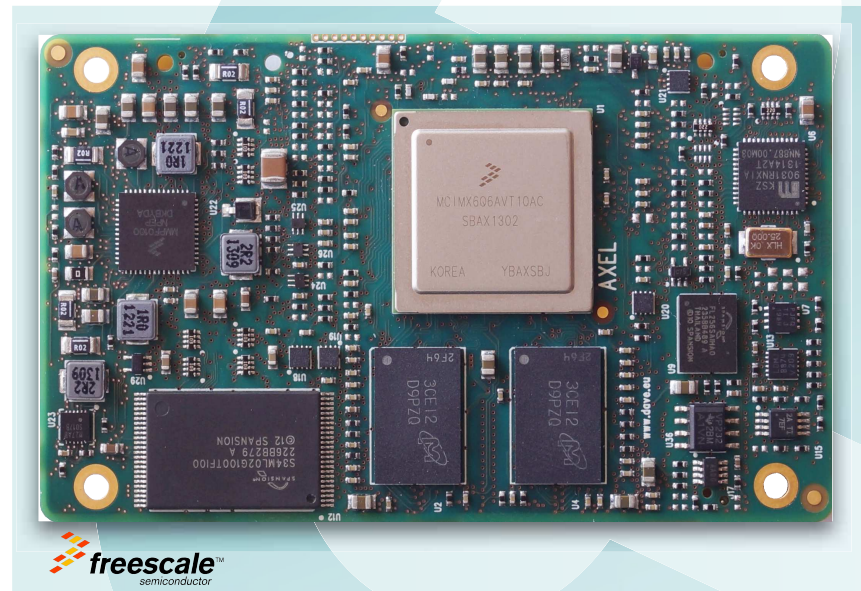


- Unmatched performances thanks to Solo-to-Quad ARM Cortex A9 MPCore @ 1.2 GHz
- All memories you need on-board
- Boot from NOR for safe applications
- Enabling massive computing applications thanks to wide range DDR3 RAM memory up to 4GB
- Wide range PSU input from 3.1V to 4.5V
- High mechanical retention up to 50G shock thanks to 2x140pins
- Reduced carrier complexity: dual CAN, USB, Ethernet GB, and native 3.3V I/O
- Suitable for Asymmetric Multicore Processing
- Cost saving thanks to on-board 5ppm RTC



AXEL ESATTA is the new top-class Solo - Dual - Quad core ARM Cortex-A9 CPU module by DAVE Embedded Systems, based on the popular Freescale i.MX6 application processor.

Thanks to AXEL ESATTA, customers are going to save time and resources by using a compact solution that permits to reach scalable performances that perfectly fits the application requirements avoiding complexities on the carrier PCB.

