Introduction to the i.MX Applications Processor Portfolio

AMF-CON-T0678

Pat Stilwell
Product Marketing
i.MX families offer some of the most versatile platforms for multimedia and display applications, bringing personality and interactivity to a whole new world of products.
Your Interface to the World
i.MX families offer the most versatile platforms for multimedia and display applications, bringing personality and interactivity to a whole new world of products

Auto

Smart Devices

Industrial

Medical
Freescale gives you the market’s widest range of ARM-based solutions for automotive, industrial, consumer and networking applications. Find your ideal solution at the price, performance and power level you desire and leverage the extensive software and tool bundles available to speed and ease your design process.
Freescale is a trusted provider of high quality technical solutions that enable the development of breakthrough Smart Devices.

**Trusted Partner**
Freescale is on your team, delivering innovative products with long lives and the quality you expect from a leader.

**Enablement**
Freescale’s ARM portfolio has the technical infrastructure to provide the highest level of support in the IC industry.

**Technology Leadership**
Freescale’s i.MX family includes a wide range of platforms giving customers access to the necessary components for designing breakthrough embedded systems.

**Embedded Leadership**
**Long Product Lives**
**Quality**
**Service**

**Development Platforms**
**Vast Ecosystem**
**Software Completeness**
**Ease of Use**

**Broad Portfolio**
**Power & Performance Leadership**
**Scalable Platforms**
**Targeted Reference Designs**
i.MX Value

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**Software Completeness**

**Ease of Use**

**Broad Portfolio**

**Power & Performance Leadership**

**Scalable Platforms**

**Targeted Reference Designs**
i.MX Markets and Applications

Automotive
- Infotainment
- Telematics
- Instrument Clusters
- Vision/Camera Systems

eReaders
- Monochrome eReader
- Color eReaders

Smart Devices
- Media Tablets
- IPTV/Streaming Media
- Smart Monitors
- Media Phones
- Printers
- Appliances
- Scanners

- Medical – Patient Monitoring
- Medical tablets
- Industrial tablets
- Smart Energy
- Factory Automation
- HMI
- Aerospace and Defense
- Digital Signage
i.MX: Enable Multimedia Everywhere

It’s about consumerization of… Everything

From:
Specialized (low-end) hardware with RTOS

To:
High-performance hardware + OpenOS + Specialized apps

Car Infotainment
Medical
IP Phones
Education Devices
Industrial HMI
Panes
DECT Phones
Digital signage
In-flight Infotainment
Enterprise Tablets

IPTV
Appliances
Metering
Giant Waterproof Tablet – i.MX53

Honeywell Lynx Touch security panel with the i.MX25

Icephone, Medical Phone with i.MX31

Navico Marine Navigation i.MX51

Gigaset DECT phone with i.MX233

Maxtrack tablet for Brazilian Police with i.MX51

Avaak Vue Personal Video Network With the i.MX25

Invoxia IP Phone - i.MX503

i.MX25 based picking application, logistics market system in warehouses

Sophia systems’ non-contact card Reader/Writer for DoCoMo with i.MX51

AMX 20.3” Modero X Series Panoramic Table Top Touch Panel with i.MX53

Televic in Belgium trams using MX51

i.MX51

Sophia systems’ non-contact card Reader/Writer for DoCoMo with i.MX51

Sharp e-Dictionary with i.MX28

Harris military communication equipment with i.MX27

Japanese Boarding Gate Pass Reader with i.MX27

Self service touch screen terminal
Some i.MX Smart Devices with telephony features

- China Telecom P7 Media Phone – i.MX51
- Telstra T-hub – i.MX51
- Huawei MC850 – i.MX51
- ACN IP Phone – i.MX27
- BlackBerry Curve - MXC
- Yulong smartphone – i.MX31
- Coship E89 smartphone – i.MX31
- Coolpad 8910 smartphone – i.MX51
- Gigaset DECT phone – i.MX233
- Skype DECT phone – i.MX28
- Orange Livephone Touch – i.MX31
- Yulong TV phone – i.MX31
- PCCW Eye – i.MX21
- Icephone Medical Phone – i.MX31
- Avaak Vue Personal Video Network – i.MX25
- PCCW Eye Home Smartphone – i.MX51
- Galentia Liverpool FC phone – i.MX31

i.MX2x : ARM9
i.MX3x : ARM11
i.MX5x : ARM Cortex A8
Freescale-based E Ink eReaders

Amazon
- Kindle DX & Kindle 2
  - i.MX31
- Kindle 3
  - i.MX35
- Kindle, Kindle Touch
  - i.MX50

Kobo (Fnac/WHSmith)
- i.MX35
- i.MX50

Google / iRiver
- i.MX50

Sony
- i.MXL
- i.MX31
- i.MX50

Ectaco
- i.MX50

Pocketbook
- i.MX35
- i.MX50

Bebook
- Booq
  - i.MX31
- Acer
  - Medion
  - i.MX35

Hanvon
- i.MX51
- i.MX50

Onyx
- Greenbook
- Jinke
  - i.MX50
i.MX for General Embedded Highlights

• Supply
  - 10-15 year longevity commitment
  - Industrial & Automotive qualifications
  - Long history of strong partnerships with global distributors

• Software
  - Freescale coded, tested, and supported OSs (Android, Linux, Windows Embedded)
  - Free software codecs optimized for Freescale solutions.
  - Wide ecosystem to support tool chains, modules, system integrators, software and design services

• Ease of Use
  - All generally launched products are accessible via the web.
  - Quicker time to market through reference platforms
  - Integration of key peripherals (CAN, 1588 Ethernet, dual Ethernet, boot modes, graphics and video accelerators, etc.) to reduce system cost and complexity, improve performance, lower power consumption
  - Low cost development systems such as the i.MX53 Quick Start Board.
  - Extensive i.MX community - www.imxcommunity.org
  - Part of a vast portfolio of product technologies offered by Freescale
  - Freescale is a leader in multiple markets (automotive, industrial, consumer, networking) – leveraging technology from all markets across product portfolios
i.MX for Industrial

