



**THE DATASHEET OF
MCIMX6X1AVO08AB**





i.MX 6 Series Portfolio Overview

AMF-CON-T0060

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Product Marketing



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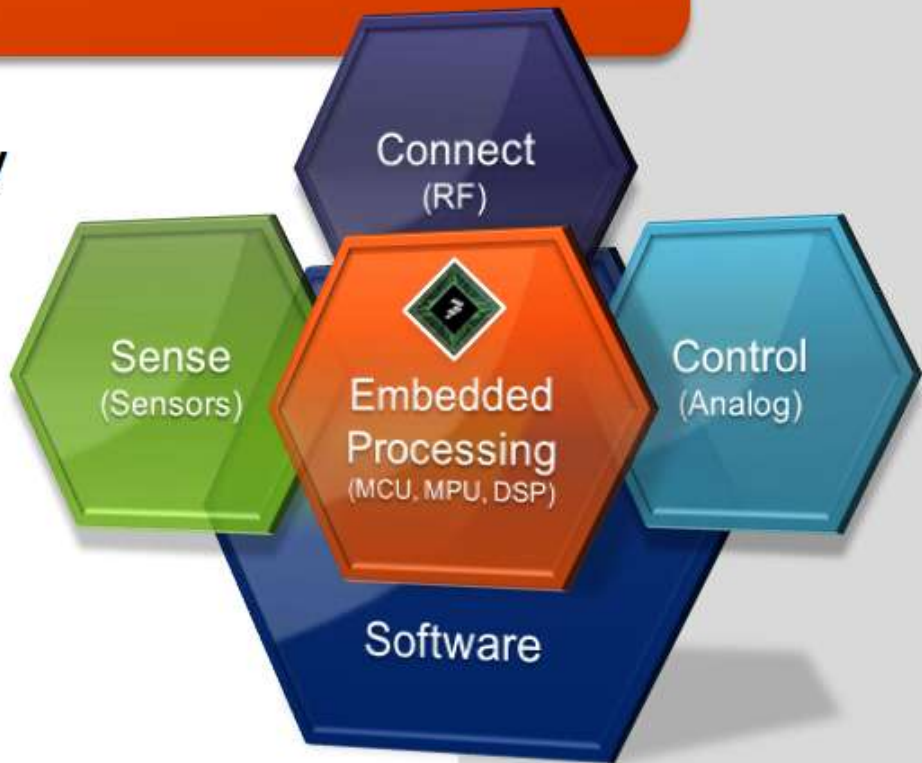
A Global Leader of Embedded Processing Solutions

Two Core Product Groups

- Automotive, Industrial & Multi-Market Solutions
 - Microcontrollers
 - Sensors
 - Analog
- Networking and Multimedia Solutions
 - Communications Processors
 - Applications Processors
 - RF Power

