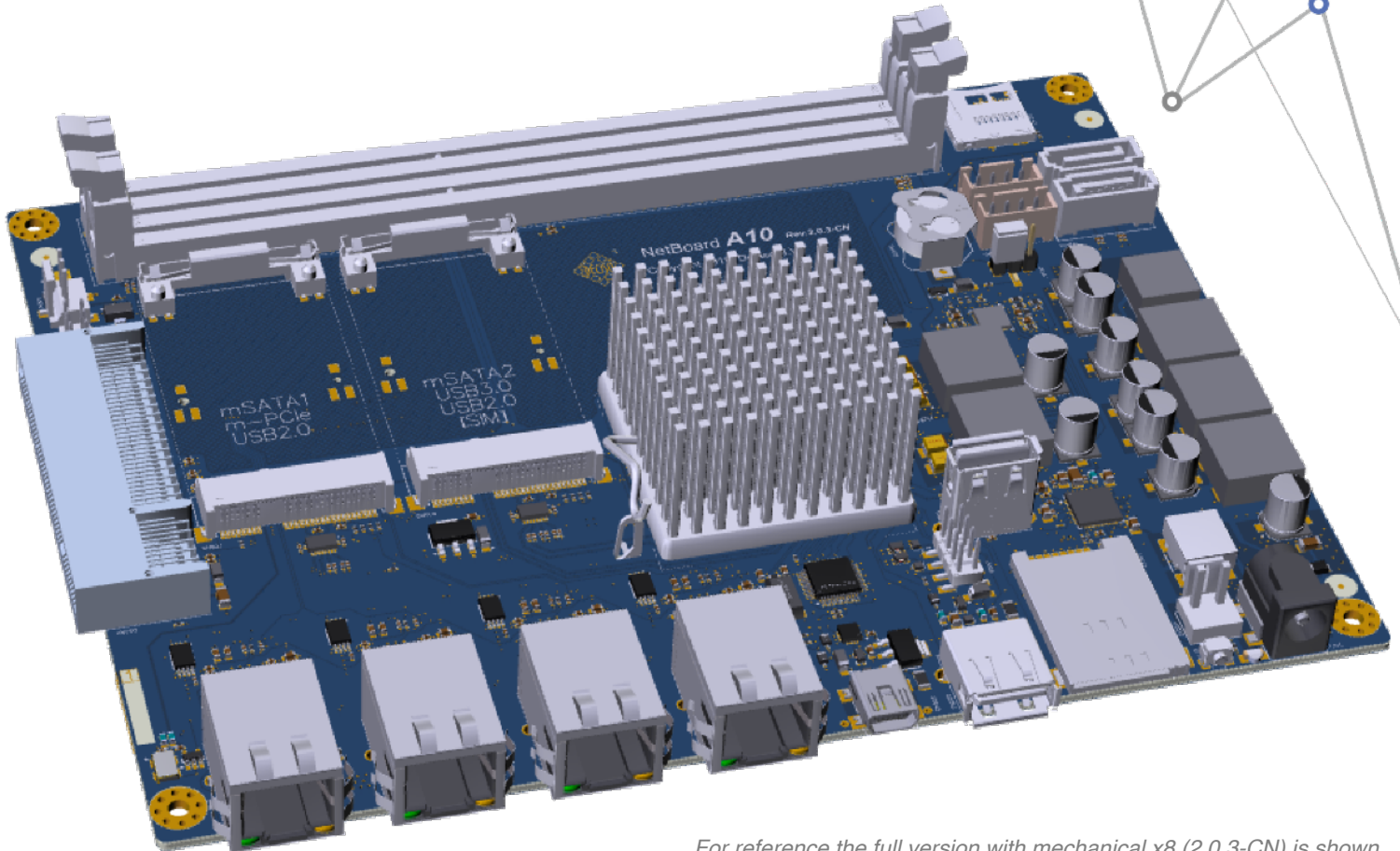# NETBOARD A10 Revision 2.0.1-CN
MODEL: E, F & G

For reference the full version with mechanical x8 (2.0.3-CN) is shown.