• Broad Software Support
  - Mature Freescale Linux offering. Charter member of Linaro
  - 3\textsuperscript{rd} generation Android offering with 3.0 and 4.0 support in Q1 2012
  - 10+ years of Windows Embedded development
  - RTOS support including QNX, VxWorks, Integrity
  - Strong Ecosystem with Module Manufacturers and Software Integrators

• Industrial Environment and Peripheral Support
  - 3.3V IO
  - 0.8mm pitch package to reduce PCB & manufacturing cost
  - Flexible interface support including legacy interfaces – DDR2, DDR3, LVDS
  - Broad peripheral support – Gbit ethernet, CAN, SATA, PCI-E, LVDS
  - Extended Temp range available with full Industrial qualified parts

• Up to 15 year lifetime support for manufacturing

| ARM920™ | ARM926™ 400MHz | ARM1136™ 532MHz | ARM® Cortex A8 800MHz-1GHz | ARM® Cortex A9 1GHz-1.2GHz | ARM® Cortex A53 1.5GHz-2GHz |
Freescale Product Longevity Program

- The embedded market needs long-term product support
- Freescale has a longstanding track record of providing long-term production support for our products
- Freescale is pleased to provide a formal product longevity program for the market segments we serve
- For the automotive and medical segments, Freescale makes a broad range of devices available for a minimum of 15 years
- For all other market segments in which Freescale participates, Freescale makes a broad range of devices available for a minimum of 10 years
- Life cycles begin at the time of launch
- A list of participating Freescale products is available at: www.freescale.com/productlongevity
Freescale Quality Commitment

Screened Reliability

Built-in Reliability

Reliability Resources

Reliability Risks

Low-Risk Quality and Verification

Process Certification

Reliability Reuse

Reliability Verification Qualification
Freescale is a trusted provider of high quality technical solutions that enable the development of breakthrough Smart Devices

<table>
<thead>
<tr>
<th>Trusted Partner</th>
<th>Enablement</th>
<th>Technology Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freescale is on your team</strong>, delivering innovative products with long lives and the quality you expect from a leader.</td>
<td><strong>Freescale’s ARM portfolio</strong> has the technical infrastructure to provide the highest level of support in the IC industry</td>
<td><strong>Freescale’s i.MX family includes a wide range of platforms</strong> giving customers access to the necessary components for designing breakthrough embedded systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Embedded Leadership</th>
<th>Development Platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long Product Lives</strong></td>
<td><strong>Vast Ecosystem</strong></td>
</tr>
<tr>
<td><strong>Quality</strong></td>
<td><strong>Software Completeness</strong></td>
</tr>
<tr>
<td><strong>Service</strong></td>
<td><strong>Ease of Use</strong></td>
</tr>
</tbody>
</table>

**Broad Portfolio**

- Power & Performance Leadership
- Scalable Platforms
- Targeted Reference Designs
### Six Generations of Applications Processors

<table>
<thead>
<tr>
<th>Year</th>
<th>Processor</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>Dragonball</td>
<td>1st FSL Apps Processor</td>
</tr>
<tr>
<td>2001</td>
<td>i.MX1</td>
<td>1st FSL ARM9 Apps Processor</td>
</tr>
<tr>
<td>2003</td>
<td>i.MX2 Series</td>
<td>90nm LP HW Video Accel Analog Integration</td>
</tr>
<tr>
<td>2005</td>
<td>i.MX3 Series</td>
<td>ARM11 GPU Integration</td>
</tr>
<tr>
<td>2009</td>
<td>i.MX5 Series</td>
<td>65nm LP/GP ARM Cortex-A8 &gt;1GHz</td>
</tr>
<tr>
<td>2011</td>
<td>i.MX 6 Series</td>
<td>40nm LP ARM Cortex-A9 Multi-core family</td>
</tr>
</tbody>
</table>

- **Clear market leader** for eReader applications processors (IDC)
- **No. 1** in Applications Processors (IDC 12/2011)
- **No. 2** in Auto Infotainment (Strategy Analytics)

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**Freescale**

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### Freescale i.MX Applications Processors

<table>
<thead>
<tr>
<th>Processor</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.MX 6Quad</td>
<td>High Performance Tablet, Media Box, Luxury Infotainment, Advanced HMI</td>
</tr>
<tr>
<td>i.MX 6Dual</td>
<td>Color eReader, Business Tablet, Mainstream Infotainment, Medical</td>
</tr>
<tr>
<td>i.MX 6DualLite</td>
<td>i.MX53</td>
</tr>
<tr>
<td>i.MX 6Solo</td>
<td>Monochrome eReader, Single Function Tablet, Connected Radio, Smart Energy Meter</td>
</tr>
<tr>
<td>i.MX 6SoloLite</td>
<td>i.MX28, i.MX233, i.MX25, i.MX35, i.MX50</td>
</tr>
</tbody>
</table>

**Performance/Multimedia Capability**
- Good
- Better
- Best
- Differentiation

- **Content Creation, Technology Driver**
- **Good, Better, Best Differentiation**

**Images:**
- NXP logo
- Freescale logo

**Text:**
- i.MX
- 6Quad
- 6Dual
- 6DualLite
- 6Solo
- 6SoloLite
- i.MX50
- i.MX28, i.MX233, i.MX25, i.MX35

- High Performance Tablet
- Media Box
- Luxury Infotainment
- Advanced HMI
- Color eReader
- Business Tablet
- Mainstream Infotainment
- Medical
- Monochrome eReader
- Single Function Tablet
- Connected Radio
- Smart Energy Meter
i.MX 6 Series

• Industry’s Most Scalable ARM Processors

Build scalable product lines with ultimate versatility

Software and hardware compatibility across single, dual and quad core devices

Easy to use development kits

Best-in-class performance, low power consumption and bleeding-edge multimedia and graphics

Optimized peripheral sets tailored to serve automotive, industrial and consumer markets
Saves development costs and improves time to market. Scalability with multiple cores is key to implement this strategy.

