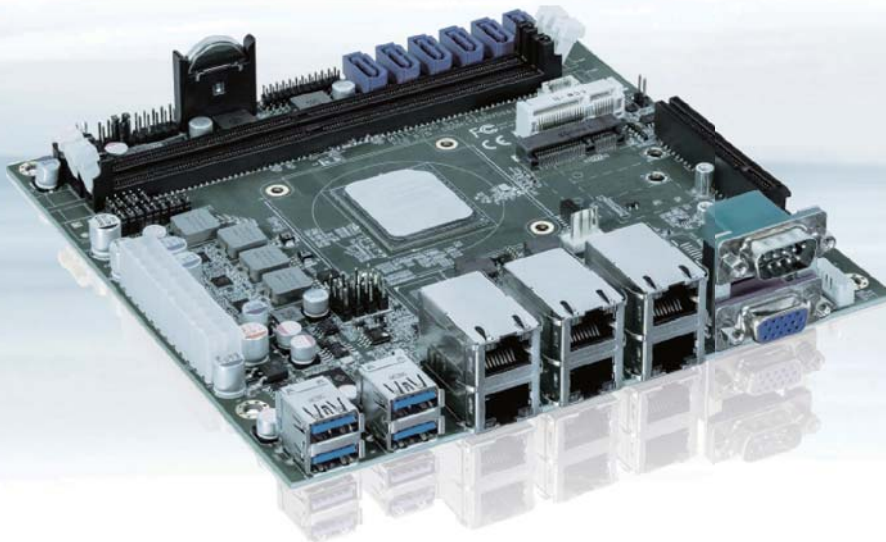


# mITX-DNV

## IDEAL FOR DENSE LOW-POWER APPLICATIONS

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### MINI-ITX INDUSTRIAL MOTHERBOARD WITH INTEL® DENVERTON PROCESSORS

- ▶ 1x VGA for display output
- ▶ 6x GbE LAN for Ethernet
- ▶ 4x USB 3.0, 2x USB 2.0, 2x RS232/422/485, 1x 8-bit DIO for peripherals
- ▶ Up to 6x SATA 3.0, Up to 1x mSATA, 1x M.2 Key B, optional eMMC for storage
- ▶ Up to 1x mPCIe, 1x PCIe x8 for expansion

# mITX-DNV

## MINI-ITX INDUSTRIAL MOTHERBOARD WITH INTEL® DENVERTON PROCESSOR

mITX-DNV is a Mini-ITX industrial motherboard equipped with Intel® Denverton SoC processors, Atom™ C3000 Series, which is specially suitable for dense low-power network, storage, and IoT applications.

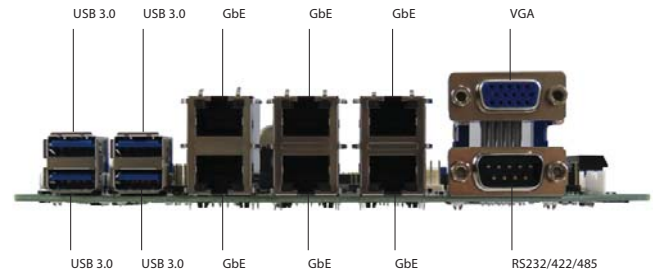
It has up to six SATA3.0 sockets and one M.2 Key B socket for HDD / SSD storage device connection as well as optional eMMC drive soldered on-board. In addition, It also supports 6 GbE LAN ports to deliver

sufficient traffic flow for huge data volumes.

