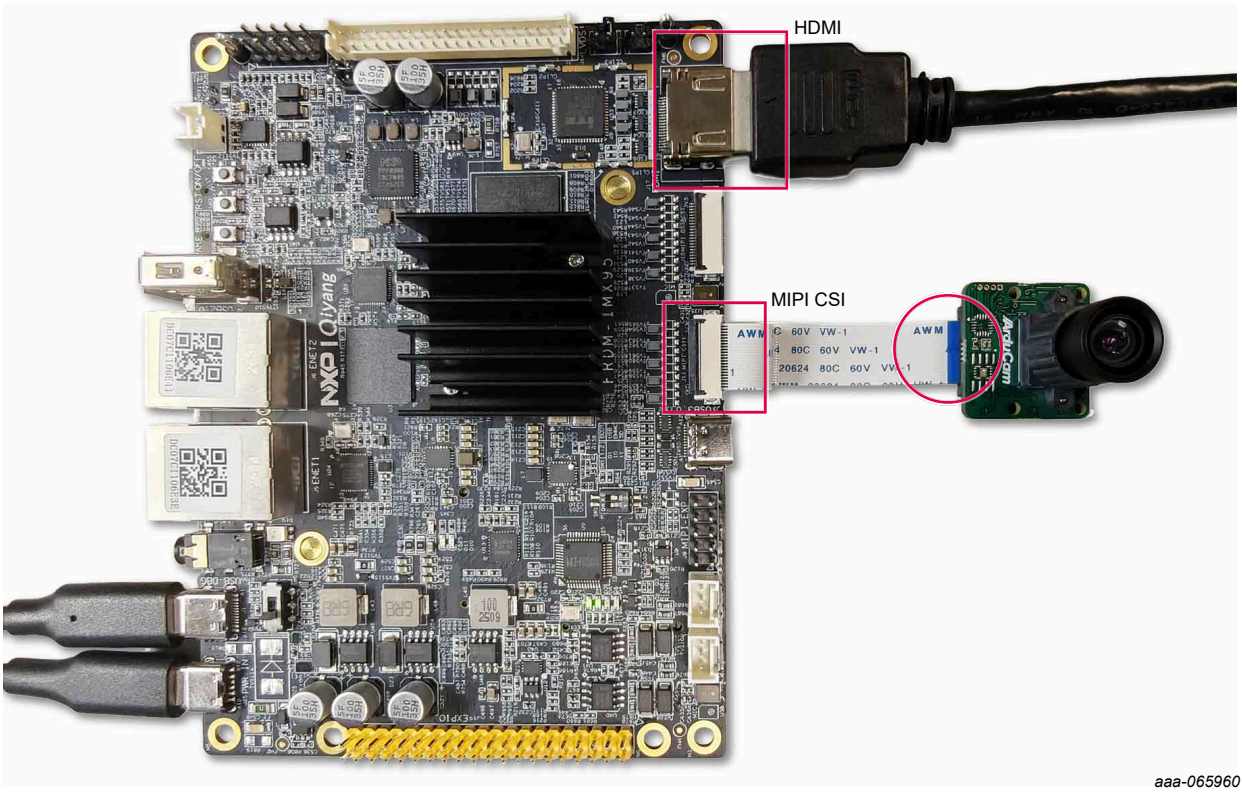


Figure 15. IMX 477 connection to MIPI-CSI on i.MX 95 15 mm x 15 mm FRDM board

4.4 Test IMX 477 camera module

After connecting the camera module, HDMI cable, power on the i.MX 95 15 mm x 15 mm FRDM board.

- To test if IMX 477 camera module is detected, run the following command:

```
root@imx95-evk:~# cam -l
Available cameras:
1: 'imx477' (/base/soc/bus@42000000/i2c@42530000/imx477@1a)
```

- Set the libcamera pipeline handler and uGuzzi IPA:

```
root@imx95-evk:~# export
LIBCAMERA_IPA_MODULE_PATH="/usr/lib/libcamera/ipa-nxp-neo-uguzzi/"
root@imx95-evk:~# export
LIBCAMERA_PIPELINES_MATCH_LIST='nxp/neo,imx8-isi,uvc'
```

- To stream camera on HDMI output, run gstreamer command:

```
root@imx95-evk:~# gst-launch-1.0 libcamerasrc camera-name=/base/soc/
bus@42000000/i2c@42530000/imx477@1a ! video/x-raw , width=3840, height=2160,
 format=YUY2 ! autovideosink
```

- Running the above Gstreamer command sets up IMX 477 to output camera stream at a resolution of 3840 x 2160 to HDMI output.

