



*The Programmable Real-time Unit ("PRU-ICSS") embedded in the AM335x chip is an ideal environment for OEM customers who want to develop specific solution for their end customers. And that means the OEMs will need a robust environment to quickly develop and implement those solutions.*

## Background

**Smart Embedded Systems**, a business unit of Silicon Valley-based Abisys Corporation, has been working with TI for the past few years to build this core expertise. We are now able to offer development services to OEMs who are building solutions that take advantage of the unique and versatile architecture of the AM335x.

If you think of the PRU-ICSS in the AM335x as a "processor within a processor", you can imagine how easily programmable solutions can be built that are based on the end-customers needs. And there are significant advantages when using the AM335x, including fewer external components, lower costs, higher reliability, and real-time programmability.

## Smart Embedded Systems Development Skills

### Our Core PRU-ICSS Competencies

- ✈ Detailed knowledge of PRU-ICSS memory and interrupts structure
- ✈ **Assembly programming**
- ✈ Programming and initializing PRU from Linux
- ✈ **Code optimization to fit in PRU-ICSS memory**
- ✈ Porting multiple protocols to PRU-ICSS

### Firmware

- Operating system: Windows, Linux MacOS, Win/CE, Android.
- **Languages: C, C++, Assembly, Java, ASP.net.**
- Processors: TI AM335x, TI AM1808, TI C55x, TI C64X, ARM 8051, Intel x86, Motorola PPC.

### Device Drivers

- Development on Linux and Windows.

### Past PRU-ICSS Project Examples

- Smart card.
- **Soft UART.**
- Soft i2C interface.
- **Communications protocols.**
- High-to-end solutions, including firmware, Linux drivers and applications
- **Simultaneous operation of functions.**

### Applications

- Development on Linux and Windows.

### Hardware

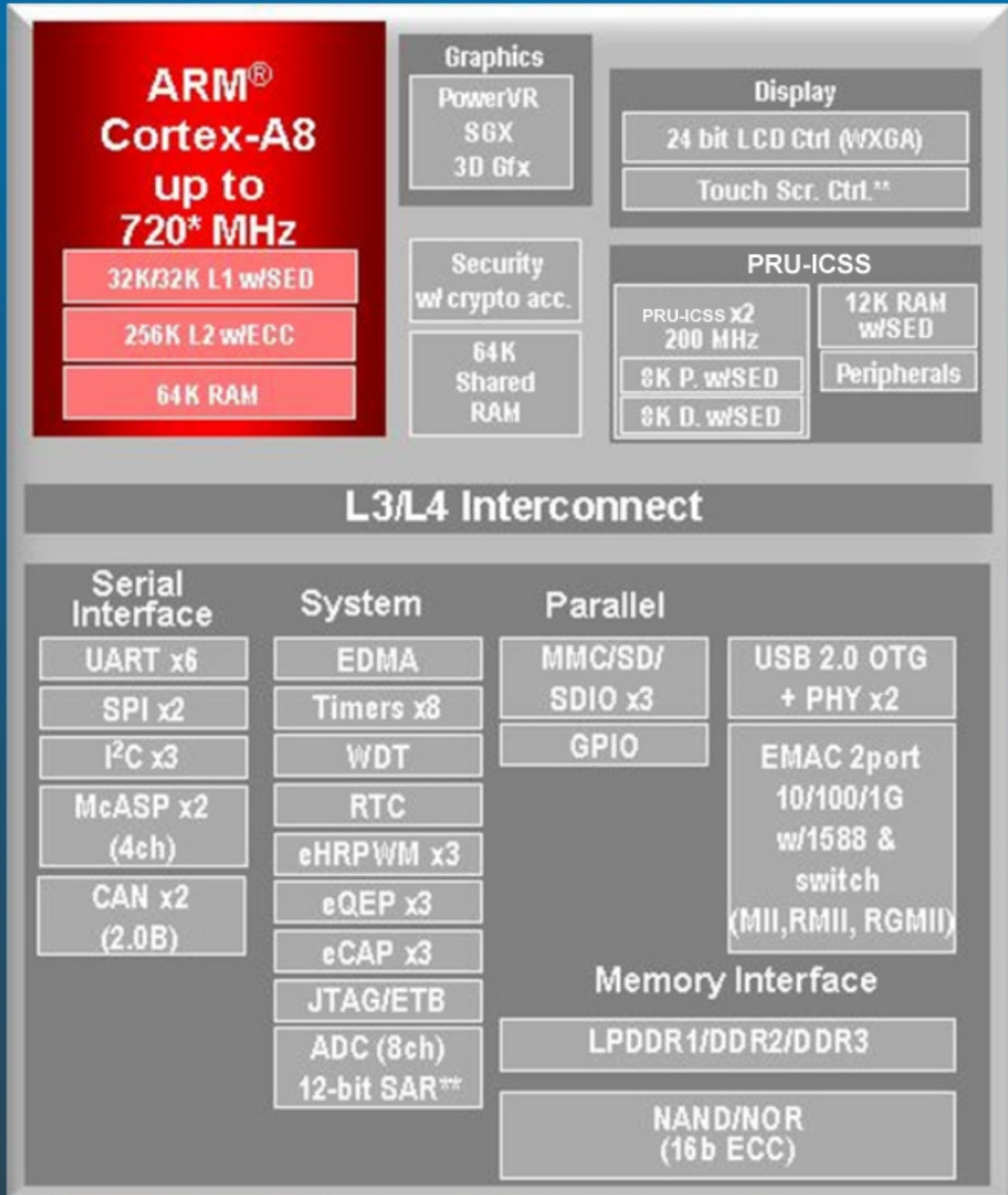
- System design based on TI, ARM and Intel Architectures.
- **Design using USB, SPI, Ethernet, RS-232 and RF devices.**

## About Smart Embedded Systems

The management team has over 60 years' experience in product development using a wide variety of technologies, and have developed solutions in such diverse industries as Biometrics, Industrial Automation, Medical Devices, Consumer Electronics, and Network Security.

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