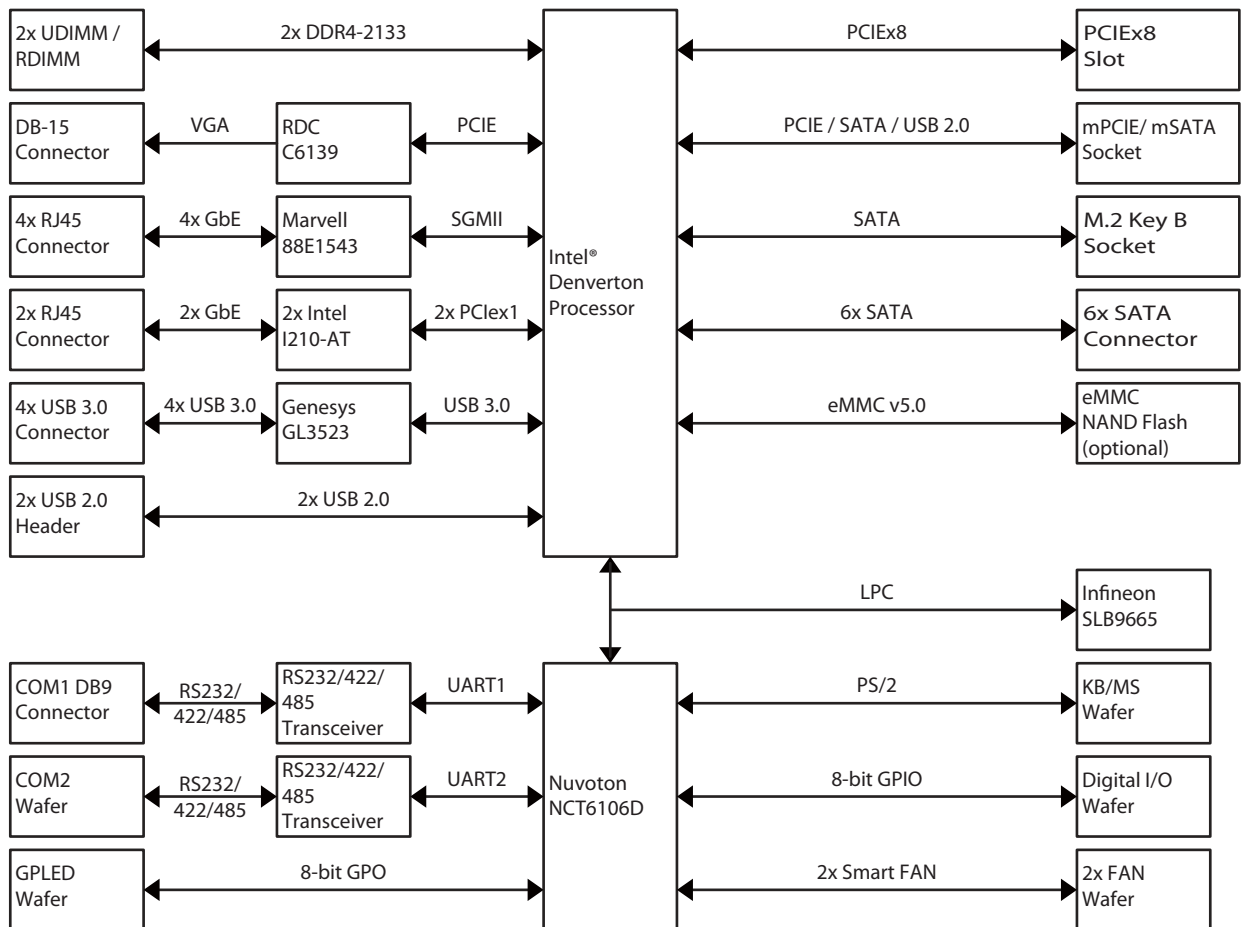
mITX-DNV reserves one mPCIe slot and one PCIe x8 slot, allowing users to expand specific functions such as wireless connection or additional network interface card.

