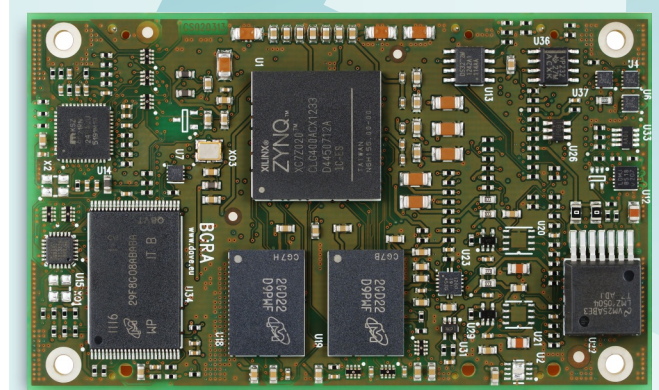


- Unmatched performance thanks to dual ARM Cortex-A9 @ 800MHz
- All memories you need: on-board NOR and NAND Flash
- Enabling smarter system thanks to Artix-7 FPGA integrated on chip
- FPGA banks wide range PSU input from 1.2V to 3.3V
- Highest security and reliability: internal voltage monitoring and power good enable
- Reduced carrier complexity: dual CAN, USB, Ethernet GB and native 3.3V I/O
- Easy to fit thanks to its small form factor
- Accurate timing application thanks to on-board 5ppm RTC



**XILINX**

BORA is the new top-class Dual Cortex-A9 + FPGA CPU module by DAVE Embedded Systems, based on the recent Xilinx Zynq XC7Z010/XC7Z020 application processor. Thanks to BORA, customers are going to save time and resources by using a compact solution that includes both a CPU and an FPGA, avoiding complexities on the carrier PCB.

The use of this processor enables extensive system-level differentiation of new applications in many industry fields, where high-performance and extremely compact form factor (85mm x 50mm) are key factors. Smarter system designs are made possible, following the trends in functionalities and interfaces of the new, state-of-the-art embedded products.

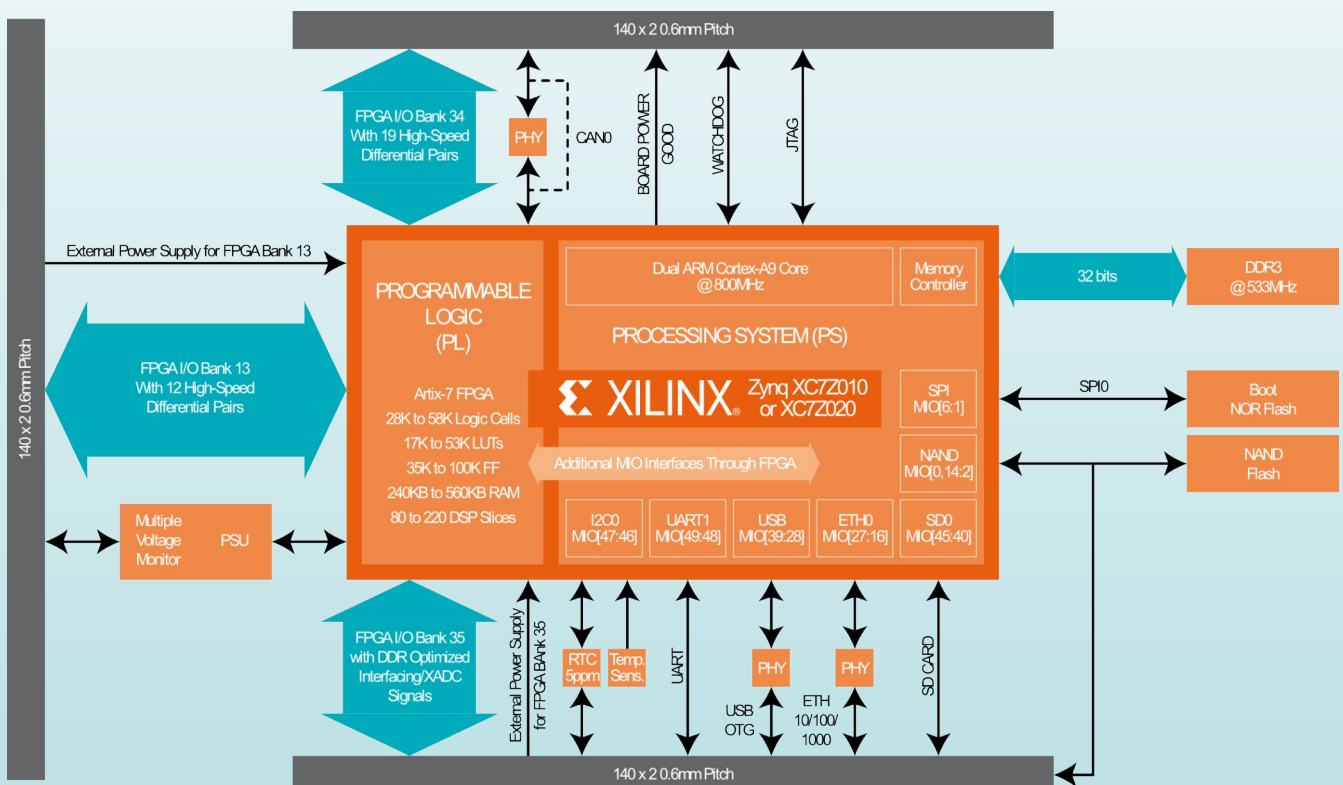
BORA offers great computational power, thanks to the rich set of peripherals, the Dual Cortex-A9 and the Artix-7 FPGA together with a large set of high-speed I/Os (up to 5GHz).