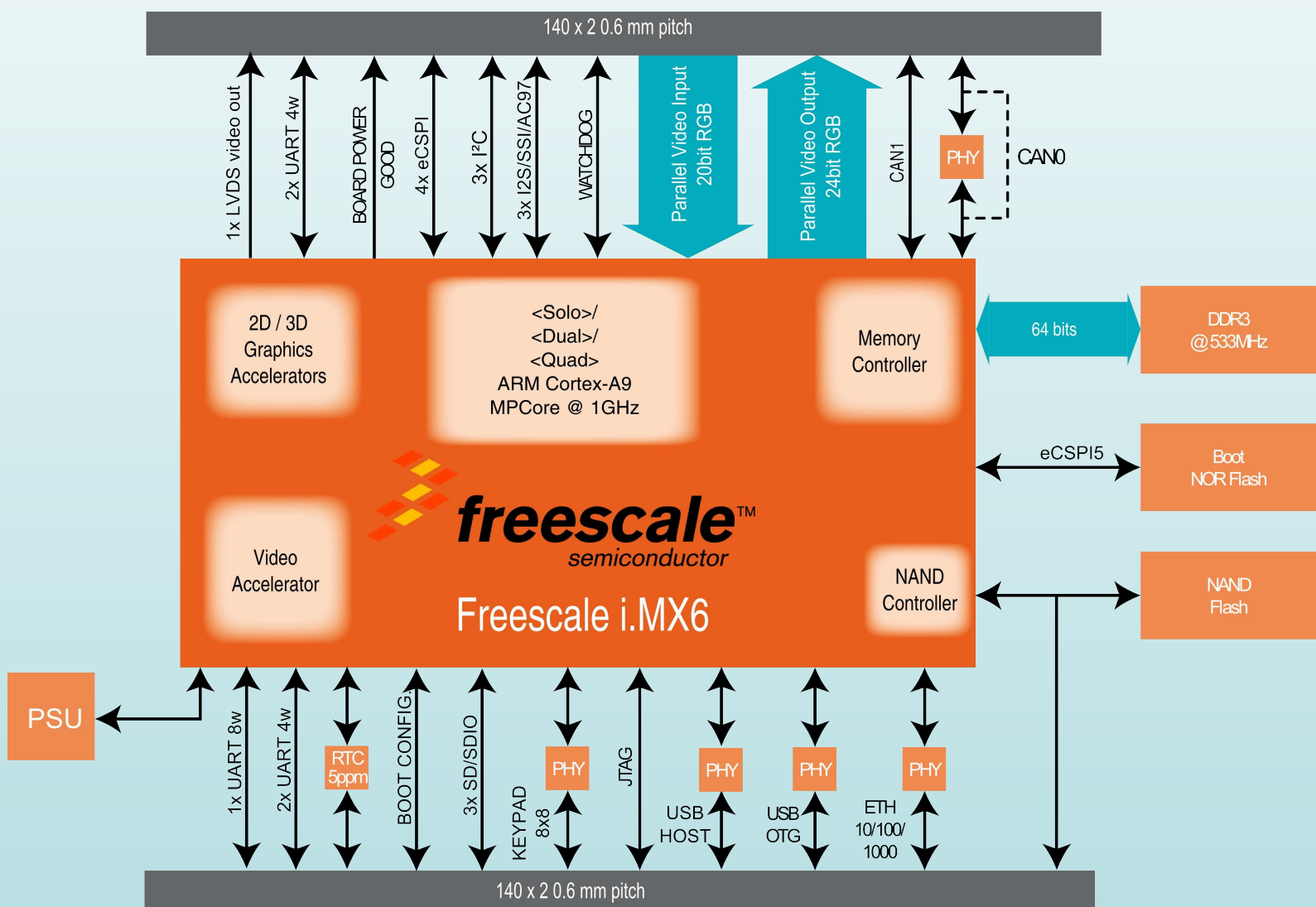
The use of this processor enables extensive system-level differentiation of new applications in many industry fields, where high-performances and extremely compact form factor (85mm x 50mm) are key factors. Smarter system designs are made possible, following the trends in functionalities and interfaces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

AXEL ESATTA offers great computational power, thanks to the rich set of peripherals, the Scalable ARM Cortex-A9 together with a large set of high-speed I/Os with a robust mechanical format.

AXEL ESATTA enables designers to create smart products suitable for harsh mechanical and thermal environments, allowing the development of high computing and reliable solutions.

Thanks to the tight integration between the ARM Core-based processing system, designers are able to share the application through the multicore platform and/or to divide the task on different cores in order to match with specific application requirements (thanks to AMP is possible to create application where RTOS and Linux works together on different cores). AXEL ESATTA is designed in order to keep full compatibility with the ESATTA Line CPU modules, to guarantee the premium quality and technical value of those customers that requires top performances.

AXEL ESATTA is suitable for high-end applications such as security systems, medical imaging applications, automotive HMI, broadcasting, military, industrial process control system (IPC), advanced communication systems, portable solutions, Human Machine Interfaces and Home Automation applications.