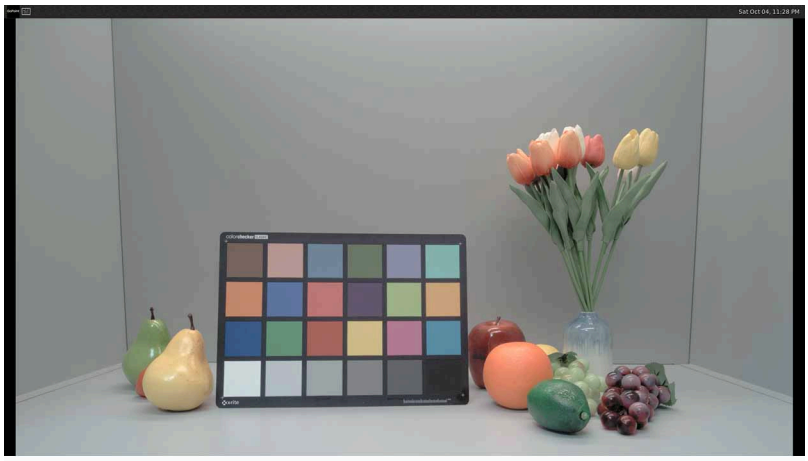


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Figure 16. IMX 477 capture output

5 Appendix

5.1 Using the software pack

This section explains the two different methods for enabling the camera module using the software pack and describes the prerequisite setup for both methods:

- Section 5.1.1 "Local build"
- Section 5.1.2 "Use precompiled binaries"

5.1.1 Local build

The software pack includes patches in the form of Yocto recipes for the ISP module, drivers, and calibration files necessary to enable each sensor camera module. It allows users to build a flashable BSP image locally using Yocto.

The Yocto recipes can be downloaded from the link: https://github.com/nxp-imx-support/imx-camera-sw-pack.

5.1.1.1 Prerequisite

Local build prerequisites are required, only if compiling recipes locally using the camera software pack. These steps set up the base Yocto build environment.

5.1.1.1.1 Set up build environment for Yocto project

To build the Yocto image for the i.MX 95 15 mm x 15 mm FRDM board, perform the following steps:

1. Install the essential Yocto project host packages as follows:

```
$ sudo apt-get install build-essential chrpath cpio debianutils diffstat file gawk \
  gcc git iputils-ping libacl1 liblz4-tool locales \
  python3 python3-git python3-jinja2 python3-pexpect \
```

```
python3-pip python3-subunit socat texinfo unzip wget xz-utils zstd efitools
```

2. To set up repo utility, perform the following steps:
   a. Create a bin folder in the home directory, as follows:

```
$ mkdir ~/bin (this step may not be needed if the bin folder already exists)
$ curl https://storage.googleapis.com/git-repo-downloads/repo > ~/bin/repo $ chmod
 a+x ~/bin/repo
```

   b. To ensure that the `~/bin` folder is in your `PATH` variable, add the following command line to the `.bashrc` file:

```
$ export PATH=~/bin:$PATH
```

3. Set up the Git as follows:

```
$ git config --global user.name "Your Name"
$ git config --global user.email "Your Email"
$ git config -list
```

4. Set up Yocto for required BSP as follows:

```
$ mkdir imx-yocto-bsp
$ cd imx-yocto-bsp

// For Setting up 6.18.2-1.0.0 BSP
$ repo init -u https://github.com/nxp-imx/imx-manifest -b imx-linux-whinlatter -m
 imx-6.18.2-1.0.0.xml
$ repo sync
```

   Note: *imx-yocto-bsp directory is referred as the Yocto_Directory.*
   Yocto directory contains a sources directory, containing various recipes used to build one or more build directories.