### ▶ PRODUCT HIGHLIGHTS

- ▶ Intel® Denverton Processor, Atom™ C3000 Series
- ▶ Up to 2x DDR4 UDIMM memory socket
- ▶ 1x VGA for video output
- ▶ 6x GbE LAN for Ethernet
- ▶ 4x USB 3.0, 2x USB 2.0, 2x RS232/422/485, 1x 8-bit DIO for peripherals
- ▶ Up to 6x SATA 3.0, 1x M.2 Key B, optional eMMC for storage
- ▶ Up to 1x mPCIe, 1x PCIe x8 for expansion
- ▶ TPM 2.0 support
- ▶ Extended temperature model available: -20 °C ~ 70 °C



### ▶ BLOCK DIAGRAM



## ► TECHNICAL INFORMATION

<b>SYSTEM</b>	<b>PROCESSOR</b>	Intel® Atom™ C3338 (Dual Core, 4M Cache, up to 2.20 GHz, FCBGA1310, 9 W TDP)
	<b>MEMORY</b>	Intel® Atom™ C3538 (Quad Core, 8M Cache, up to 2.10 GHz, FCBGA1310, 15 W TDP) 1x DDR4 1866 UDIMM (Atom™ C3338 model) 2x DDR4 2133 UDIMM (Atom™ C3538 model)
<b>VIDEO</b>	<b>GRAPHICS DISPLAY INTERFACE</b>	RDC® C6139 1x VGA (on rear, 1024 x 768 @ 60 Hz)
<b>NETWORK CONNECTION</b>	<b>ETHERNET</b>	6x GbE LAN (RJ45 on rear, 2x Intel® I210-AT, 4x Marvell® 88E1543)
<b>PERIPHERAL CONNECTION</b>	<b>USB</b>	4x USB 3.0 (Type A on rear from HUB)
	<b>SERIAL PORT</b>	2x USB 2.0 (by wafer from SoC)
	<b>OTHER I/Os</b>	2x RS232/422/485 (1x DB9 on rear w/ 5 V / 12 V output support, 1x by wafer) 1x 8-bit DIO (by wafer) 1x PS/2 Keyboard / Mouse (by wafer)
<b>STORAGE &amp; EXPANSION</b>		Up to 6x SATA 3.0 eMMC support (optional) 1x M.2 Key B (type 2280, for SSD only) 1x mPCIe / mSATA (full size, mixed with SATA, USB 2.0) 1x PCIe x8 (supporting PCIe x1 / x4 / x8 depending on HSIO selection) 1x Micro SIM Card Cage (by wafer)
<b>POWER</b>	<b>CONNECTOR INPUT VOLTAGE</b>	2x12-pin ATX connector DC +5 V / -5 V / +12 V / -12 V / +3.3 V / 5 VSB
<b>FIRMWARE</b>	<b>BIOS WATCHDOG H/W MONITOR REAL TIME CLOCK TPM</b>	AMI uEFI BIOS w/ 128 Mb SPI Flash Programmable WDT to generate system reset event Voltages, Temperatures SoC integrated RTC Supported (Infineon SLB9665 TPM 2.0)
<b>SYSTEM CONTROL &amp; MONITORING</b>	<b>FP HEADER</b>	1x Header for Reset button, HDD LED & External Speaker 1x Header for Power button, Power LED & SM bus 1x Header for 6x LAN LED 1x Header for mPCIe LED 1x Header for 8-bit GPLED
<b>COOLING</b>	<b>FAN</b>	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
<b>SOFTWARE</b>	<b>OS SUPPORT</b>	Windows Server
<b>MECHANICAL</b>	<b>DIMENSION (L x W)</b>	Mini-ITX (170 mm x 170 mm / 6.70" x 6.70")
<b>ENVIRONMENTAL</b>	<b>OPERATION TEMPERATURE</b>	0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard)
	<b>STORAGE TEMPERATURE</b>	-20 °C ~ 70 °C / -4 °F ~ 158 °F (Extended)
	<b>HUMIDITY</b>	-20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extended) 0 % ~ 95 %
<b>CERTIFICATION</b>	<b>EMC &amp; SAFETY</b>	CE, FCC Class A