Color eReader Reference Design Based on i.MX 8ULP

IMX8ULP-COLOR-EREADER

Preproduction

This page contains information on a preproduction product. Specifications and information herein are subject to change without notice. For additional information please contact your sales representative.
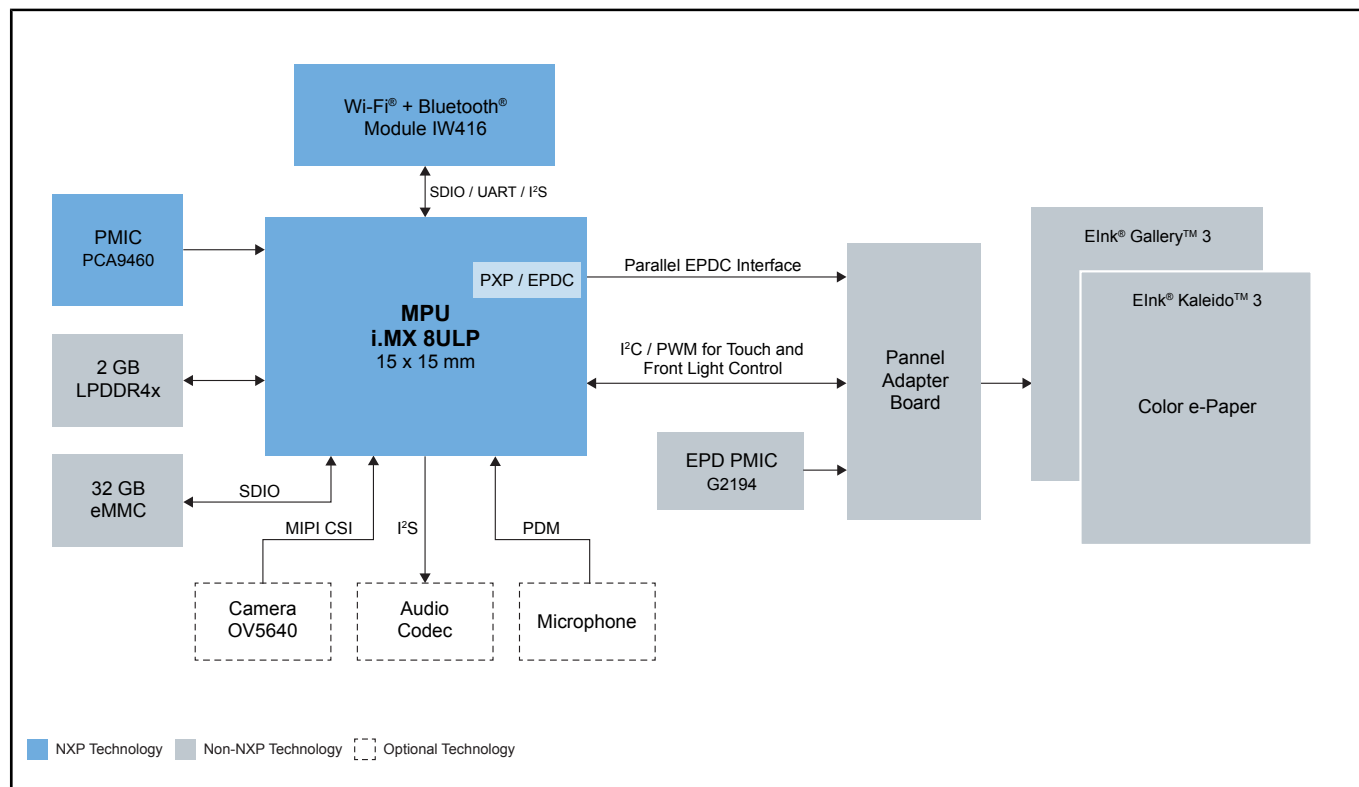
Last Updated: Oct 22, 2025

The NXP Color eReader reference design demonstrates how to use the i.MX 8ULP built-in EPDC (Electrophoretic Display Controller) to drive the E Ink® Gallery™ 3 and Kaleido™ 3 color e-paper. Since an external TCON (Timing Controller) is not required, the cost and power consumption are significantly reduced.

This reference design consists of:

- A SOM (MCIMX8ULP-SOM) with the i.MX 8ULP processor, PMIC, 32GB eMMC, and 2GB LPDDR4x.
- A baseboard (8ULP-ACEP-EPD) specifically designed to support eReaders.
- An EPD PMIC daughter card (8ULP-ACEP-PMIC).
- A panel adapter board (8ULP-ACEP-KH3) for the E Ink® Gallery™ 3 or Kaleido™ 3 color e-paper displays.

Color eReader Block Diagram

Wi-Fi® + Bluetooth® Module IW416

SDIO / UART / I²S

PMIC PCA9460

MPU i.MX 8ULP 15 x 15 mm

PXP / EPDC

Parallel EPDC Interface

I²C / PWM for Touch and Front Light Control

2 GB LPDDR4x

32 GB eMMC

SDIO

MIPI CSI

I²S

PDM

Camera OV5640

Audio Codec

Microphone

Pannel Adapter Board

EPD PMIC G2194

EInk® Gallery™ 3

EInk® Kaleido™ 3

Color e-Paper

■ NXP Technology ■ Non-NXP Technology ⬚ Optional Technology

View additional information for Color eReader Reference Design Based on i.MX 8ULP.

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