**Quad Core**
- High-End (6Quad)
- IPTV
  - High Performance Tablet
  - Auto Infotainment

**Dual Core**
- High-End (6Dual)
- Smart Monitor
  - Business Tablet
  - Media Tablet
  - IP Phone
- Low-End (6DualLite)
  - Tablets for Kids
  - Mainstream Infotainment
  - Color eReaders

**Single Core**
- High-End (6Solo)
- Smart Energy
  - eReaders
  - Entry Auto Infotainment
- Low-End (6SoloLite)
Enabling Next Generation Consumer Products

**Being the Same Is Different**
Scalable multicore processors enables one software design for a portfolio of products.

**Do More with Less Power**
24 hours of video playback, 30+ days of standby time through unique low-power design and multicore utilization.

**i.MX 6 Series**
Built on ARM® Cortex™-A9

**Make It Look Good**
Get clean, crisp and complex graphics powered by 200MT/s. Three dedicated graphics engines for uncompromised user experience.

**Make It Pop**

Industry’s most **scalable** and **powerful** platform for multimedia and display applications
Supreme Scalability and Flexibility: Leverage One Design Into Diverse Product Portfolio

Scalable series of five ARM Cortex A9-based SoC Families
## i.MX 6 Series At a Glance

### i.MX 6Solo
- Single ARM® Cortex™-A9 at 1.0GHz
- 256KB L2 cache, Neon, VFPv16, Trustzone
- 2D graphics
- 32-bit DDR3 and LPDDR2 at 400MHz
- Integrated EPD controller

### i.MX 6SoloLite
- Single ARM® Cortex™-A9 at 1.0GHz
- 512KB L2 cache, Neon, VFPv16, Trustzone
- **3D graphics** with 1 shader
- 2D graphics
- 32-bit DDR3 and LPDDR2 at 400MHz
- Integrated EPD controller

### i.MX 6DualLite
- **Dual** ARM Cortex-A9 at 1.0GHz
- 512KB L2 cache, Neon, VFPv16, Trustzone
- 3D graphics with 1 shader
- 2D graphics
- **64-bit** DDR3 and 2-channel 32-bit LPDDR2 at 400MHz
- Integrated EPD controller

### i.MX 6Dual
- **Dual** ARM Cortex-A9 at **1/1.2GHz**
- 1 MB L2 cache, Neon, VFPv16, Trustzone
- 3D graphics with **4 shaders**
- Two 2D graphics engines
- **64-bit** DDR3 and 2-channel 32-bit LPDDR2 at **533MHz**
- Integrated SATA-II

### i.MX 6Quad
- **Quad** ARM Cortex-A9 at 1.2GHz
- 1 MB L2 cache, Neon, VFPv16, Trustzone
- 3D graphics with 4 shaders
- Two 2D graphics engines
- 64-bit DDR3 and 2-channel 32-bit LPDDR2 at 533MHz
- Integrated SATA-II

## i.MX 6 Series Highlights
- ARM Cortex-A9 based solutions ranging up to 1.2GHz
- HD 1080p encode and decode (except 6SL)
- 3D video playback in High definition (except 6SL)
- Low power 1080p playback at 350mW
- Integrated IO’s that include HDMI v1.4, MIPI and LVDS display ports, MIPI camera, Gigabit Ethernet, multiple USB 2.0 and PCI-Express
- SW support: Google Android™, Windows® Compact 7, Linux®, QNX

*Features vary by product family*
Intelligent Integration of Multimedia

**i.MX 6Dual/6Quad VPU**
- H.264 MVC1080p60 decode
- H.264 MVC 720p60 encode
- 350mW power consumption for single video!

**i.MX 6Dual/6Quad IPU**
- Four Display support (2x MIPI-DSI, Parallel, HDMI v1.4a)
- Stereoscopic camera input
- Color adjustments and gamut mapping
- Gamma correction and contrast stretching
- Compensation for low-light conditions & backlight reduction

**Image capture**

**VPU**

**2D/3D Graphics**

**2x/4x ARM Cortex- A9s**

**IPU**

**3D LCD**

**Movie Content**

**Recording Video**

**Game Content**

**i.MX 6Dual/6Quad Triple-Play Graphics**
- 3 engines: 3D, OpenVG and BLT
- 200 MT/s, 4 shaders, 3 separate engines
- High quality 3D games optimized for mobile
- Augmented reality views (real world + 3D objects)
- Advanced 3D video formats (source/depth format)

**i.MX 6Dual/6Quad – 2x/4x cores**
- Create, transform, enhance, & publish multimedia fast!
- Intuitive User Interfaces for content viewing
- Scalability for ‘the next big use case’

*Publish*

*3D Television*
<table>
<thead>
<tr>
<th>Feature</th>
<th>i.MX25x</th>
<th>i.MX233</th>
<th>i.MX28x</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAM</td>
<td>128KB</td>
<td>32KB</td>
<td>128KB</td>
</tr>
<tr>
<td>Flash Interface</td>
<td>MLC/SLC NAND Flash w/ 8-bit RS, NOR Flash</td>
<td>SLC/MLC/Managed NAND Flash 20-bit BCH, 8-bit RS</td>
<td>SLC/MLC/Managed NAND Flash w/ 20-bit BCH</td>
</tr>
<tr>
<td>DRAM Interface</td>
<td>150 MHz 16-bit DDR2, mDDR, SDRAM</td>
<td>150 MHz 16-bit DDR1, mDDR</td>
<td>200 MHz 16-bit DDR2, LV-DDR2, mDDR</td>
</tr>
<tr>
<td>LCD</td>
<td>1 overlay, alpha blending, panning</td>
<td>8 overlays, alpha blending, scaling, rotation, color space conversion</td>
<td>8 overlays, alpha blending, scaling, rotation, color space conversion</td>
</tr>
<tr>
<td>Integrated TV-Out</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CMOS Sensor Interface</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CAN</td>
<td>x2</td>
<td>-</td>
<td>x2</td>
</tr>
<tr>
<td>10/100 Ethernet</td>
<td>Single 10/100</td>
<td>-</td>
<td>Dual 10/100 (1588 H/W Time stamping) and L2 Switch</td>
</tr>
<tr>
<td>Analog Audio</td>
<td>External</td>
<td>Integrated stereo ADC/DAC with amps, Mono speaker amp output</td>
<td>External</td>
</tr>
<tr>
<td>S/PDIF Interface</td>
<td>No</td>
<td>1 output</td>
<td>1 output</td>
</tr>
<tr>
<td>Power Management</td>
<td>External</td>
<td>Integrated</td>
<td>Integrated</td>
</tr>
<tr>
<td>USB 2.0</td>
<td>HS port (Host/Device) HS PHY x1, HS Host with FS PHY x1</td>
<td>HS port (Host/Device) with PHY x1</td>
<td>HS Host/Device with PHY x1, HS Host with PHY x1</td>
</tr>
<tr>
<td>SIM</td>
<td>x2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P-ATA</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Security</td>
<td>Equivalent capabilities, Tamper Detection, RNG</td>
<td>Equivalent capabilities, PRNG</td>
<td>Equivalent capabilities, HAB4, PRNG</td>
</tr>
</tbody>
</table>
i.MX25 Target Markets