BORA enables designers to create rugged products suitable for harsh mechanical and thermal environments, allowing for the development of the most advanced and robust products.

Thanks to the tight integration between the ARM-based processing system and the on-chip programmable logic, designers are free to add virtually any peripheral or create custom accelerators that extend system performance and better match specific application requirements.

BORA is designed and manufactured according to DAVE Embedded Systems ULTRA Line specifications, in order to guarantee premium quality and technical value for customers who require top performances and flexibility.

BORA is suitable for high-end applications such as medical instrumentation, advanced communication systems, critical real-time operations and safety applications.



**CPU** Xilinx Dual ARM Cortex-A9 Zynq XC7Z010/XC7Z020 @ 800MHz

**Supervisor** On-board power supply supervision and power sequencer  
Watchdog and RTC

**Memory**

**Cache** 32Kbyte instruction, 32Kbyte data, 512Kbyte L2 for each core

**SDRAM** Up to 1GB DDR3 @ 533MHz

**NOR** Bootable SPI NOR 8, 16, 32 MB

**NAND** All sizes, on request

**SRAM** 256 Kbyte

**Interfaces (full-spec models) \***

**LAN** Ethernet 10/100/1000 Mbps  
Additional RMII interface

**UART** up to 2x UART ports

**USB** up to 2 x 2.0 OTG ports

**CAN** up to 2 x CAN

**Debug** JTAG IEEE 1149.1 Test Access Port  
CoreSight™ and Program Trace Macrocell (PTM)

**Other** PC Card: 2 x SD/SDIO 2.0/MMC 3.31 compliant controllers  
up to 6 x I<sup>2</sup>C channels  
up to 6 x SPI channels  
GPIOs available