<b>CPU</b>	Freescale i.MX6 Solo/Dual/Quad ARM Cortex A9 MPCore @ 1.2 GHz
<b>Supervisor</b>	On-board power supply supervision and power sequencer Watchdog and RTC
<b>Memory</b>	
<b>Cache</b>	L1: 32Kbyte instruction, 32Kbyte data L2: Unified data/instruction, 1 MByte
<b>SDRAM</b>	Up to 4GB DDR3, x64 data bus width @ 533MHz
<b>NOR</b>	Bootable SPI NOR 16, 32, 64 MB
<b>NAND</b>	All sizes, on request

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

<b>LAN</b>	Ethernet 10/100/1000 Mbps (PHY on board)
<b>UART</b>	up to 4x UART ports 4 wires up to 1x UART ports 8 wires
<b>USB</b>	1x 2.0 OTG port (PHY on board) 1x 2.0 Host port (PHY on board)
<b>CAN</b>	2x CAN (with PHY on board)
<b>SDIO</b>	up to 3x SDIO/MMC
<b>Audio</b>	up to 3x I <sup>2</sup> S / SSI / AC97
<b>Video Output</b>	1x RGB Parallel port 16/24 bit 1x LVDS outputs 1x HDMI H264 decoder engine up to 1080p60
<b>Video Input</b>	1x RGB Parallel port 20 bit H264 encoder engine up to 1080p30
<b>Debug</b>	JTAG IEEE 1149.1 Test Access Port
<b>Other</b>	up to 3x I <sup>2</sup> C channels up to 5x SPI channels GPIOs with interrupt capabilities 8x8 keypad

### Mechanical

<b>Connectors</b>	2x 140 pins 0.6mm pitch
<b>Size</b>	85mm x 50mm
<b>Temperature</b>	Commercial (0°C / +70°C) temperature range Industrial (-40°C / +85°C) temperature range

### PSU

<b>Input</b>	2.8 - 4.5V, on-board voltage regulation
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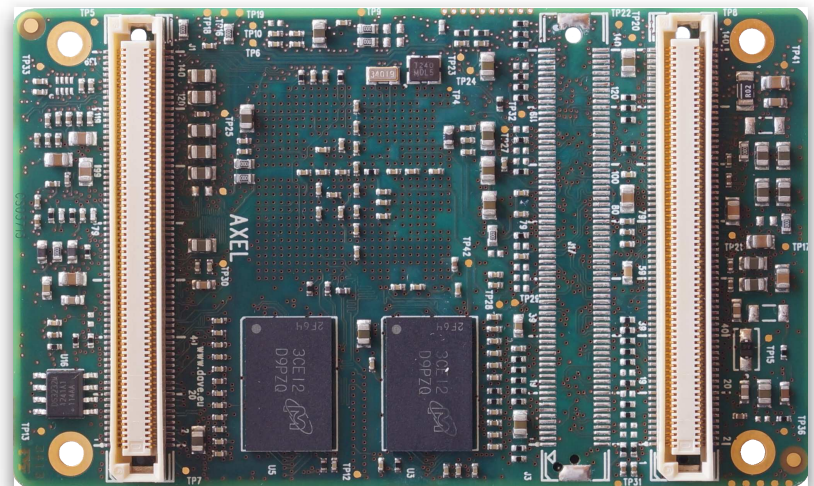
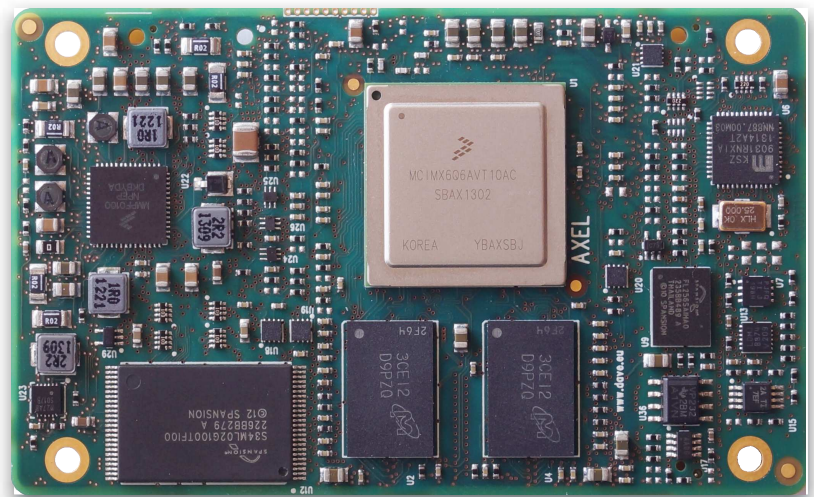
### Software