**Industrial**
- HMI (Factory Automation & Building Control)
- Smart Meters
- General Embedded / Consumer

**Point Of Sale**
- Secure ePOS Terminals
- Data Acquisition (Scanners)
- Fixed and Handheld Printers

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration and Connectivity – Ethernet, CAN, SDIO, Touchscreen Controller, DDR2, USB PHY, Camera I/F</td>
<td>Reduced system cost and complexity, greater product feature scalability</td>
</tr>
<tr>
<td>LCD Controller</td>
<td>Can drive high color VGA displays for information display and user interaction</td>
</tr>
<tr>
<td>Security</td>
<td>Robust, tamper-resistant devices for secure applications</td>
</tr>
<tr>
<td>Industrial qualification and product longevity</td>
<td>Supports the full life of the product in the field</td>
</tr>
<tr>
<td>Windows CE and Linux BSP’s</td>
<td>Reuse software across i.MX platforms</td>
</tr>
<tr>
<td>Optimized performance and power consumption</td>
<td>Fanless automation, increased battery life for portable equipment</td>
</tr>
</tbody>
</table>
i.MX25x Family

- **Key Features and Advantages**
  - 400MHz ARM926EJ-S™, 16KB L1 I/D-Cache
  - 128KB on-chip SRAM for low power LCD refresh
  - External memory interface: DDR2, mDDR, or SDRAM up to 133MHz, 16-bit data bus
  - Supports off-chip NAND or NOR Flash
  - 10/100 Ethernet MAC with RMII support
  - USB 2.0 OTG w/ HS PHY, USB 2.0 Host w/ FS PHY or ULPI
  - Two CAN interfaces
  - Two Smartcard interfaces
  - SDIO interface for external Wi-Fi module
  - VGA (800x600) LCD controller, Resistive touchscreen controller
  - CMOS sensor interface
  - P-ATA for external CD connection or HDD
  - CE-ATA and SD/MMC+ for external storage
  - Enhanced serial audio interface
  - 3 general purpose 12-bit ADC channels
  - UART’s, CSPI’s, I²C, I²S
  - Enhanced security features, including secure boot and tamper detection (i.MX258, i.MX251, i.MX255 only)

- **Available Parts**
  - i.MX251, i.MX255, i.MX253, i.MX257, i.MX258

- **Package and Temperature**
  - 0.8mm,400-pin MAPBGA, 0.5mm,400-pin MAPBGA (i.MX257 only)
  - -20C to +70C, -40C to +85C temperature options
# i.MX28 Target Applications

## Industrial
- Smart Energy - Gateways/Meters
- HMI - Factory Automation
- HMI – Building Control
- Industrial Control
- Fixed and Handheld Printers

## Home and Office
- HMI (Appliances, Security Panels, Automation)
- Portable Medical
- Media Gateways/Accessories

## Automotive
- Audio Connectivity
- CAN Gateways
The i.MX28 processor family reaches new levels of integration in an ARM9 device, with on-chip display, power management and connectivity features. Easy-to-use tools and software help you design differentiated industrial, automotive and consumer products in less time.

**Industrial-Strength Integration**
- WVGA LCD controller with touchscreen for display-centric applications
- Numerous connectivity options including dual 10/100 Ethernet (1588 capable) with L2 switch

**Industry-leading Power Management**
- Integrated power management simplifies customer design and saves on system cost
- <0.5 W performance under harshest conditions

**Comprehensive Enablement**
- Software BSPs and multimedia codecs available and supported by Freescale at no added cost
- Freescale-owned development system priced at <$400 include access to all design and layout files.
# i.MX28 Family Product Comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>i.MX280</th>
<th>i.MX283</th>
<th>i.MX286</th>
<th>i.MX287</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-chip RAM</td>
<td>128KB</td>
<td>128KB</td>
<td>128KB</td>
<td>128KB</td>
</tr>
<tr>
<td>Memory Interface</td>
<td>NAND Flash, DDR2, mDDR, LV-DDR2</td>
<td>NAND Flash, DDR2, mDDR, LV-DDR2</td>
<td>NAND Flash, DDR2, mDDR, LV-DDR2</td>
<td>NAND Flash, DDR2, mDDR, LV-DDR2</td>
</tr>
<tr>
<td>LCD w/ TS</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Security</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethernet</td>
<td>x1</td>
<td>x1</td>
<td>x1</td>
<td>x2</td>
</tr>
<tr>
<td>L2 Switch</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>CAN</td>
<td>-</td>
<td>-</td>
<td>x2</td>
<td>x2</td>
</tr>
<tr>
<td>12-bit ADC</td>
<td>x8</td>
<td>x8</td>
<td>x8</td>
<td>x8</td>
</tr>
<tr>
<td>High Speed ADC</td>
<td>x1</td>
<td>x1</td>
<td>x1</td>
<td>x1</td>
</tr>
<tr>
<td>USB2.0</td>
<td>OTG HS with HS PHY x1, HS Host with HS PHY x1</td>
<td>OTG HS with HS PHY x1, HS Host with HS PHY x1</td>
<td>OTG HS with HS PHY x1, HS Host with HS PHY x1</td>
<td>OTG HS with HS PHY x1, HS Host with HS PHY x1</td>
</tr>
<tr>
<td>SDIO*</td>
<td>x3</td>
<td>x3</td>
<td>x3</td>
<td>x4</td>
</tr>
<tr>
<td>SPI*</td>
<td>x3</td>
<td>x3</td>
<td>x3</td>
<td>x4</td>
</tr>
<tr>
<td>UART*</td>
<td>x6</td>
<td>x6</td>
<td>x6</td>
<td>x6</td>
</tr>
<tr>
<td>PWM*</td>
<td>x8</td>
<td>x8</td>
<td>x8</td>
<td>x8</td>
</tr>
<tr>
<td>S/PDIF Tx</td>
<td>-</td>
<td>-</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Package</td>
<td>14x14 0.8mm 289 BGA</td>
<td>14x14 0.8mm 289 BGA</td>
<td>14x14 0.8mm 289 BGA</td>
<td>14x14 0.8mm 289 BGA</td>
</tr>
</tbody>
</table>