5. Image configuration:

```
DISTRO=fsl-imx-xwayland MACHINE=imx95-15x15-lpddr4x-frdm source imx-setup-release.sh -
b build
```

   Where:

   - `DISTRO=<distro name> fsl-imx-xwayland` is the distro configuration.
   - `MACHINE=<machine name> imx95-15x15-lpddr4x-frdm` is the board configuration.
   - `-b <build_directory>` specifies the name of the build directory.

   Note: *The "build" directory is referred as the `build_directory` in the next section.*

6. Build the multimedia image using the following command:

```
$ bitbake imx-image-multimedia
```

   Now, your Yocto build environment is set up, allowing you to add and compile the recipes for individual camera modules into the final image build.

For more information on Yocto build setup instructions, refer to the *i.MX Yocto Project User's Guide* (document IMXLXYOCTOUG) on IMXLINUX webpage. For steps to download the right version for the document, see Figure 17.

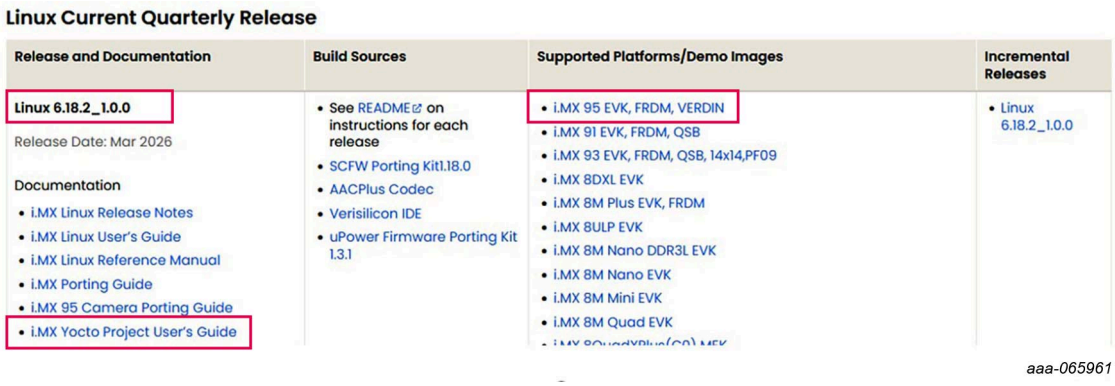

Figure 17. Downloading the Yocto documentation for LF6.18.2-1.0.0

5.1.2 Use precompiled binaries

i.MX camera software pack also includes precompiled ISP modules, drivers, and libraries for each sensor. They can be directly copied onto the supported i.MX 95 15 mm x 15 mm FRDM Linux BSP image.

The binaries directory for each camera sensor contains precompiled drivers, kernel modules, and libraries required to enable the camera sensor to use the i.MX 95 ISP.

It also contains the camera calibration tuning files (database.bin).

Binaries can be downloaded using the following link:

- For LF6.18.2_1.0.0 BSP: imx-camera-sw-pack-LF6.18.2_1.0.0-Binaries-i.MX95.zip

Table 2 lists the contents of the binaries directory.

Table 2. Contents of binaries directory

Directory	Content
kernel	Device tree file, overlay, and kernel module to enable sensor
libcamera	Compiled libraries for libcamera
neo-ipa-uguzzi	Compiled shared libraries for uGuzzi, camera tuning database files
copy_binaries.sh	Script to copy binaries to the right location on the board

5.1.2.1 Prerequisite

This section includes steps to use the precompiled binaries with prebuilt image for i.MX 95 15 mm x 15 mm FRDM board.

5.1.2.2 Use the precompiled binaries with prebuilt image

1. Select and download the right image package for i.MX 95 15 mm x 15 mm FRDM board marked for the required BSP version:
   - For Linux 6.18.2_1.0.0 BSP: imx-camera-sw-pack-LF6.18.2_1.0.0-Binaries-i.MX95.zip

