NXP Semiconductors
Application Notes

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Quick Start Guide for MINISASTOCSI for i.MX 8M Evaluation Kit

Introduction

NXP provides optional accessory boards that can be used to evaluate the i.MX 8M Evaluation kit. The MINISASTOCSI for the i.MX 8M EVK is a MIPI-CSI interface camera kit, based on OmniVision chipset OV5640. The MINISASTOCSI card can be purchased at nxp.com.

This document provides a brief overview on how to get started with the MINISASTOCSI accessory card and the i.MX 8M EVK.

Key specifications / features:

- Image sensor optical size of 1/4" with 5 megapixel (2592*1944)
- Supported output formats: RAW RGB, RGB565/555/444, CCIR656, YUV422/420, YCbCr422, and compression
- Maximum image transfer rate:
  - QSXGA (2592*1944): 15 fps
  - 1080p (1920*1080): 30 fps
  - 720p (1280*720): 60 fps

Contents

1. Get to know the MINISASTOCSI accessory card

MINISASTOCSI accessory kit contains:

Item	Quantity
Camera module	1
8" mini-SAS cable	1

Figure 1. MINISASTOCSI accessory card

2. How to use the MINISASTOCSI accessory card

Quick steps to get started with the MINISASTOCSI accessory card are as follows:

NOTE

Before plugging in the cable, remove the plastic cover on the mini-SAS connectors.

Hardware Setup

Step 1:

Plug in the mini-SAS cable into the mini-SAS connector on the MINISASTOCSI accessory card.

Step 2:

Plug in the other end of the mini-SAS cable into J1502 on the i.MX 8M Evaluation kit.