* Represents maximum available – some pins are shared with other interfaces
i.MX28x Family

- **Key Features and Advantages**
  - 454MHz ARM926EJ-S core w/ 32KB Cache
  - PMU with high efficiency on-chip DC/DC, supports Li-ion batteries, battery charging
  - 10/100 Dual IEEE 1588 Ethernet with RMII support and L2 Switch
  - Dual CAN interfaces
  - LCD Controller with Touchscreen
  - NAND support – SLC/MLC and eMMC 4.4 managed
  - Hardware BCH (up to 20-bit correction)
  - 200 MHz 16-bit DDR2, LV-DDR2, mDDR external memory support
  - Dual High speed USB with embedded PHY
  - Up to 8 General purpose 12-bit ADC channels and single 2 Msps ADC channel
  - Temperature sensor for thermal protection
  - Multiple connectivity ports (UART, SSP, SDIO, SPI, I2C, I2S)
  - <0.5 Watt performance in harshest conditions
  - Family of products supporting various feature sets

- **Package and Temperature**
  - 289 BGA 14x14mm 0.8mm pitch
  - -40C to +85C (Industrial, Automotive)
  - -20C to +70C (Consumer)
### Freescale’s Cortex A8 Product Portfolio

<table>
<thead>
<tr>
<th>Feature</th>
<th>i.MX53 Family</th>
<th>i.MX50 Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Camera</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Video HW</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>2D Graphics</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>3D Graphics</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Ethernet</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>CAN</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>USB(PHY)</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>DRAM controller</td>
<td>32-bit DDR3</td>
<td>32-bit DDR2</td>
</tr>
<tr>
<td>Analog</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

- **UXGA**
- **SXGA**

**From low cost to high definition and everything in between**
# i.MX5x Cortex-based SoC Feature Summary

<table>
<thead>
<tr>
<th>Feature</th>
<th>i.MX51</th>
<th>i.MX503</th>
<th>i.MX508</th>
<th>i.MX53</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample w/BSP</td>
<td>Now</td>
<td>Now</td>
<td>Now</td>
<td>Now</td>
</tr>
<tr>
<td>Qual / Final BSP</td>
<td>Now</td>
<td>Now</td>
<td>Now</td>
<td>Now</td>
</tr>
<tr>
<td><strong>Core</strong></td>
<td>Cortex-A8 800MHz (Consumer) 600MHz (Automotive)</td>
<td>Cortex-A8 800MHz (Consumer)</td>
<td>Cortex-A8 800MHz (Consumer)</td>
<td>Cortex-A8 Up to 1.2GHz (Consumer) Up to 1GHz (Automotive)</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>512MB, x32 mDDR / DDR2</td>
<td>2GB, x32 DDR2 / mDDR / LP-DDR2</td>
<td>2GB, x32 DDR2 / mDDR / LP-DDR2</td>
<td>2GB, x32 DDR2 / DDR3 / LP-DDR2</td>
</tr>
<tr>
<td>Max Mem Speed</td>
<td>400MT/s (200 MHz clock)</td>
<td>533MT/s (266 MHz clock)</td>
<td>533MT/s (266 MHz clock)</td>
<td>800MT/s (400MHz clock)</td>
</tr>
<tr>
<td>Video Decode</td>
<td>720p30</td>
<td>N/A</td>
<td>N/A</td>
<td>1080p30</td>
</tr>
<tr>
<td>Video Encode</td>
<td>D1</td>
<td>N/A</td>
<td>N/A</td>
<td>720p30</td>
</tr>
<tr>
<td><strong>3D GPU</strong></td>
<td>OpenGL/ES 2.0 27M tri/s, 166M pix/s</td>
<td>N/A</td>
<td>N/A</td>
<td>OpenGL/ES 2.0 33M tri/s, 200M pix/s</td>
</tr>
<tr>
<td><strong>2D GPU</strong></td>
<td>OpenVG 1.1, 166M pix/s</td>
<td>OpenVG 1.1, 200M pix/s</td>
<td>OpenVG 1.1, 200M pix/s</td>
<td>OpenVG 1.1, 200M pix/s</td>
</tr>
<tr>
<td>LCD Resolution</td>
<td>WXGA (1280x800) 60fps</td>
<td>SXGA+ (1400x1050)60fps</td>
<td>SXGA+ (1400x1050)60fps</td>
<td>UXGA (1600x1200) 60fps</td>
</tr>
<tr>
<td>Display Interface</td>
<td>LCD, Parallel</td>
<td>LCD, Parallel</td>
<td>EPD Controller</td>
<td>LCD, Parallel, LVDS</td>
</tr>
<tr>
<td>EPD Controller</td>
<td>N/A</td>
<td>N/A</td>
<td>(2048x1536) @106 Hz</td>
<td>N/A</td>
</tr>
<tr>
<td>Video Out</td>
<td>Component HD720 60fps</td>
<td>N/A</td>
<td>N/A</td>
<td>VGA HD1080p60</td>
</tr>
<tr>
<td>Camera I/F</td>
<td>Parallel</td>
<td>N/A</td>
<td>N/A</td>
<td>Parallel</td>
</tr>
<tr>
<td>HDD I/F</td>
<td>P-ATA</td>
<td>N/A</td>
<td>N/A</td>
<td>P-ATA, S-ATA 1.5Gbps</td>
</tr>
<tr>
<td>Ethernet</td>
<td>10/100Mbps</td>
<td>10/100Mbps</td>
<td>10/100Mbps</td>
<td>10/100Mbps</td>
</tr>
<tr>
<td>USB</td>
<td>OTG + PHY, Host + ULPI (x3)</td>
<td>OTG + PHY, Host + PHY</td>
<td>OTG + PHY, Host + PHY</td>
<td>OTG + PHY, Host + PHY Host + ULPI (x2)</td>
</tr>
</tbody>
</table>

