i.MX35 PDK 1.5
Product Brief

The i.MX35 Product Development Kit (PDK) provides a robust hardware and software platform for the Windows® Embedded CE 6.0 and Linux® environments, based on the exceptional capabilities of the Freescale i.MX35 applications processor.

The PDK offers optimized middleware and codecs that enable your critical resources to focus on what makes your product unique in the market, because Freescale has completed the fundamental elements for your design.

The i.MX PDK includes an optimized and validated board-support-package (BSP).

You perform product design and application development on the i.MX PDK, which comprises a "three-stack" set – separate CPU, Personality and Debug modules - connected together for software development and debugging purposes.

The modules are designed for essential re-use. The Debug module is the common debugging board across all i.MX PDKs; it provides the hardware necessary for a software engineer to develop and debug applications and any accompanying software. The Personality module is a peripherals and connectivity board for product development.

Contents

1 Benefits

Hardware and Software designers can use this platform as a reference design and start immediately on their projects. With a near end product platform, the hardware designers can develop a custom product quickly and the software designers can begin working long before any custom hardware is available. The integrated design methodology (hardware and software) greatly reduces your development time.

2 Features

The i.MX35 PDK features support its architecture, design, operation, and functionality:

- Near form-factor demonstration modules and working platforms.

- Solid reference schematics that closely resemble final products to aid customers' designs.

- Software development kits for Windows Embedded CE and Linux

- Three-board system:
  — Personality board with peripheral components and interface connectors
    – 7" LCD display panel with touch panel and LED backlight
    – Image sensor camera connector
    – Microphone jack, headphone and video jacks, stereo and mono (ear piece) speaker terminals
    – TV IN decoder which supports Y.Pr .Pb input
    – SD card connectors, with card sense functionality. Also support MMC and MS card.
    – Generic UI connector
    – One USB OTG high-speed transceiver with MICRO USB connector
    – One USB fast-speed host transceiver, with standard USB host connector
    – ATA5 controller with one 44-position dual row, 2mm header for small form-factor disk drivers
    – One DB9 connector for CAN bus and one 10pin connector for CAN bus.
    – One 2mm connector for MLB signal.
  — CPU board with i.MX35 ARM11™ MCU and MC13892 power management IC
    – Configurable intelligent management of system power through power management chip (PMIC) Freescale MC13892
    – Reset control from PMIC
    – 2 GB of MLC NAND Flash Memory
    – 64MB of NOR Flash Memory
    – 256MB of 32 bit DDR2 memory

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— Debug board with RS-232 interface, 10/100 Base-T Ethernet connector, and current measure connectors

- +5.0 VDC, 2.4 A universal power supply

- RealView-ICE® debug support

3 System Requirements

The system requirements are as follows.

- An IBM PC or compatible host computer with:
  — Microsoft Windows 98, Windows ME, Windows 2000, Windows XP, or Windows NT (version 4.0) operating system
  — A free USB port
  — An Ethernet interface
  — An RS-232 serial port with DE-9 connector

- A +5VDC, 2.4A power supply with a female (inside positive) power connector (included)

- Additional software and hardware debugging tools are available through third parties

