



## Atmel SAM9G45

400MHz ARM926 Embedded MPU with HS USB and DDR2 Optimized for Industrial Applications

### Benefits

- DDR2 and Low Power DDR (LPDDR) support ensures market availability and low cost
- High-bandwidth architecture provides data speedway
- High-speed connectivity
- Optimized for industrial applications
- Designed for low active power and high performance

### Key Features

- 400MHz ARM926 core with 32kB I & D cache
- DDR2 and LPDDR support
- 133MHz twelve-layer 32-bit Advanced High-performance Bus (AHB) Matrix
- 35 DMA channels
- Dual External Bus Interface
- 100Mbps+ data rates on multiple high-speed peripherals, including high-speed USB, 10/100 Ethernet, SDIO/SDCard, MMC
- EHCI-compliant high-speed USB Host
- 3.3V I/Os eliminate need for external level shifters
- I/O drive controller simplifies PCB design
- 0.8mm ball pitch, BGA324 package for reduced cost PCB manufacturing
- Integrated power management replaces external components
- Sub 300 $\mu$ W/MHz at 400MHz operation with 8 $\mu$ A in backup mode
- Backup unit with RTC, timer and four 32-bit registers and fast wake-up



### Application Areas

- Home and commercial building automation
- Point-of-sale (POS) terminals
- Data loggers
- Internet appliances
- Medical

### Evaluation Kit and Ecosystem

- Fully-featured evaluation board delivered with free board support packages
  - Android™ BSP
  - Linux® distribution
  - Microsoft® Windows® Embedded CE BSP
- Worldwide support ecosystem of industry-leading suppliers of development tools, operating systems, protocol stacks and applications



### Ordering Information

<b>Device Ordering Code</b>	AT91SAM9G45-CU
<b>Status</b>	In production
<b>Kit Ordering Code</b>	AT91SAM9M10-G45-EK
<b>Availability</b>	In stock