Four Primary Markets

- Automotive
- Industrial
- Networking
- Consumer



Platform-Level Solutions

>50 Year Legacy

>5,500 Engineers

>6,000 Patent Families

>18,000 Customers



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i.MX Smart Devices



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



Maxtrack tablet for Brazilian Police with i.MX51



Avaak Vue Personal Video Network With the i.MX25



Invoxia IP Phone - i.MX503



Gigaset DECT phone with i.MX233

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



Line6 "Stagescape" audio mixing system with i.MX51



i.MX233 based i'mWatch



Japanese Boarding Gate Pass Reader with i.MX27



Sharp e-Dictionary with i.MX28



Harris military communication equipment with i.MX27

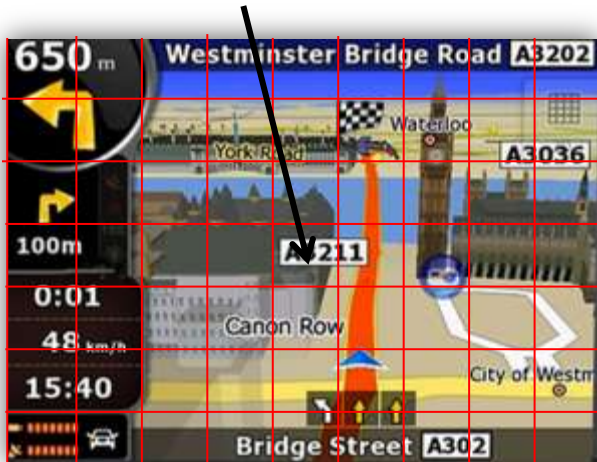


Self service touch screen terminal

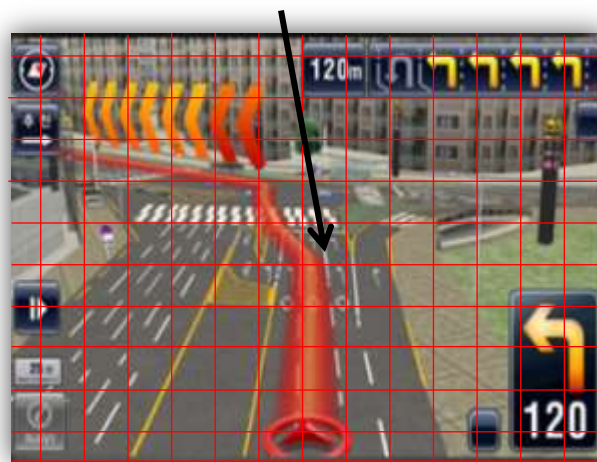
Tile Based Rendering (Chunkers)

- Size of scene buffer unknown before rendering
 - Possible overflow if scene requires more data than expected
- Good rendering method for baseline GUI/3D Apps with smaller object count (less details)
 - More bandwidth efficient than FMR in simple (yesterday) use cases
- For next generation dynamic scenes in new and future applications with lots of objects, details and post-processing effects, tile based Chunkers require multi-pass memory access to constantly process changing 3D/scene data
 - PC Level Applications (Performance, Quality, Effects) → Tablets → Smartphones → Infotainment

Tile



Tile



Tile (Complex Scene)





i.MX 6 Series feature list (3/4)

Red indicates change from column to the left

	i.MX 6SoloLite	i.MX 6Solo	i.MX 6DualLite	i.MX 6Dual	i.MX 6Quad
Display Resolution (@60Hz)	WXGA (WXGA=1366x768)	2x WXGA	2x WXGA	2x 4XGA or 2x [1080p + WXGA] (4XGA=2048x1536)	2x 4XGA or 2x [1080p + WXGA]
Display Interfaces	2x Outputs • 1x Parallel • EPDC	2x Outputs • 2x Parallel • 2x LVDS • HDMI • MIPI-DSI • EPDC	2x Outputs • 2x Parallel • 2x LVDS • HDMI • MIPI-DSI • EPDC	4x Outputs • 2x Parallel • 2x LVDS • HDMI • MIPI-DSI	4x Outputs • 2x Parallel • 2x LVDS • HDMI • MIPI-DSI
GPU 3D	-	Vivante GC880 • 53Mtri/s • 266Mpxl/s • OpenGL ES 1.1/2.0/3.0	Vivante GC880 • 53Mtri/s • 266Mpxl/s • OpenGL ES 1.1/2.0/3.0	Vivante GC2000 • 176Mtri/s • 1000Mpxl/s • OpenGL ES 1.1/2.0/3.0 • OpenCL 1.1 EP	Vivante GC2000 • 176Mtri/s • 1000Mpxl/s • OpenGL ES 1.1/2.0/3.0 • OpenCL 1.1 EP
GPU 2D (Vector Graphics)	Vivante GC355 • 300Mpxl/s • OpenVG 1.1	via GPU 3D • OpenVG 1.1	via GPU 3D • OpenVG 1.1	Vivante GC355 • 300Mpxl/s • OpenVG 1.1	Vivante GC355 • 300Mpxl/s • OpenVG 1.1
GPU 2D (BLIT)	Vivante GC320 • 600Mpxl/s	Vivante GC320 • 600Mpxl/s	Vivante GC320 • 600Mpxl/s	Vivante GC320 • 600Mpxl/s	Vivante GC320 • 600Mpxl/s
Video Dec	SW Only	1080p30 + D1 MPEG-2, H.264 MVC, VC1, MPEG-4/Xvid, DivX 6, H.263, MJPEG, VP6 / WebM VP8	1080p30 + D1 MPEG-2, H.264 MVC, VC1, MPEG-4/Xvid, DivX 6, H.263, MJPEG, VP6 / WebM VP8	1080p60 + D1 2x 1080p30 MPEG-2, H.264 MVC, VC1, MPEG-4/Xvid, DivX 6, H.263, MJPEG, VP6 / WebM VP8	1080p60 + D1 2x 1080p30 MPEG-2, H.264 MVC, VC1, MPEG-4/Xvid, DivX 6, H.263, MJPEG, VP6 / WebM VP8
Video Enc	-	1080p30 2x 720p H.264, H.263, MPEG-4, MPEG-2, MJPEG	1080p30 2x 720p H.264, H.263, MPEG-4, MPEG-2, MJPEG	1080p30 2x 720p H.264, H.263, MPEG-4, MPEG-2, MJPEG	1080p30 2x 720p H.264, H.263, MPEG-4, MPEG-2, MJPEG