Blue indicates change from column to the left.
i.MX50 Target Markets

- eReaders
- Portable navigation
- DECT phones
- Kiosks
- Signage
- Patient / client monitoring
- Home and office automation

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimized performance and power consumption</td>
<td>Increased battery life for portable equipment</td>
</tr>
<tr>
<td>Memory</td>
<td>2X more memory bus bandwidth than competitive solutions @266 MHz = faster connection to memory for quicker response times</td>
</tr>
<tr>
<td>Display Controllers</td>
<td>Can drive high resolution, high color LCDs, in addition to EPD's</td>
</tr>
<tr>
<td>Graphics</td>
<td>Hardware-accelerated graphics rendering for feature-rich UI</td>
</tr>
<tr>
<td>Integration and Connectivity – Ethernet, SDIO, DDR, USB PHY,</td>
<td>Reduced system cost and complexity, greater product feature scalability</td>
</tr>
<tr>
<td>Security</td>
<td>Robust, tamper-resistant devices for secure applications</td>
</tr>
<tr>
<td>Proven power management solution</td>
<td>MC34708 optimized for i.MX50 and supported and supplied from single supplier</td>
</tr>
</tbody>
</table>
i.MX508 Block Diagram

Specifications:
- **CPU**: ARM Cortex-A8 800MHz
- **Process**: 65nm, LP/GP
- **Core Voltage**: 0.7-1.1V
- **Temp Range**: 0 to 70°C
- **Package**: 13x13 0.5mm
  17x17 0.8 mm

Features and Advantages
- High Performance CPU: Cortex-A8
- Advanced power management features
- Integrated E INK EPD Controller
- Low Power LP-DDR2 support
- eMMC 4.4/SDIO
- NAND 32-bit ECC and ONFI2.1/Toggle
- Dual USB PHY (HS/OTG, HS/Host)
- Flexible LCD display support up to 1400x1050
### i.MX53 Target Markets

#### Consumer
- Tablet
- Personal Navigation
- Mobile Internet Devices
- Video-enabled IP Phone
- Digital Photo Frame
- Connected TV
- Smart Monitor

#### Industrial
- Security and Surveillance
- Industrial HMI
- Digital Signage / Kiosks
- Barcode Scanners
- Printers

#### Automotive
- Connectivity and Telematics
- Digital Instrument Clusters
- Video and Navigation

#### Medical
- Patient Monitors
- Telehealth
- Infusion Pumps
The low-power i.MX53 family offers ultra-fast processing and full HD capability to provide the ultimate user experience.

- **Full HD Capability:** The i.MX53 is the first i.MX processor to offer full HD video playback, for a stunning visual experience.

- **Best-in-Class Performance and Integration:** The highly integrated i.MX53 offers fast processing and features hardware accelerators, improving graphics performance and reducing power consumption.

- **Beyond the Chip:** Highly optimized hardware and software solutions that simplify out-of-box development and speed time to market.
**Specifications:**
- **CPU:** Cortex-A8
  - 1.0GHz – Consumer
  - 800MHz – Automotive/Industrial
- **Process:** 65nm, LP/GP
- **Core Voltage:** 0.85V - 1.3V
- **Package:** 19x19 0.8mm 529 ball BGA
  - 12x12 0.4mm PoP (Consumer)
- **Case Temp:** -20 to 70°C (Consumer)
  - -40 to 85°C (Automotive/Industrial)

**Key Features and Advantages**
- High performance CPU: Cortex A8
- 2GB DDR2/3, LPDDR2 memory at 400MHz
- HDD: PATA, S-ATA interface
- One eSDHC ports supports MMC4.4 including DDR mode
- Ethernet 10/100 with IEEE1588
- Delivers rich graphics and UI in HW
- OpenGL ES 2.0 3D accelerator (AMD Z430)
- OpenVG 1.1 graphics accelerator (AMD Z160)
- Neon Vector floating point co-processor
- Display up to UXGA (1600x1200)
- Drives high resolution video in HW
  - Multi-format HD1080 video decode
  - Multi-format HD720 video encode
  - High quality video processing (resizing, de-interlacing, etc)
- Displays: Parallel, LVDS or VGA
- Audio:
  - I²S, S/PDIF Rx/Tx, ESAI
- Secure boot (HAB), cryptographic accelerators, TZ
- More analog integration: simplified system, reduced system BOM
- Temperature Monitor for smart performance control
- Linear supply regulators
- 32KHz supply regulators

---

**Multimedia**
- OpenGL ES 2.0 + VG1.1
- 1080p30 Video Decoder
- 720p30 Video Encoder
- 1080p30 @ 60Hz TV Out

**Display**
- Analog VGA Out
- Parallel (RGB) UXGA
- LVDS UXGA
- Resizing & Blending
- Inversion / Rotation
- Image Enhancement
- De-interlacing
- Camera Interface

---

**Connectivity**
- Fast IrDA
- eMMC 4.3/SD 2.1 x4
- eMMC 4.4
- CSPI x3
- UART x5
- PCIe x3
- ESI
- SSI/I²S x3
- PATA
- SATA
- HS USB OTG +PHY
- HS Host+PHY
- HS ULPI Host x2
- S/PDIF Tx/Rx
- CAN x2
- MLB50
- ASRC
- 10/100 Ethernet
- GPIO