The **NETBOARD A10 Revison 2.0.1-CN** is an embedded mainboard intended for demanding 24/7 applications. The board is designed with integrated programmable DC-DC power supply and automatic inrush current limiter. It has a wide range voltage input (7-24VDC) and can react to input voltage changes within milliseconds over its full range. The A10 is a fixed BOM solution using only components from respected manufacturers and a high quality bare board with controlled stack-up. The board has been designed and is produced in The Netherlands.
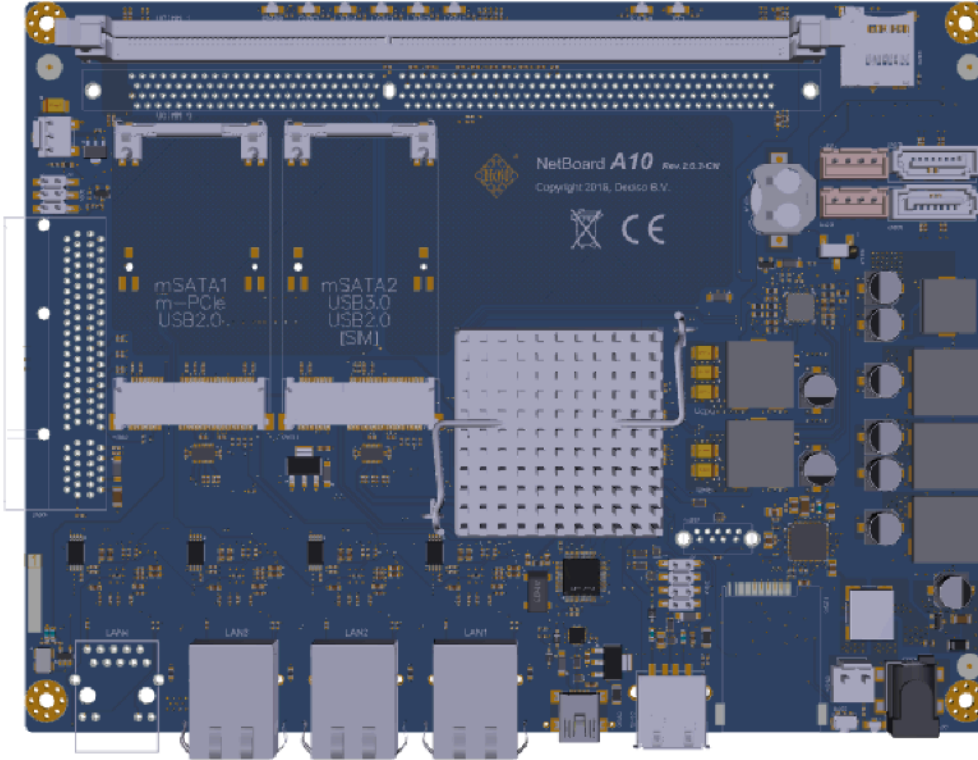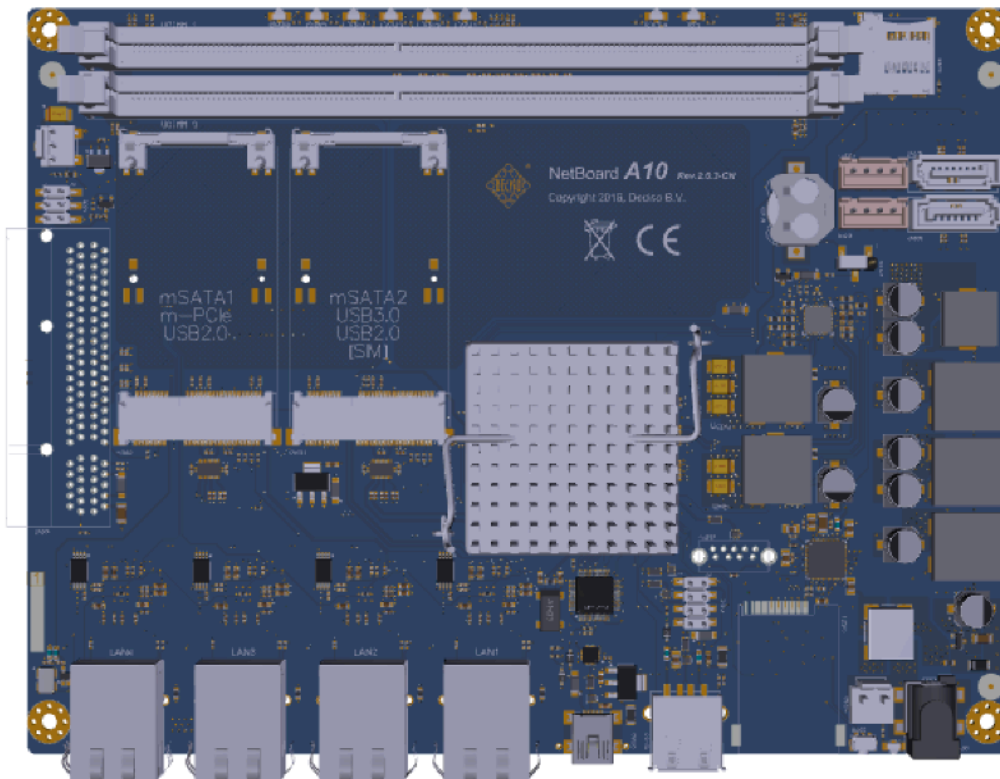
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MODEL F, dual core CPU, 3x ethernet, 2x mSATA, 1x UDIMM