<b>Bootloader</b>	U-Boot
<b>Multitasking</b>	Linux 3.x.x

### Evaluation Kit

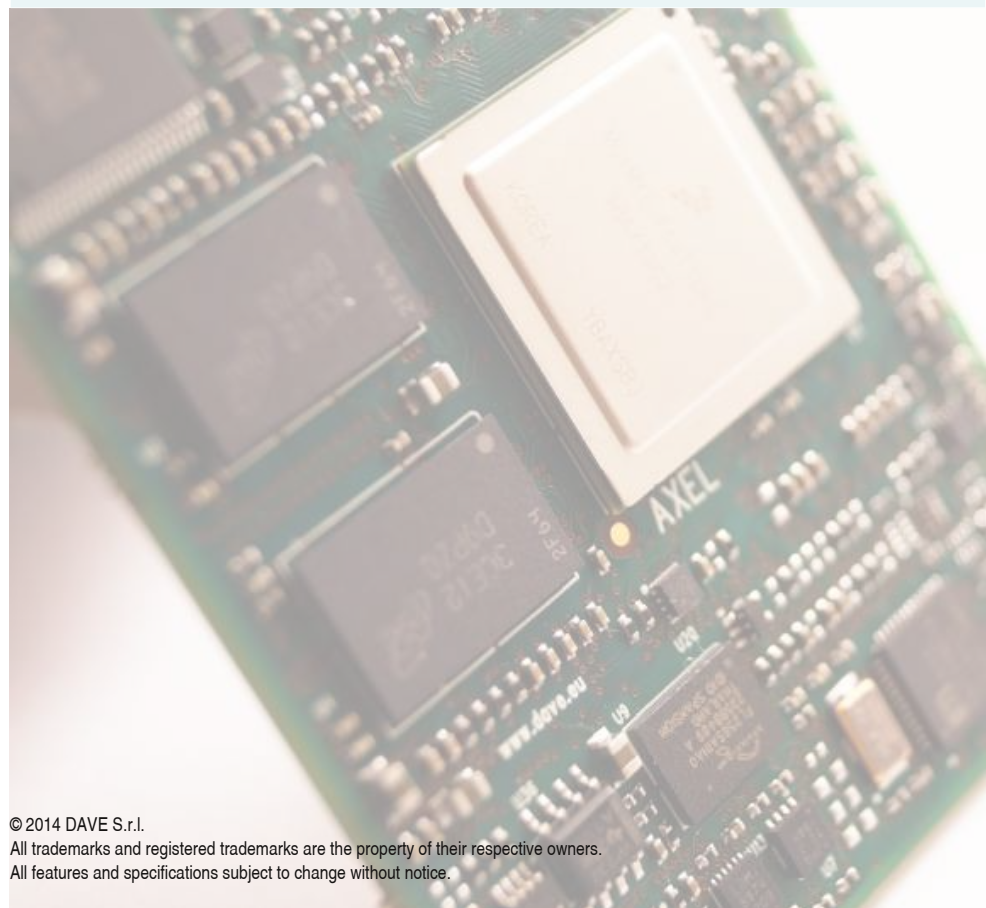
The AXEL ESATTA evaluation kit is available in a development kit that includes a SOM, a carrier board and all accessories required for immediate start-up.

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



### Product code configurator \*

Family	Processor	NOR flash	DDR3 RAM	NAND flash	Temp. range
DXE	A: i.MX6 Solo - 800M	0: No NOR	4: 4GB	0: No NAND	I: -40 / +85°C Industrial temp.
	B: i.MX6 Solo - 1GHz	4: 16MB	2: 2GB	7: 128MB	
	D: i.MX6 Dual - 800M	5: 32MB	1: 1GB	8: 256MB	
	E: i.MX6 Dual - 1GHz	6: 64MB	9: 512MB	9: 512MB	C: 0 / 70°C Commercial temp.
	G: i.MX6 Quad - 800M			1: 1GB	
	H: i.MX6 Quad - 1GHz			2: 2GB	
	I: i.MX6 Quad - 1.2GHz				



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