**Ext. Memory I/F**
- 2GB DDR2/DDR3/ LPDDR2
- SLC/MLC NAND
- Up to 16-bit ECC
- NOR

**CPU Platform**
- 32KB i-cache
- 32KB d-cache
- 256KB L2-cache
- Neon
- ETM
- Vector Floating Point Unit

---

**System Control**
- Secure JTAG
- Power Mgmt
- PLL x4
- Clock Reset
- Smart DMA
- 32KHz Osc
- Temp Monitor
- LDO Supply x2

**Timers**
- Timer x3
- PWM x2
- Watch Dog x2

**Memory**
- ROM
- RAM

**Security**
- Sahara v4
- Trust Zone
- RTIC
- SCC v2
- SRTC
- eFUSES

---

**i.MX53 Block Diagram**

---

**Reused IP from i.MX51x or i.MX35x**

**Updated IP from i.MX51x**

**NEW IP in i.MX53x**
The Home Health Hub Platform

Optional Tablet with Medical User Interface
i.MX6

HHH Ref Platform Gateway
i.MX28

HHH Ref Platform Expansion Capabilities
- Smart Plugs
- Smart Appliances
- Safety/Security
- Lighting Control
- Local Display

868MHz RF
HHH Panic Alarm MC12311
Nonin Pulse Ox MC9S08GP32

TELE-HEALTH

Blood Glucose Meter
Thermometer
Blood Pressure Monitor
Weight Scale

Wired connection
Wireless connection
Medical monitoring
WWW connection

Physician Monitoring Center
Loved Ones
Social Network

HOME AUTOMATION

Freescale

i.MX6
Physician Monitoring Center
Loved Ones
Social Network

i.MX28

HHH Ref Platform Expansion Capabilities
- Smart Plugs
- Smart Appliances
- Safety/Security
- Lighting Control
- Local Display

868MHz RF
HHH Panic Alarm MC12311
Nonin Pulse Ox MC9S08GP32

TELE-HEALTH

Blood Glucose Meter
Thermometer
Blood Pressure Monitor
Weight Scale

Wired connection
Wireless connection
Medical monitoring
WWW connection
The i.MX28 Home Energy Manager - Reference Platform (Adjacent Application)

- Smart Meter
- AC
- MC13224V ZigBee chipset
  - HA 1.0
- Navajo Mbus-RF chipset
- MC13224V ZigBee chipset
  - HA 1.0
- MC13224V ZigBee chipset
  - SA 1.0
- NAND Flash
- DDR2
- USB
  - Optional PHY
- Wi-Fi 802.11bg Module
- ARM9™ Core
  - 400MHz
- Integrated PMIC
- Integrated Crypto
- UART
- LCD Display
- Optional Wireless WAN
- Remote Access
- Router/Residential Gateway

**Features**
- 4-layer PCB
- Freescale Silicon
- Board Features
- Enabled Networks

*Pin and software compatible i.MX280 provides option for headless version.*

i.MX28 features used in HEM ref design shown.
i.MX Value

Freescale is a trusted provider of high quality technical solutions that enable the development of breakthrough Smart Devices.

Trust Partner

Freescale is on your team, delivering innovative products with long lives and the quality you expect from a leader.

Enablement

Freescale’s ARM portfolio has the technical infrastructure to provide the highest level of support in the IC industry.

Technology Leadership

Freescale’s i.MX family includes a wide range of platforms giving customers access to the necessary components for designing breakthrough embedded systems.

Embedded Leadership

Development Platforms

Broad Portfolio

Long Product Lives

Vast Ecosystem

Power & Performance Leadership

Quality

Software Completeness

Scalable Platforms

Service

Ease of Use

Targeted Reference Designs
i.MX50 Family Processors

- The i.MX50 Evaluation Kit (EVK) is a cost effective platform for developing products based on i.MX50 processors
- Small, single board design including the complementary MC34708 PMIC
- Support for multiple display options including HDMI, LCD or EPD

SABRE Platform for eReaders

- The Smart Application Blueprint for Rapid Engineering (SABRE) series introduces the SABRE platform for eReaders based on i.MX50
- Enables EPD display, touch control, audio playback and the ability to add WLAN, a 3G modem or Bluetooth
- Includes the MC34708 PMIC and Freescale MMA8450QT three-axis digital accelerometer

i.MX50 EVK : $499 USD MSRP

SABRE platform for eReaders: $998 USD MSRP
i.MX50 Development Platform Key Features

Processor
- Freescale i.MX50 800 MHz ARM® Cortex™-A8 CPU
- Freescale MC34708 PMIC

Memory
- 512 MB Double Data Rate2 Mobile (LPDDR2) DRAM memory
- Socket for raw NAND Flash (48-TSOP)
- Footprint for Managed NAND (eMMC/eSD)
- SPI Flash
- Two Secure Digital (SD)/multimedia card (MMC) sockets

Display
- HDMI digital video output connector
- Parallel WVGA LCD add-on card via expansion connector
- EPD add-on card via expansion connector
- EPD board (SABRE)

Audio
- Freescale SGTL5000 audio codec
- Audio HP Jack
- External speaker connection
- Microphone

Connectivity
- USB Host connectors
- Micro USB OTG connector
- Ethernet (10/100T) connector
- SIM Card Socket
- Mini PCIe connector

Debug
- JTAG connector
- One console UART

Other
- MMA8450QT three-axis digital accelerometer (SABRE)

Tools & OS Support
- VMware player to bring up image on a Windows PC
- Linux and Android from Freescale
- LTIB
Quick Start Board

• Cost-effective, open source development platform
• Designed to simplify product evaluation

SABRE for Tablets

• Smart Device Market-focused
• Form-factor ready to accelerate design and time to market
MX SABRE for Automotive Infotainment Modular Reference Design Concept

- **CPU Card**
  - Capable of stand-alone operation
  - Processor, memory, power, USB, Ethernet, SD-card slot, Display
  - Attaches to Application Module for more comprehensive system evaluation and application benchmarking
  - Industry standard MXM 3.0 connector

- **Main Board**
  - Expanded connectivity options (CAN, MOST, USB, dual displays, SDIO)
  - Connectors for Processor Module and Wireless Modules