3.1 Block Diagrams

Figure 1, Figure 2, and Figure 3 illustrate the functional modules of the i.MX35 PDK Debug board, CPU board, and Personality board, respectively.
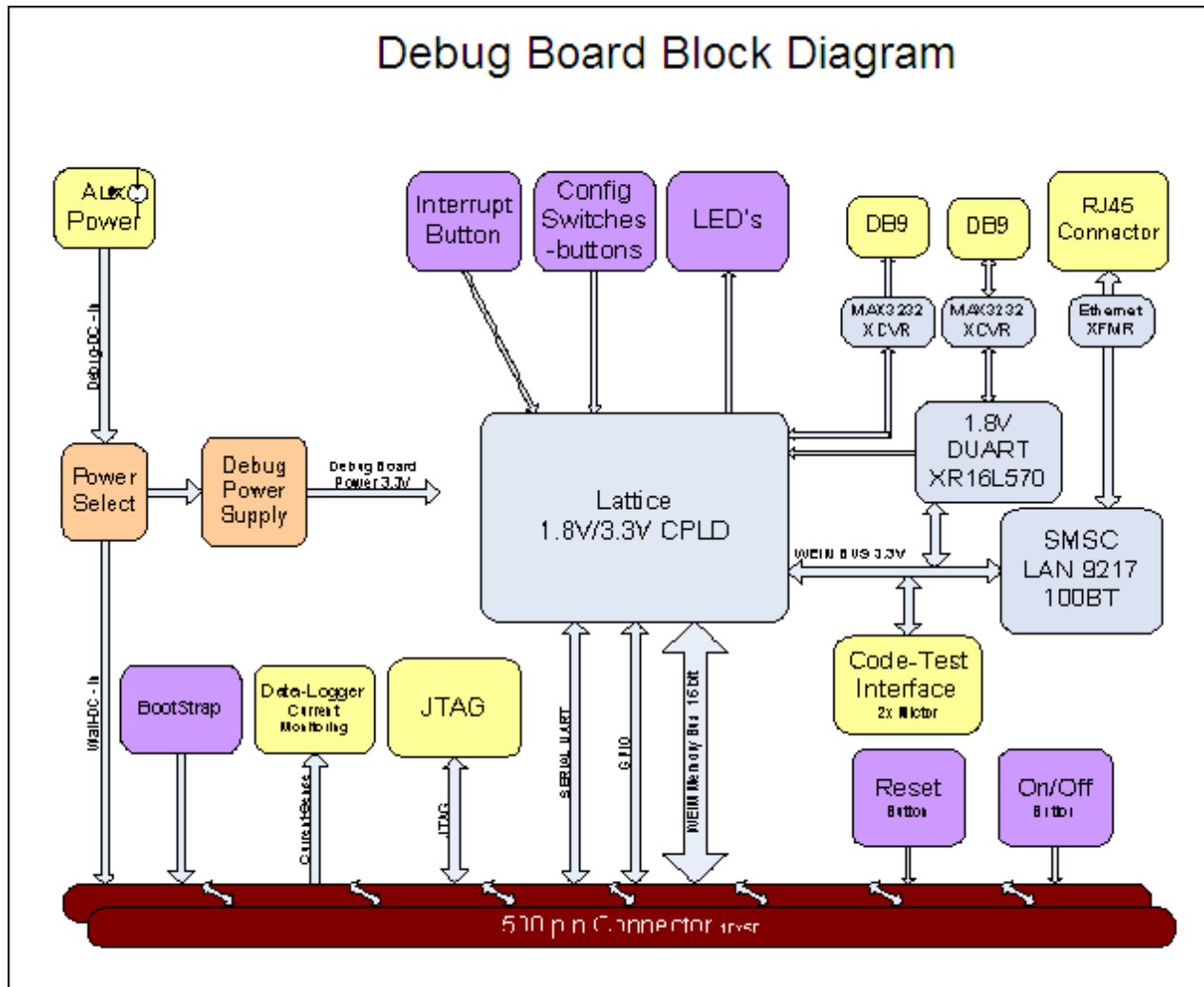