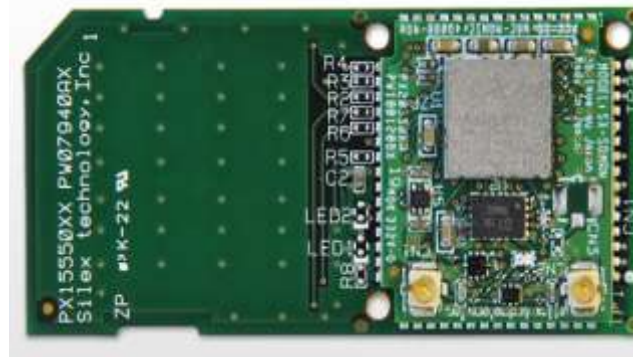
i.MX 6 Series feature list (4/4)

Red indicates change from column to the left

	i.MX 6SoloLite	i.MX 6Solo	i.MX 6DualLite	i.MX 6Dual	i.MX 6Quad
UART SPI I2C	5x UART, 4x SPI 4x I2C	4x SPI 5x UART 4x I2C	4x SPI 5x UART 4x I2C	5x SPI 5x UART 3x I2C	5x SPI 5x UART 3x I2C
ADC	-	-	-	-	-
Temp. Monitor	Yes	Yes	Yes	Yes	Yes
PMU	Partial PMU integration	Partial PMU integration	Partial PMU integration	Partial PMU integration	Partial PMU integration
Security	HAB, Secure RAM, Crypto Acc., TrustZone, NIST approved RNG	HAB, Secure RAM, Crypto Acc., TrustZone, NIST approved RNG	HAB, Secure RAM, Crypto Acc., TrustZone, NIST approved RNG	HAB, Secure RAM, Crypto Acc., TrustZone, NIST approved RNG	HAB, Secure RAM, Crypto Acc., TrustZone, NIST approved RNG
Commercial Qual.	Available	Available	Available	Available	Available
Automotive Qual. AEC-Q100	-	Available	Available	Available	Available
Industrial Qual.	-	Available	Available	Available	Available
Package	13x13 0.5P BGA	21x21 0.8P BGA Pin compatible with i.MX 6Dual/Quad		21x21 0.8P FCBGA Pin compatible with i.MX 6DualLite/Solo	



- 802.11a/b/g/n low power SDIO cad based on Qualcomm Atheros AR6003
- Wi-Fi driver software integrated with Freescale i.MX 6 platform
- Family of hardware solutions available
 - System-in-Package (SiP)
 - Radio Module
 - SD Card Form Factor





Backup



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