**FPGA**

**Model** Artix-7

**Logic Cells** 28K to 56K

**LUTs** 17K to 53K

**Flip Flops** 35K to 100K

**RAM** 240KB to 560KB

**DSP Slices** 80 to 220

**Differential Pairs** up to 34 differential pairs for high freq. interfaces

**Mechanical**

**Connectors** 3 x 140 pin 0.6mm pitch

**Size** 85mm x 50mm

**Temperature** Commercial (0°C / +70°C)  
Industrial (-40°C / +85°C)

**PSU**

**Input** 3.3V, on-board voltage regulation

**Software**

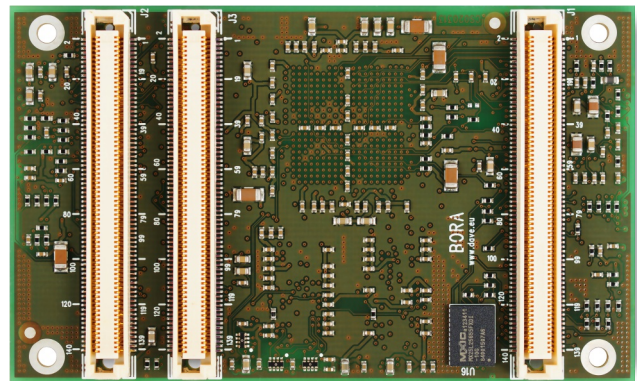
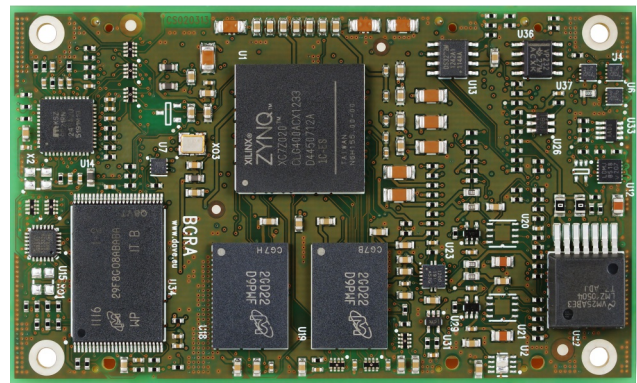
**Bootloader** U-Boot

**Multitasking** Linux 3.x.x

**Evaluation Kit**

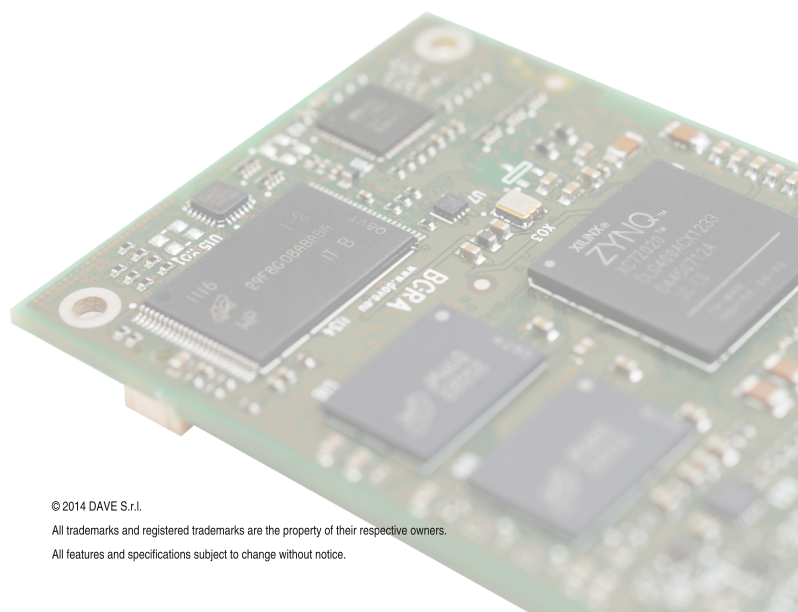
The BORA evaluation kit is available in a development kit that includes a SOM, a carrier board and all accessories required for immediate start-up.

\*: interface availability depends on pin multiplexing.  
Please contact your local FAE.



**Product code configurator \***

Family	Processor	NOR flash	DDR RAM	NAND flash	BOOT	Temp. range
DBR	A: XC7Z010-1	0= 0MB	1= 1GB	0= 0MB	0 = Nor Boot	C: Commercial temp.
	B: XC7Z010-2	3= 8MB	9= 512MB	1= 1024MB		
	C: XC7Z010-3	5= 32MB		2= 2048MB	0 / +70°C	
	D: XC7Z020-1	6= 64MB		7= 128MB	I: Industrial temp.	
	E: XC7Z020-2			8= 256MB	-40 / +85°C	
	F: XC7Z020-3			9= 512MB		



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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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