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## 1 - Features

- Optimize the Power Consumption of the Whole System
- Controls Power Consumption Elements
  - Main Oscillator
  - Up to Two Phase Locked Loops (PLLs)
  - Up to two PLL Divider(s)
  - Clock Prescalers
  - ARM® Core Clock
  - Peripheral Clocks
- Drives Up to 30 APB Peripherals
- Drives Up to eight AHB/ASB Peripherals
- Two Oscillators
  - Main Oscillator
  - Slow Clock Oscillator
- Provides:
  - Processor Clock PCK
  - Master Clock MCK
  - Application Clock APCK
  - USB Clock (UHPCK) for the USB Host Port
  - USB Clock (UDPCK) for the USB Device Port
  - Programmable Automatic PLL Switch-off in USB Device Suspend Conditions
- Selection of Several Different Clocks to Drive Peripherals
- Up to eight Programmable Clock Outputs

## 2 - Description

The Power Management Controller (PMC) optimizes power consumption by controlling all clocking elements such as the oscillators, PLLs and system and user peripheral clocks. The PMC enables/disables the clock inputs to many of the peripherals and the ARM Cores.

Furthermore, the PMC gives the user the ability to control up to eight programmable clocks that can be used as outputs on pins to feed external devices.

The integration of up to two PLLs supplies the USB ports with a 48 MHz clock for a USB device and/or 12/48 MHz for a USB host (as required by the bus speed) and the rest of the system with a clock at another frequency.



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**32-bit  
Embedded ASIC  
Core Peripheral**

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**Power  
Management  
Controller  
(PMC)**

**Summary**

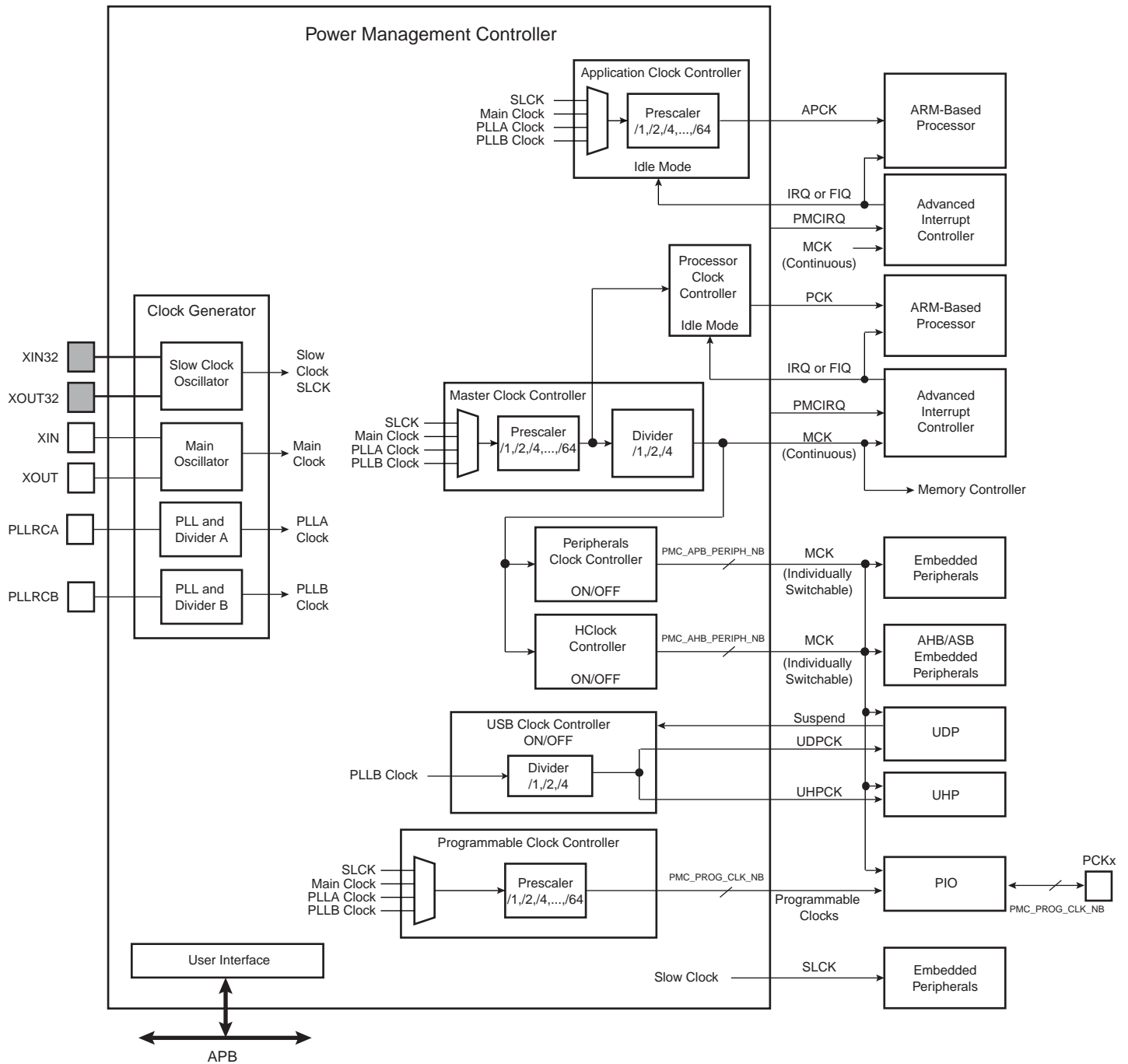
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Note: This is a summary document. A complete document is available under NDA. For more information, please contact your local Atmel sales office.

# Block Diagram

Figure 3. PMC Block Diagram





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