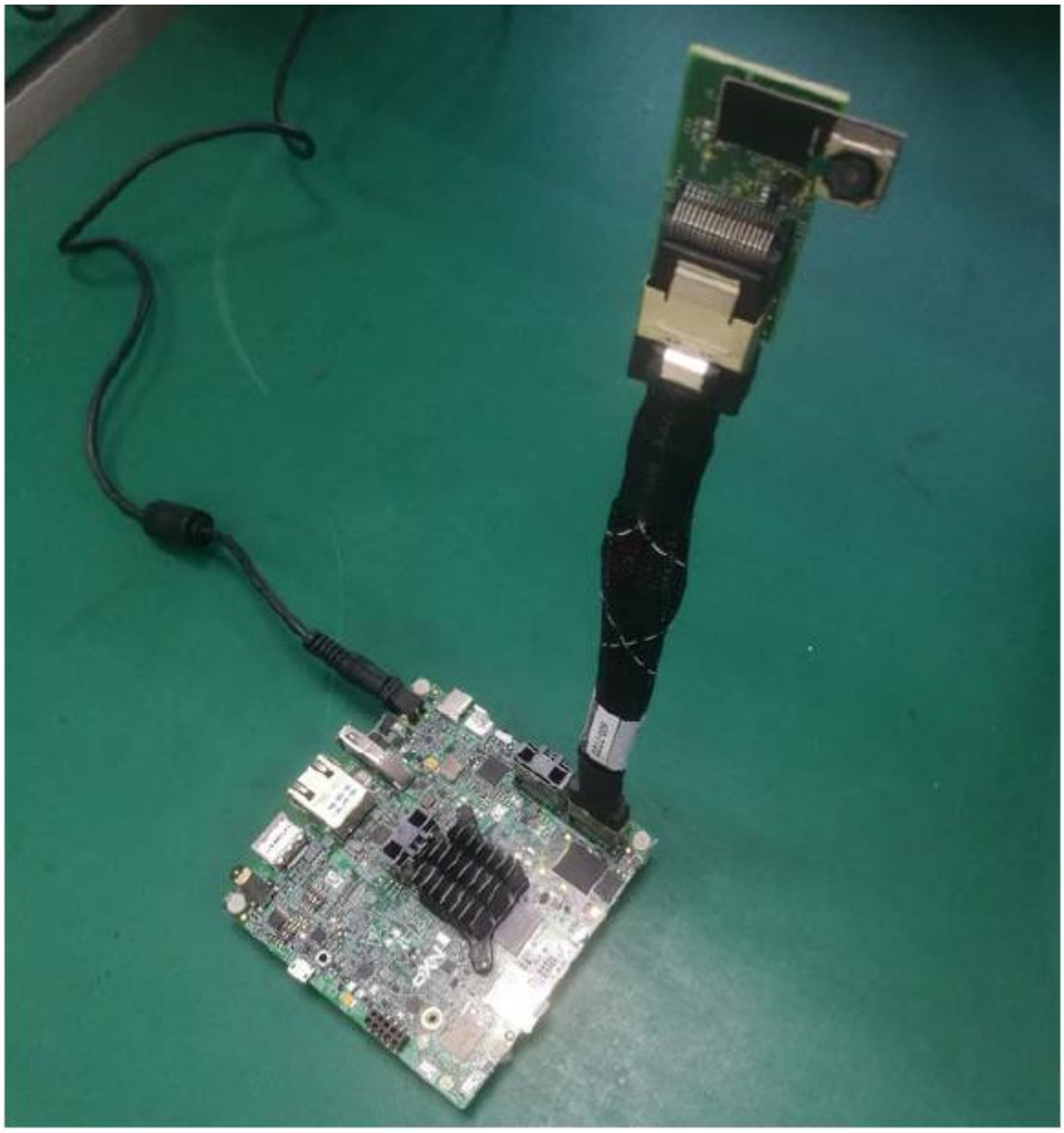

Figure 2. Hardware Setup of MINISASTOCSI Accessory card

Software Setup: Linux

The default Board Support Package (BSP) supports the MIPI-CSI on J1502. To enable the camera on J1503, replace the original **.dtb* file with *fsl-imx8mq-evk-mipi-csi2.dtb* as follows.

```
U-Boot > setenv fdt_file fsl-imx8mq-evk-mipi-csi2.dtb
U-Boot > run bootcmd
```

The camera GStreamer commands are:

```
gst-launch-1.0 v4l2src ! video/x-raw,width=640,height=480 ! kmssink
gst-launch-1.0 v4l2src ! video/x-raw,width=720,height=480 ! kmssink
gst-launch-1.0 v4l2src ! video/x-raw,width=1280,height=720 ! kmssink
gst-launch-1.0 v4l2src ! video/x-raw,width=1920,height=1080 ! kmssink
gst-launch-1.0 v4l2src ! video/x-raw,width=2592,height=1944 ! kmssink
```

3. References

Table 1 provides the link to access software or order the Evaluation Kit and accessory boards.

Table 1. Link to access software/order Evaluation Kit

Compatible boards	Description	Link
MCIMX8M-EVK	i.MX 8M Evaluation Kit	https://www.nxp.com/imx8mquadevk

For latest software, visit - https://www.nxp.com/support/developer-resources/run-time-software/i.mx-developer-resources/i.mx-software-and-development-tool-resources:IMX_SW

Table 2 provides links to more information on MINISASTOCSI accessory card or other accessory cards for the i.MX 8M EVK.

Table 2. Links to accessory cards for the i.MX 8M EVK

Accessory Boards	Description	Link
IMX-MIPI-HDMI	Converts MIPI-DSI signal to HDMI signal	https://www.nxp.com/support/developer-resources/run-time-software/i.mx-developer-resources/evaluation-kit-for-the-i.mx-8m-applications-processor:MCIMX8M-EVK?tab=Buy_Parametric_Tab
MX8-DSI-OLED1	MIPI-DSI interface OLED display kit with touch screen	https://www.nxp.com/support/developer-resources/run-time-software/i.mx-developer-resources/evaluation-kit-for-the-i.mx-8m-applications-processor:MCIMX8M-EVK?tab=Buy_Parametric_Tab
MINISASTOCSI	MIPI-CSI interface camera kit based on OmniVision chipset OV5640	https://www.nxp.com/support/developer-resources/run-time-software/i.mx-developer-resources/evaluation-kit-for-the-i.mx-8m-applications-processor:MCIMX8M-EVK?tab=Buy_Parametric_Tab

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