

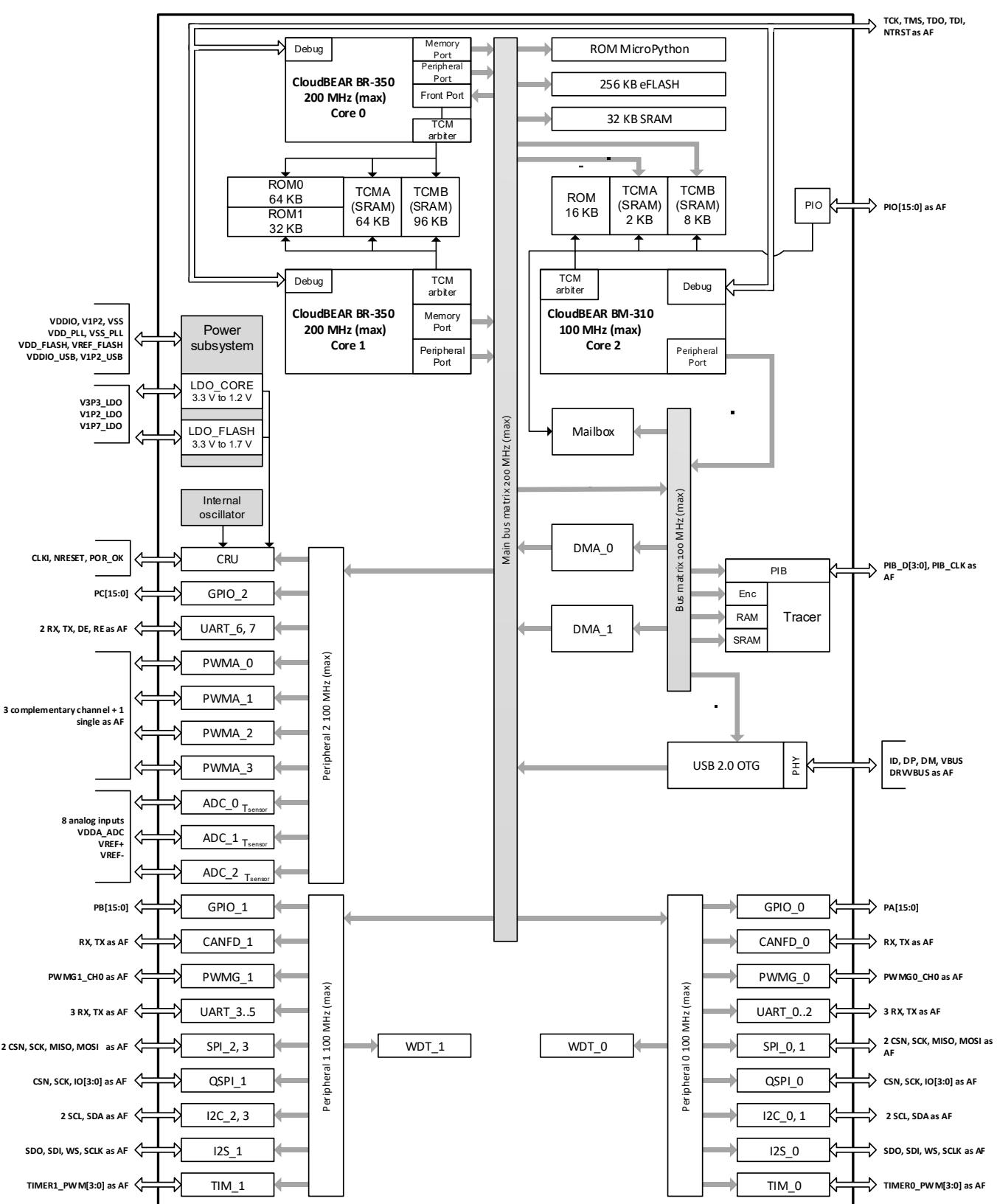
BE-U1000 Microcontroller

Product Brief

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BE-U1000 is a 32-bit general purpose three-core microcontroller. The characteristics of the BE-U1000 microcontroller allow to be used in IoT, automated process control systems, automotive industry, robotics, industrial automation, motor control and other industries.

Memory	2 CloudBEAR BR-350 cores	Communication interfaces
32 KB SRAM	RISC-V architecture	8xUART (2xUART with RS-485 operating mode support)
256 KB eFLASH	RV32IMCBFNAU(P) ISA extension	2xSPI (master)
Maximum size of external direct addressable FLASH memory – 16 MB (in XIP mode)	Maximum operating frequency – 200 MHz	2xSPI (slave)
Timers	Performance – 3.42 CoreMark/MHz (on one core)	4xI ² C
4 timers with 4 PWM channels (PWMA)	ROM: 64 KB for core 0 32 KB for core 1	2xQSPI
2 one-channel general-purpose timers (PWMG)	Sharing a 160 KB TCM (SRAM) memory block	2xI ² S
2 TIM timers	32 KB L1 instruction cache	2xCAN FD
2 watchdog timers	JTAG and TRACE interfaces	USB 2.0 OTG + PHY (HS)
3 12-bit ADC	CloudBEAR BM-310 core	Power consumption
8 multiplexing channels	RISC-V architecture	Input voltages: 3.3 V; 1.7 V and 1.2 V (optional); 1.0 V (reference)
Sampling frequency – 1 MSps	RV32IMCB ISA extension	Maximum current consumption of VDDIO power domain – 250 mA
Integrated temperature sensor	Maximum operating frequency – 100 MHz	Maximum current consumption of V1P2 power domain – 250 mA
2 DMA controllers	16 KB ROM	Ground pin connected through exposed pad
48 GPIO lines	10 KB TCM (SRAM)	
Embedded MicroPython	JTAG interface	
QFN-88 package, 10x10 mm		Reference clock source
		External oscillator (25 MHz)
		Internal oscillator (from 12 to 32 MHz)



Revision History

Revision	Date	Description
1.2.2	29.12.2025	Initial version

Contact Info



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