MODEL E & G, quad core CPU, 4x ethernet, 2x mSATA, 2x UDIMM (standard version)

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DECISO

Coreboot is an Open Source project aimed at replacing the proprietary BIOS (firmware) found in most computers. Coreboot performs a little bit of hardware initialization and then executes additional boot logic, called a payload.

With the separation of hardware initialization and later boot logic, coreboot can scale from specialized applications that run directly from firmware, run operating systems in flash, load custom bootloaders, or implement firmware standards, like PC BIOS services or UEFI. This allows for systems to only include the features necessary in the target application, reducing the amount of code and flash space required.

SeaBIOS is an open-source legacy BIOS implementation which can be used as a coreboot payload. It implements the standard BIOS calling interfaces that a typical x86 proprietary BIOS implements.

integrated memory testing

coreinfo - diagnostics

Features and Payloads

Deciso's Coreboot version has been optimised for use on its Netboard A10 platform and includes SeaBIOS, Memtest86+ , PXE boot, and Coreinfo as standard payload.

Boot Options

Our optimised coreboot version can boot support operating systems from a diverse media including network boot.

☑ mSATA,
☑ SATA III,
☑ USB,
☑ microSD,
☑ PXE boot.

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Netboard A10 Revision 2.0.1-CN	
Hardware Specifications	
CPU Model E	AMD Embedded GX-416RA G-Series SOC (4x 1.65Ghz, L2 cache 2MB, 15W, No GPU)
CPU Model F	AMD Embedded GX-210UA G-Series SOC (2x 1.0Ghz, L2 cache 1MB, 8.5W, No GPU)
CPU Model G	AMD Embedded GX-420MC G-Series SOC (4x 2.0Ghz, L2 cache 2MB, 17.5W, No GPU)
DRAM	UDIMM DDR3 (Model E & G have 2 sockets), total memory capacity max. 32GB (Model F 16GB), ECC & Non ECC
Chipset	Integrated in SoC (single-chip)
Ethernet	Model E/G: 4x Intel® i210, Model F: 3x Intel ® i210
Hardware acceleration	SoC has integrated AESNI instructionset including support for GCM
Standard I/O Interfaces	
	uSD card socket
	3 x USB 2.0 (2 on header, 1 external port)
	2x miniPCI socket (1x mSATA, m-PCIe and USB 2.0 & 1x mSATA, USB3.0 and optional SIM card support)
	1 x Serial Console with integrated usb serial converter on miniUSB B port
	1 micro switch configured as power button (can also be configred as GPI or reset button by component placement)
	2 x SATA 3 (shared with mSATA sockets / auto sensing) + mini power header (JST)
BIOS Features	64 MBit serial SPI firmware flash with Coreboot & SEABIOS
Power Management	ACPI 3.0 (With 5V power rail always active / S3 Sleep state not support by current BIOS)
Operating Systems	Linux, FreeBSD, Windows, others OS support upon request available
Power Supply	External 12V [wide range capable 7-24VDC]
Optional I/O interfaces	1 x PCIe x4 Edge Connector, shared with first miniPCIe socket (auto sensing)
(revision 2.0.3-CN: mechanical x8)	DC-in on header for systems with integrated power supply
	internal USB 3.0 port (upright)
	SIM card socket
Dimensions	
Width x Length (mm)	185 x 140
Width x Length (inches)	7.28 x 5.51
Form Factor	Proprietary Network Board
Weight (Kg)	without heatsink or fan
Environment	
Power Requirements	7-24VDC (12VDC is required if PCIe edge connector is used)
Maximum Current (@ 12VDC)	3A
Power Consumption (Typical)	Model E: 20W, Model F: 15W, Model G: 25W
Heat Dissipation (Typical in BTU/hr)	Model E: 68.3, Model F: 51.2, Model G: 85.3
Operating Temperature	0 to +45°C (depends on applied cooling solution / value assumes default heatsink + standard fan)
Storage Temperature	-20 to +70°C
Humidity	10-90% non-condensing
Regulatory Compliance	
	FCC part 15 Class A, CE, Rohs

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