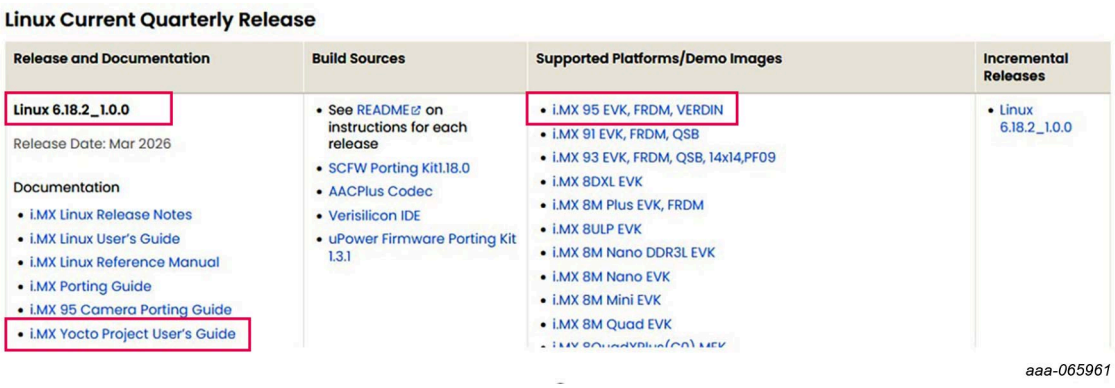

Figure 18. Example for downloading Linux 6.18.2_1.0.0 i.MX 95 15 mm x 15 mm FRDM board image

2. Extract the contents of the downloaded BSP zip file, taking Linux 6.18.2_1.0.0 as an example *LF_v6.18.2_1.0.0_images_IMX95.zip*.
3. After extracting, select the `imx-image-full-imx95evk.wic` and `imx-boot-imx95-15x15-lpddr4x-frdm-sd.bin-flash_all` image file and flash it onto an SD card using suitable flash method from Section 2.4.

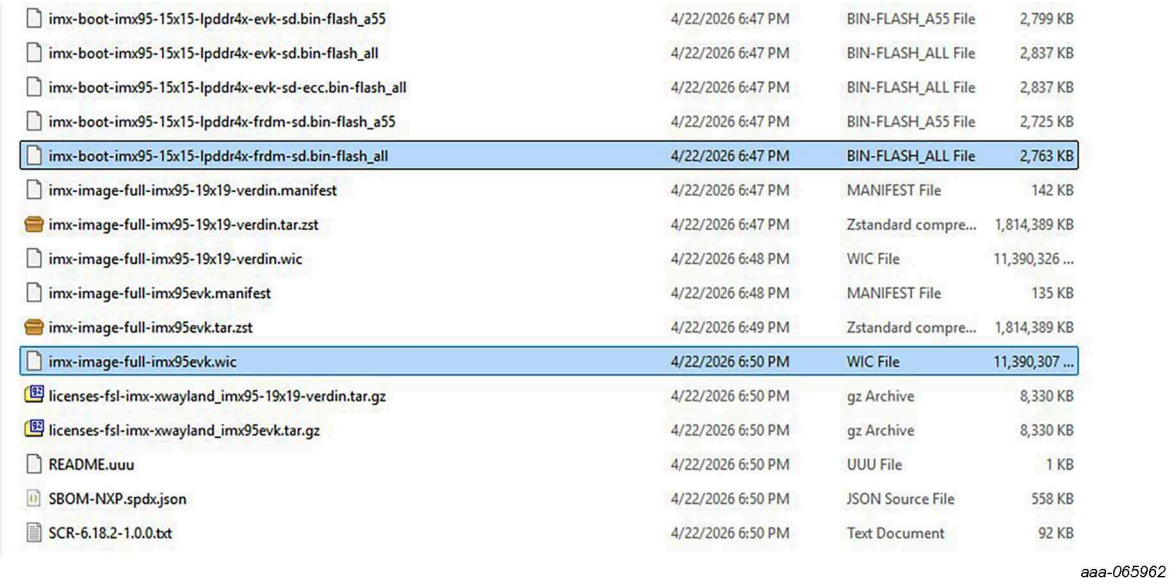

Figure 19. Full image for i.MX 95 15 mm x 15 mm FRDM board

4. Boot the i.MX 95 15 mm x 15 mm FRDM board with the flashed SD card while connected to the serial console terminal on your PC.

6 Note about the source code in the document

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7 Revision history

Table 3 summarizes the revisions to this document.

Table 3. Revision history

Document ID	Release date	Description
AN15033 v.1.0	15 July 2026	Initial public release

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