Figure 1 Debug Board Functional Block Diagram
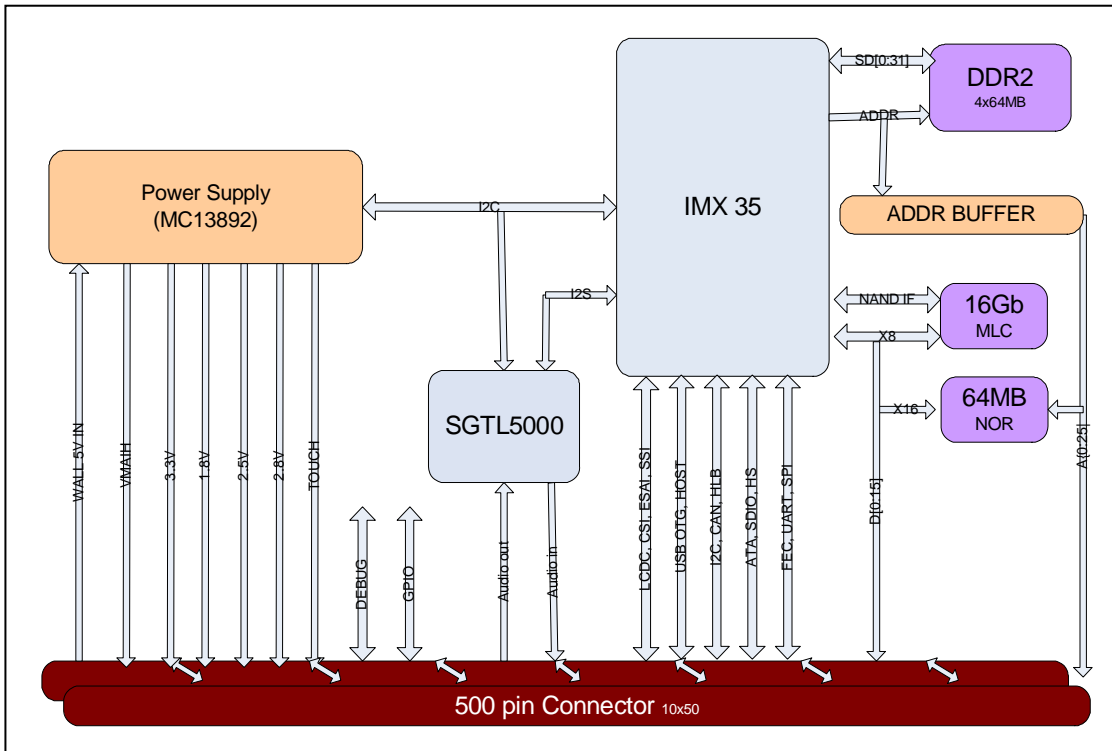
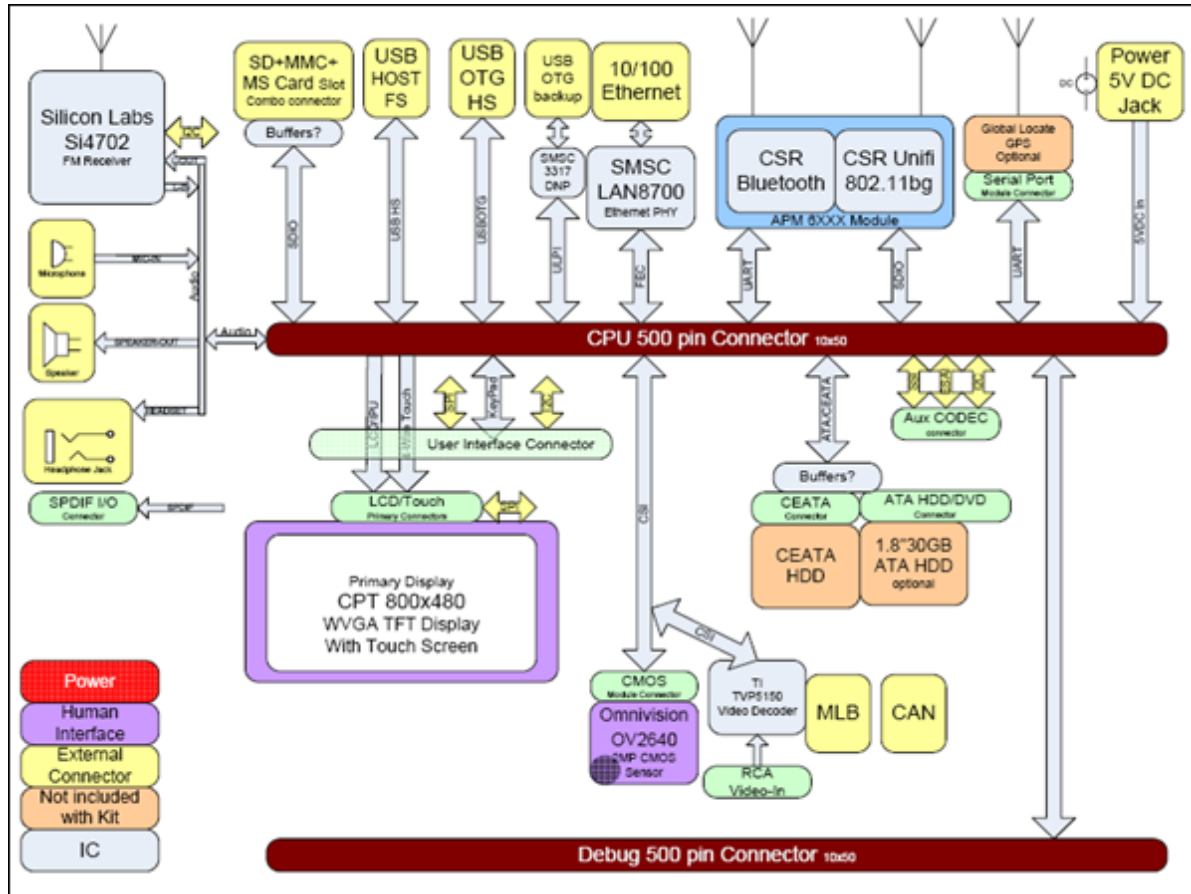**Figure 2 CPU Engine Board Block Diagram**