- **Wireless Modules**
  - GPS Module
  - Bluetooth/Wi-Fi Module
  - 3G Modem Module
  - Radio Tuners
  - IAP
SABRE Platform for Tablets Key Features

**i.MX53 1GHz Cortex-A8**
- Other Freescale silicon
  - SGTL5000 Audio Codec
  - MMA8451Q 3-Axis Accelerometer
  - MAG3110 Magnetic Sensor
  - MC1323X ZigBee®

**Memory**
- 1GB DDR3
- 16GB SanDisk SSD
- 8GB eMMC

**PMIC:** Dialog DA9053

**Connectivity**
- Atheros GM22 GPS Receiver
- Atheros AR6003 Wi-Fi + AR3001 BT Module

**User Interface**
- 10.1” 1024x768 display with capacitive multi-touch
- Omnivision OV5642 5MP camera
- Capacitive Buttons: Home, Menu, Back, Search
- Other Buttons: Power, Reset, Volume up/down

**I/Os:**
- HDMI connector
- 1x Full size SD Card Slot
- 2x High-Speed USB Host, 1 x Micro-USB
- 1x SATA port, 1x LVDS display footprint
- Debug PCB with Ethernet 10/100, JTAG, UART
- Stereo Speaker, Headphone/Microphone

**OS Support**
- Android, Ubuntu, Linux, Windows Embedded
i.MX53 Quick Start Board Key Features

**i.MX53 1Ghz Cortex-A8 Processor**
- Dialog DA9053 PMIC
- 1 GB DDR3 memory
- 3” x 3” 8-layer PCB

**Display**
- LVDS connector
- VGA connector
- Parallel LCD add-on card via expansion connector
- 24 bit 4.3” 800x480 WVGA with 4-wire touch screen
- HDMI add-on card via expansion connector

**Audio**
- SPDIF output via HDMI add-on card
- Freescale SGTL5000 audio codec
- Microphone and headphone jacks

**Expansion Connector**
- Enables parallel LCD or HDMI output
- Camera CSI port signals
- I2C, SSI, SPI signals

**Connectivity**
- Full-size SD/MMC card slot
- Micro SD card slot
- 7-pin SATA data connector
- 10/100BT Ethernet port
- 2x high-speed USB host port
- 1x micro USB device port

**Debug**
- JTAG connector
- DB-9 UART port

**Additional Features**
- 3-axis Freescale accelerometer (MMA8450QT)
- Power supply 5V, 2A

**Tools Support**
- Segger/CodeSourcery, Macgraijor, IAR debug/IDE tool chain
- Inflexion™ UI from Mentor Embedded
- VMware player to bring up image on a Windows PC

**OS Support**
- Linux from Freescale; Android 2.2 and Windows Compact 7 from Adeneo

$149
i.MX 6 Reference Designs (with Production Silicon)

- All Boards FSL designed
- All Boards FSL supported
- Common set of boards for 6Q/D/DL/S
- SoloLite will have its own EVK

<table>
<thead>
<tr>
<th>Board Name</th>
<th>i.MX 6Quad</th>
<th>i.MX 6Dual</th>
<th>i.MX 6Dual Lite</th>
<th>i.MX 6Solo</th>
<th>i.MX 6SoloLite</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.MX 6Quad</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>i.MX 6Dual</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>i.MX 6Dual Lite</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>i.MX 6Solo</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>i.MX 6SoloLite</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

- SABRE–Al for Auto ($1499)
- SABRE Platform for Smart Devices ($999)
- SABRE Board for Smart Devices ($399)
- i.MX 6SLEVK ($599)

i.MX 6 maximizes use of reference boards across derivative parts
Freescale i.MX 6 Series Development Systems

SABRE Board for Smart Devices

- **P/N: MCIMX6Q-SDB**
- **Cost-effective ($399)**, open source development platform
- Designed to **simplify product evaluation**

SABRE Platform for Smart Devices

- **P/N: MCIMX6Q-SDP MCIMX6DL-SDP**
- Smart Device Market-focused
- Form-factor ready to accelerate design & time to market ($999)

SABRE Platform for Automotive Infotainment

- **P/N: MCIMXABASEV1 MCIMX6SAICPU1 MCIMX6QAICPU1**
- Automotive Market-focused
- Standard base board ($699) and adaptable CPU card ($799) system
SABRE Board for Smart Devices

- Cost-effective ($399), open source development platform
- Designed to simplify product evaluation

SABRE Platform for Smart Devices

- Smart Device Market-focused ($999)
- Form-factor ready to accelerate design and time to market
Freescale EcoMAPS for i.MX Architectures

Dev Tools
- ARM
- IAR Systems
- Mentor Graphics
- Segger
- Timesys

Customer Application
- Application Specific
  - Apple
  - Adobe
  - IXXAT
- Middleware
  - Infineon
  - Green Hills Software
  - Qt
- Operating Systems
  - Android
  - Windows CE
  - QNX
  - Linux
  - Ubuntu
- i.MX Processors
  - ARM
  - E-Ink
  - Chips & Media
  - Vivante
- fast boot
- Security

HW & SW Engineering Services
- EBS: Embedded Board Solutions
  - Advantech
  - Boundary Devices
  - Congatec
  - Digi International
  - iWave
  - Kontron
  - NovTech
  - SECO
  - TQ
- IDH: Independent Design House
  - Compal
  - FIC
  - Foxconn
  - HMS
  - Letou
  - Netronix
- ODM: Original Design Manufacturer
  - Green Hills Software
  - Intrinsyc
  - iWave

Training
- Training Partners
  - Acsys
  - Adeneo
  - iWave

IDE: Integrated Development Environment
BDM: Background Debug Module
EBS: Embedded Board Solutions
IDH: Independent Design House
ODM: Original Design Manufacturer
SSI: Software & Solution Integrators

More Standard
More Custom
A Freescale supported open web community of developers sharing common interest in transforming i.MX applications processors into practically anything imaginable.

Community Facts at a Glance

- Over 3,000 members and over 200 Freescale engineers and marketers interacting with you
- Support and enablement for i.MX processors and software
- Forums, Groups and Blogs Posts
- News, Photos and Videos
- Training, Events and Promotions

www.imxcommunity.org