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Continuity of Specifications
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Continuity of Ordering Part Numbers
Cypress continues to support existing part numbers. To order these products, please use only the Ordering Part Numbers listed in this document.

For More Information
Please contact your local sales office for additional information about Cypress products and solutions.

About Cypress
Cypress (NASDAQ: CY) delivers high-performance, high-quality solutions at the heart of today's most advanced embedded systems, from automotive, industrial and networking platforms to highly interactive consumer and mobile devices. With a broad, differentiated product portfolio that includes NOR flash memories, F-RAM™ and SRAM, Traveo™ microcontrollers, the industry's only PSoC® programmable system-on-chip solutions, analog and PMIC Power Management ICs, CapSense® capacitive touch-sensing controllers, and Wireless BLE Bluetooth® Low-Energy and USB connectivity solutions, Cypress is committed to providing its customers worldwide with consistent innovation, best-in-class support and exceptional system value.

MB9A130LB Series

32-bit Microcontroller
FM3 Family

Fact Sheet

MB9A130LB Series are highly integrated 32-bit microcontrollers dedicated for embedded controllers with low power consumption mode and competitive cost. MB9A130LB Series are based on the ARM Cortex-M3 Processor with Flash memory and SRAM, and has peripheral functions such as Motor Control timers, ADCs and Communication Interfaces.

1. FEATURES

- **32bit ARM Cortex-M3 Core**
  - Processor version：r2p1
- **Clock**
  - Maximum clock frequency：20MHz
- **Base Timer**：8 channels (Max.)
- **Multi-function Timer**：1 unit (Max.)
  - 16-bit free-run timer ×3channels/unit
  - Input capture ×4channels/unit
  - Output compare ×6channels/unit
  - A/D activation compare ×1channel/unit
  - Waveform generator ×3channels/unit
  - 16-bit PPG timer ×3channels/unit
- **Watch dog Timer**：1 channel (SW) + 1 channel (HW)
- **Multi-function Serial Interface**
  - Selectable from UART/CSIO/I^2C
  - MB9AF131KB/132KB: 4 channels(CSIO & I^2C is Max 3ch)
  - MB9AF131LB/132LB: 8 channels
- **Real Time Clock**：1 unit
- **External Interrupt Controller Unit**
  - MB9AF131KB/132KB: 6 pins(Max.) + NMI 1 pin
  - MB9AF131LB/132LB: 8 pins(Max.) + NMI 1 pin
- **12-bit A/D Converter**
  - MB9AF131KB/132KB: 6 channels (1 unit)
  - MB9AF131LB/132LB: 8 channels (1 unit)
- **Low Power Consumption Mode**
  - 6 low power consumption modes supported
  - SLEEP mode/TIMER mode/RTC mode/STOP mode /Deep stand-by RTC mode/Deep stand-by STOP mode
- **General Purpose I/O port**
  - MB9AF131KB/132KB：37 (Max.)
  - MB9AF131LB/132LB：52 (Max.)
- **Built-in CR**
- **Debug**
  - Serial Wire JTAG Debug Port (SWJ-DP)
- **Low Voltage Detector**
- **Clock Super Visor**
- **Power Supply**：1.8 to 5.5V

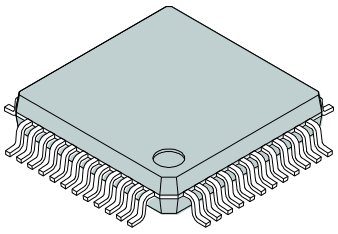
2. PRODUCT LINEUP

Parameter \ Part number	MB9AF131KB/LB	MB9AF132KB/LB
Flash (Byte)	64K	128K
RAM (Byte)	8K	8K

3. ORDERING INFORMATION

Part number	Package
MB9AF131KBPMC	Plastic・LQFP(0.5mm pitch),48-pin (FPT-48P-M49)
MB9AF132KBPMC	
MB9AF131KBQN	Plastic・QFN(0.5mm pitch),48-pin (LCC-48P-M73)
MB9AF132KBQN	
MB9AF131LBPMC1	Plastic・LQFP(0.5mm pitch),64-pin (FPT-64P-M38)
MB9AF132LBPMC1	
MB9AF131LBPMC	Plastic・LQFP(0.65mm pitch),64-pin (FPT-64P-M39)
MB9AF132LBPMC	
MB9AF131LBQN	Plastic・QFN(0.5mm pitch),64-pin (LCC-64P-M24)
MB9AF132LBQN	