Figure 3 Personality Board Functional Block Diagram

3.2 Physical Connectors

- 10/100 Base-T Ethernet RJ45 connector

- 2 micro USBOTG connectors, one for HOST connection only

- 2.0M pixel CMOS sensor connector

- 44-position dual row, 2mm header for HDD

- Audio and Video connector

- Current measure connector

- LCD connector

- Giantplus QVGA Smart display connector

- i.MX35 JTAG connector

- Samtec® 500 pin board-to- board connector

- SD card socket

- UART DB9 male connector and UART DB9 female connector

- WEIM Data and Address measure connector

4 Product Documentation

The table that follows describes the associated documentation.

	Title	Contents	Document Number
Quick Start Guides			
1	i.MX35 PDK 1.5 Windows Embedded CE 6.0 Quick Start Guide	Detailed startup steps, using provided images	926-25352
2	i.MX35 PDK 1.5 Linux Quick Start Guide	Detailed startup steps, using provided images	926-78233
Overview			
3	i.MX35 PDK 1.5 Product Brief (this document)	PDK benefits and attributes	924-76340
Hardware			
4	i.MX35 PDK 1.5 Hardware User's Guide	Hardware description and reference	924-76347
Application Notes			
5	i.MX35 PDK 1.5 Windows Revision Changes Application Note	Windows platform revision changes	924-76344
6	i.MX35 PDK 1.5 Linux Revision Changes Application Note	Linux platform revision changes	924-76343
Advanced Toolkit (ATK)			
7	i.MX Advanced ToolKit User's Guide	Installation, setup, operation	926-77203
8	i.MX Advanced ToolKit Release Notes	Release contents, requirements, features, issues	926-77993
Windows Embedded CE 6.0			
9	i.MX35 PDK 1.5 Windows Embedded CE 6.0 Hello World Application Note	Hello World demo and new demo instructions	924-76341
10	i.MX35 PDK 1.5 Windows Embedded CE 6.0 Demo Image Readme	Release contents, installation, setup, requirements, features, issues	926-77402
11	i.MX35 PDK 1.5 Windows Embedded CE 6.0 Release Notes	Release contents, requirements, features, issues	926-77399
12	i.MX35 PDK 1.5 Windows Embedded CE 6.0 User's Guide	Application description and procedures, including ATK download	UMS-25352
13	i.MX35 PDK 1.5 Windows Embedded CE 6.0 Reference Manual	Driver and software reference	924-7633
Linux			
14	i.MX PDK Linux Hello World Application Note	Hello World demo and new demo instructions	924-76342
15	i.MX35 PDK 1.5 Linux Demo Image Readme	Release contents, installation, setup, requirements, features, issues	926-77401

	Title	Contents	Document Number
16	i.MX35 PDK 1.5 Linux Standard Package Release Notes	Release contents, requirements, features, issues	926-77398
17	i.MX PDK 1.5 Linux Standard User's Guide	Application description and procedures, including ATK download	UMS-25894
18	i.MX PDK 1.5 Linux Reference Manual	Driver and software reference	926-25894

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