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.

© Freescale Semiconductor, Inc., 2009. All rights reserved.
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
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 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.

<table>
<thead>
<tr>
<th>Title</th>
<th>Contents</th>
<th>Document Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quick Start Guides</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>i.MX35 PDK 1.5 Windows Embedded CE 6.0 Quick Start Guide</td>
<td>Detailed startup steps, using provided images</td>
</tr>
<tr>
<td>2</td>
<td>i.MX35 PDK 1.5 Linux Quick Start Guide</td>
<td>Detailed startup steps, using provided images</td>
</tr>
<tr>
<td><strong>Overview</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>i.MX35 PDK 1.5 Product Brief (this document)</td>
<td>PDK benefits and attributes</td>
</tr>
<tr>
<td><strong>Hardware</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>i.MX35 PDK 1.5 Hardware User’s Guide</td>
<td>Hardware description and reference</td>
</tr>
<tr>
<td><strong>Application Notes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>i.MX35 PDK 1.5 Windows Revision Changes Application Note</td>
<td>Windows platform revision changes</td>
</tr>
<tr>
<td>6</td>
<td>i.MX35 PDK 1.5 Linux Revision Changes Application Note</td>
<td>Linux platform revision changes</td>
</tr>
<tr>
<td><strong>Advanced Toolkit (ATK)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>i.MX Advanced ToolKit User’s Guide</td>
<td>Installation, setup, operation</td>
</tr>
<tr>
<td>8</td>
<td>i.MX Advanced ToolKit Release Notes</td>
<td>Release contents, requirements, features, issues</td>
</tr>
<tr>
<td><strong>Windows Embedded CE 6.0</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>i.MX35 PDK 1.5 Windows Embedded CE 6.0 Hello World Application Note</td>
<td>Hello World demo and new demo instructions</td>
</tr>
<tr>
<td>10</td>
<td>i.MX35 PDK 1.5 Windows Embedded CE 6.0 Demo Image Readme</td>
<td>Release contents, installation, setup, requirements, features, issues</td>
</tr>
<tr>
<td>11</td>
<td>i.MX35 PDK 1.5 Windows Embedded CE 6.0 Release Notes</td>
<td>Release contents, requirements, features, issues</td>
</tr>
<tr>
<td>12</td>
<td>i.MX35 PDK 1.5 Windows Embedded CE 6.0 User’s Guide</td>
<td>Application description and procedures, including ATK download</td>
</tr>
<tr>
<td>13</td>
<td>i.MX35 PDK 1.5 Windows Embedded CE 6.0 Reference Manual</td>
<td>Driver and software reference</td>
</tr>
<tr>
<td><strong>Linux</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>i.MX PDK Linux Hello World Application Note</td>
<td>Hello World demo and new demo instructions</td>
</tr>
<tr>
<td>15</td>
<td>i.MX35 PDK 1.5 Linux Demo Image Readme</td>
<td>Release contents, installation, setup, requirements, features, issues</td>
</tr>
<tr>
<td>Title</td>
<td>Contents</td>
<td>Document Number</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>16  i.MX35 PDK 1.5 Linux Standard Package</td>
<td>Release contents, requirements, features, issues</td>
<td>926-77398</td>
</tr>
<tr>
<td>Release Notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17  i.MX PDK 1.5 Linux Standard User's Guide</td>
<td>Application description and procedures, including ATK download</td>
<td>UMS-25894</td>
</tr>
<tr>
<td>18  i.MX PDK 1.5 Linux Reference Manual</td>
<td>Driver and software reference</td>
<td>926-25894</td>
</tr>
</tbody>
</table>
How to Reach Us:

Home Page:
www.freescale.com

Web Support:
http://www.freescale.com/support

USA/Europe or Locations Not Listed:
Freescale Semiconductor
Technical Information Center, EL516
2100 East Elliot Road
Tempe, Arizona 85284
+1-800-521-6274 or +1-480-768-2130
www.freescale.com/support

Europe, Middle East, and Africa:
Freescale Halbleiter Deutschland GmbH
Technical Information Center
Schatzbogen 7
81829 Muenchen, Germany
+44 1296 380 456 (English)
+46 8 52200080 (English)
+49 89 92103 559 (German)
+33 1 69 35 48 48 (French)
www.freescale.com/support

Japan:
Freescale Semiconductor Japan Ltd.
Headquarters
ARCO Tower 15F
1-8-1, Shimo-Meguro, Meguro-ku,
Tokyo 153-0064, Japan
0120 191014 or +81 3 5437 9125
support.japan@freescale.com

Asia/Pacific:
Freescale Semiconductor China Ltd.
Exchange Building 23F
No. 118 Jianguo Road
Chaoyang District
Beijing 100022
China
+86 010 5879 8000
support.asia@freescale.com

For Literature Requests Only:
Freescale Semiconductor Literature Distribution Center
P.O. Box 5405
Denver, Colorado 80217
1-800-441-2447 or 303-675-2140
Fax: 303-675-2150
LDCForFreescaleSemiconductor@hibbertgroup.com

Information in this document is provided solely to enable system and software implementers to use Freescale Semiconductor products. There are no express or implied copyright licenses granted hereunder to design or fabricate any integrated circuits or integrated circuits based on the information in this document.

Freescale Semiconductor reserves the right to make changes without further notice to any products herein. Freescale Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Freescale Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. “Typical” parameters that may be provided in Freescale Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including “Typicals”, must be validated for each customer application by customer’s technical experts. Freescale Semiconductor does not convey any license under its patent rights nor the rights of others. Freescale Semiconductor products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Freescale Semiconductor product could create a situation where personal injury or death may occur. Should Buyer purchase or use Freescale Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold Freescale Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Freescale Semiconductor was negligent regarding the design or manufacture of the part.

Freescale™ and the Freescale logo are trademarks of Freescale Semiconductor, Inc. All other product or service names are the property of their respective owners. Microsoft, Windows, and ActiveSync are trademarks or registered trademarks of Microsoft Corporation. ARM and RealView are registered trademarks of ARM Limited. ARM11 is a trademark of ARM Limited. Bluetooth is a trademark owned by Bluetooth SIG, Inc. Wi-Fi is a registered trademark of the Wi-Fi Alliance. Linux is a registered trademark of Linus Torvalds. Samtec is a registered trademark of Samtec, Inc.

© Freescale Semiconductor, Inc. 2009. All rights reserved