4. PACKAGE EXAMPLE OF REFERENCE



Plastic ・ LQFP、64-pins
(FPT-64P-M38)

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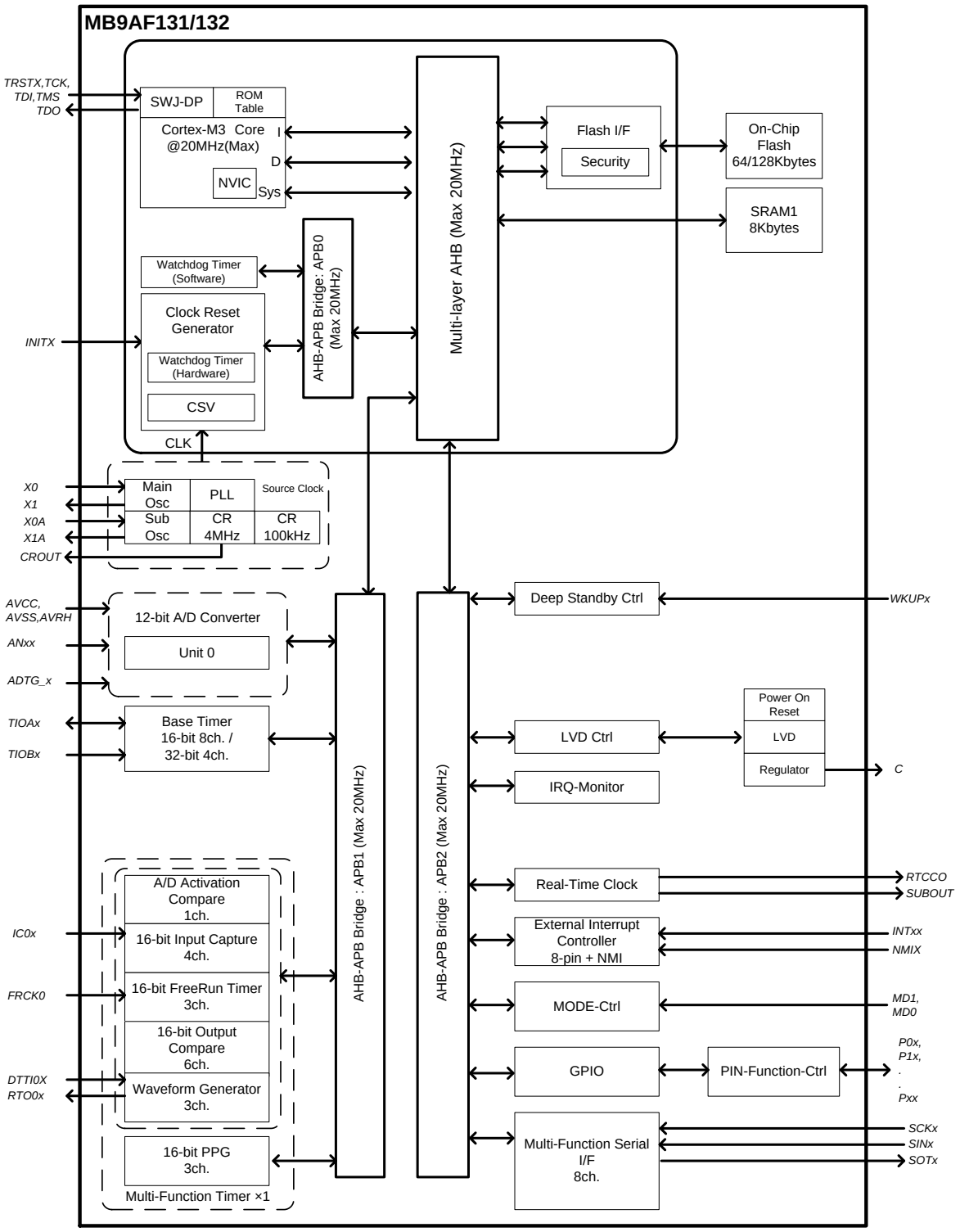
5. BLOCK DIAGRAM



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