



i.MX Applications Processors

# Freescale Product Development Kit (PDK) for the i.MX35 Applications Processor Design. Debug. Demo.



## Overview

Freescale's comprehensive i.MX35 "form-factor" development kit is a three-stack solution that builds on the earlier success of the i.MX31 and i.MX27 product development kits. Based on a powerful ARM1136™ core, the i.MX35 PDK delivers a high-performance, low-power, cost-effective solution for a variety of solutions, including devices that require an open operating system and a robust user interface.

The i.MX35 PDK is preconfigured with your choice of Linux® (MCIMX35LPDK) or Windows® Embedded CE 6.0, (MCIMX35WPDK) making it suitable for a wide range of multimedia applications. The i.MX35 PDK boards support the entire i.MX35 family of products.

## Key Benefits

- Rich multimedia experience with exceptional quality
- Power management offers an abundance of different power saving modes, giving the system developer the ability to make trade-offs between power consumption in stand-by and recovery times
- Reduced hassle associated with design-in of key connectivity options
- Simplified product design

## Design

With the i.MX35 PDK, designers have access to key features needed for an end design. The Freescale i.MX35 PDK's personality module provides designers with key hardware functionality and connectivity required for many applications, such as automotive infotainment, personal navigation devices (PNDs) and human machine interface (HMI) for home controls and factory automation. With production-ready software components, an optimized OS and a system-validated board support package (BSP), designers have the tools to test and maximize the performance of the applications they have developed.

## Debug

Software and hardware engineers are provided with the key resources to test their developed code. They can also download this code to the target PDK to test and validate their software and run and evaluate performance metrics where needed. The ability to have all communications ports working (serial, USB, Ethernet) and to debug over JTAG is essential for product development. For example, the USB and the SD card can be used to run video tests from USB and from SD, or designers can reformat the SD card and use it as a disk. The debug board is common across all i.MX PDKs, allowing maximum re-use.

## Demo

Freescale's PDK for the i.MX35 applications processor allows designers to demonstrate the results of their development efforts in the form factor provided, which evokes confidence that the product is ready to go into production, also resulting in quick time to market. With Freescale's i.MX35 PDK, key stakeholders can hold the product in their hands and evaluate the compelling features of the design, while displaying the design to the large LCD enclosed with the kit.

## i.MX35 PDK Key Features

### Processor Module

- i.MX35 with ARM1136 core
- Power management (Freescale PMIC MC13892) + power circuitry
- Memory
  - 256 MB DDR2
  - 64 MB NOR flash
  - 2 GB NAND flash

### Personality Module

- User I/O
- 7" TFT WVGA screen display with touch screen
- CMOS image sensor
- U/I connector for display/keypad
- Auxiliary video input for display from external video source
- CAN connector
- Two USB ports
- 10/100 Ethernet port
- MLB interface
- SD card, ATA, HDD interfaces

### Debug Module

- Debug Ethernet port
- Debug serial port
- JTAG
- Reset, interrupt, boot switches
- Debug LEDs
- CodeTest interface
- Power source
- Current/power monitoring

### Software Development Kit

- Optimized and validated for Linux or Windows Embedded CE 6.0 environments
- Integrated and validated BSP and additional drivers for personality module

- Functional software packages with production-ready components developed by Freescale
- Highly optimized software coded by Freescale processor experts
- Consistent application programming interface (API) and frameworks across all software packages
- Evaluation and production software packages available through a streamlined, Web-based licensing and delivery system
- Freescale development tools, test streams and documentation

## Freescale Alliance Program

Tap into a powerful ecosystem of Freescale technology alliances for building smarter, better connected solutions. Intended to help you shorten your design cycle and get your products to market faster, these technology alliances provide you with access to rich design tools and peripherals and world-class support and training. For more information, visit [www.freescale.com/alliances](http://www.freescale.com/alliances).

## The i.MX35 Applications Processor

- CPU complex with ARM1136JF-S core, L2 cache, vector floating point coprocessor and embedded SRAM
- Smart power management, including support for multiple low power modes
- External memory interface with support for SDRAM, mobile DDR, DDR2, NAND flash and PSRAM
- Display port with ability to support a variety of popular displays up to SVGA resolution
- Sensor port that provides connection to either one or two image sensors
- System connectivity, including Ethernet, USB High-Speed OTG, CAN, CSPIs, I<sup>2</sup>C, PCMCIA, ATA, UARTs
- OpenVG™ graphics acceleration

## Ordering Information

Part Number	Operating System	MSRP
MCIMX35LPDKJ	Linux®	\$995
MCIMX35WPKJ	Windows® Embedded CE	\$995



QNX® Software Systems Neutrino® RTOS and Aviage® Middleware Suite on the MCIMX35LPDK

## Learn More:

For current information about Freescale products and documentation, please visit [www.freescale.com/imx35pdk](http://www.freescale.com/imx35pdk).