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## Understanding [Embedded - Microprocessors](#)



Embedded microprocessors are specialized computing chips designed to perform specific tasks within an embedded system. Unlike general-purpose microprocessors found in personal computers, embedded microprocessors are tailored for dedicated functions within larger systems, offering optimized performance, efficiency, and reliability. These microprocessors are integral to the operation of countless electronic devices, providing the computational power necessary for controlling processes, handling data, and managing communications.

## Applications of [Embedded - Microprocessors](#)

Embedded microprocessors are utilized across a broad spectrum of applications, making them indispensable in

### Details

Product Status	Active
Core Processor	ARM® Cortex®-A9, ARM® Cortex®-M4
Number of Cores/Bus Width	2 Core, 32-Bit
Speed	227MHz, 1GHz
Co-Processors/DSP	Multimedia; NEON™ MPE
RAM Controllers	LPDDR2, LVDDR3, DDR3
Graphics Acceleration	Yes
Display & Interface Controllers	Keypad, LCD, LVDS
Ethernet	10/100/1000Mbps (2)
SATA	-
USB	USB 2.0 + PHY (1), USB 2.0 OTG + PHY (2)
Voltage - I/O	1.8V, 2.5V, 2.8V, 3.15V
Operating Temperature	-20°C ~ 105°C (TJ)
Security Features	A-HAB, ARM TZ, CAAM, CSU, SNVS, System JTAG, TVDECODE
Package / Case	400-LFBGA
Supplier Device Package	400-MAPBGA (14x14)
Purchase URL	<a href="https://www.e-xfl.com/product-detail/nxp-semiconductors/mcimx6x3evk10ab">https://www.e-xfl.com/product-detail/nxp-semiconductors/mcimx6x3evk10ab</a>

















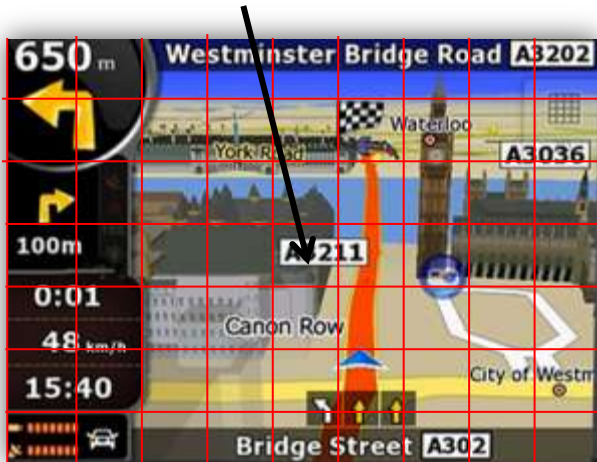




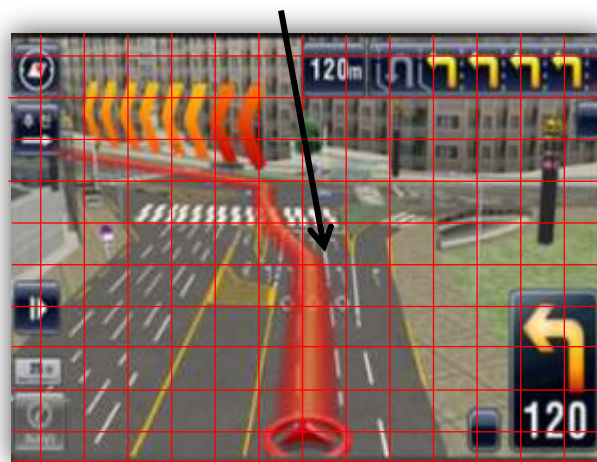
# Tile Based Rendering (Chunkers)

- 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)**



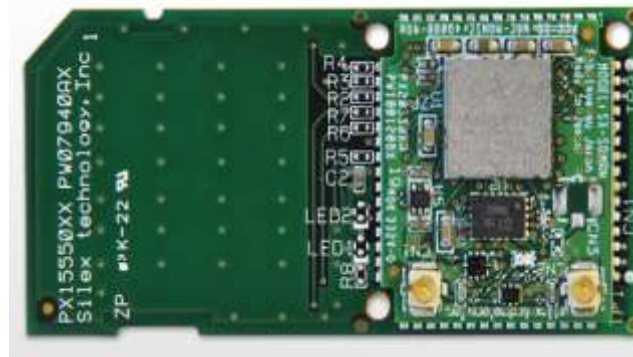








- 802.11a/b/g/n low power SDIO cad based on Qualcomm Atheros AR6003
- Wi-Fi driver software integrated with Freescale i.MX 6 platform
- Family of hardware solutions available
  - System-in-Package (SiP)
  - Radio Module
  - SD Card Form Factor











# Backup



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