

Specifications

System	
Form Factor	4" EPIC Board
CPU	Intel® Core™ Processor N-series, Intel® Processor N-series: Intel® Processor N150 (4C/4T, up to 3.6 GHz, 6W) Intel® Core™ 3 Processor N355 (8C/8T, up to 3.90 GHz, 15W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR4 3200MHz Single-Channel SODIMM x 1, up to 16GB
BIOS	UEFI
Wake On Lan	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0 (Optional)
RTC Battery	Lithium Battery 3V/240mAh
Dimension	4.53" x 6.50" (115mm x 165mm)
OS Support	Windows® 10 (64-bit) Ubuntu 22.04.2 LTS/Kernel 5.19
Power	
Power Requirement	+9-36V or +12V
Power Supply Type	AT/ATX
Connector	2-Pin Phoenix Connector
Power Consumption	Intel® Core™ 3 Processor N355, DDR4 16GB x 1, 5.0A @+12V (Typical) Intel® Core™ 3 Processor N355, DDR4 16GB x 1, 5.5A @+12V (Max)
Display	
Controller	Intel® UHD Graphics
LVDS/eDP	24/48-bit Dual-Channel LVDS x 1, up to 1920 x 1080 eDP 1.4 x 1, up to 1920 x 1080 (Optional)
Display Interface	HDMI 1.4 x 1, up to 3840 x 2160 @30Hz DP 1.2 x 1, up to 3840 x 2160 @144Hz or VGA x 1, up to 1920 x 1080
Multiple Display	Up to 3 Simultaneous Displays
Audio	
CODEC	Realtek ALC897
Audio Interface	Line-In, Line-Out, Mic
Speaker	5W Speaker (Optional)
External I/O	
Ethernet	Intel® Ethernet Controller I226-V, 2.5GbE RJ-45 x 2 (Standard: 2 Ports, Advanced: 4 Ports)
USB	USB 3.2 Gen 2 x 2
Serial Port	COM 1, COM 2 (RS-232/422/485, support 5V/12V/RI)
Video	HDMI 1.4 x 1 DP 1.2 x 1
Internal I/O	
USB	USB 2.0 x 4

Features

- Intel® Core™ Processor N-series, Intel® Processor N-series
- DDR4 3200MHz SODIMM x 1, up to 16GB
- HDMI 1.4b, Dual-Channel LVDS, DP or VGA
- Full-size mSATA + SATA 6Gb/s
- 2.5GbE x 2
- USB 3.2 Gen 2 x 2, USB 2.0 x 4
- M.2 2242 B-Key, Nano SIM
- COM Port x 6, GPIO 16-bit x 1
- Supports +9V - +36V Wide Voltage Input

Serial Port	COM 3, COM 4, COM 5, COM 6 (RS-232, support RI only)
Video	LVDS / eDP x 1 (Default : LVDS) Inverter x 1 (5V/12V@2A)
SATA	SATA 6Gb/s x 1 (Default) (up to SATA x 2 shared with mSATA, BOM Optional)
Audio	Audio Header x 1
DIO/GPIO	GPIO 16-bits
SMBus/I2C	SMBus / I2C (Default : SMBus)
Touch	—
Fan	4 Pin Smart Fan
SIM	Nano SIM x 1
Front Panel	Power Button, Reset Button, Power LED, SATA LED, Buzzer
Others	—
Expansion	
Mini PCI-E/mSATA	Full-size mPCIe x 1 Full-size mSATA x 1
M.2	M.2 2242 B-Key x 1 (PCIe 2.0 [x1] + USB 2.0)
Others	—
Environment & Certification	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	922,291
EMC	CE/FCC Class A

Packing List

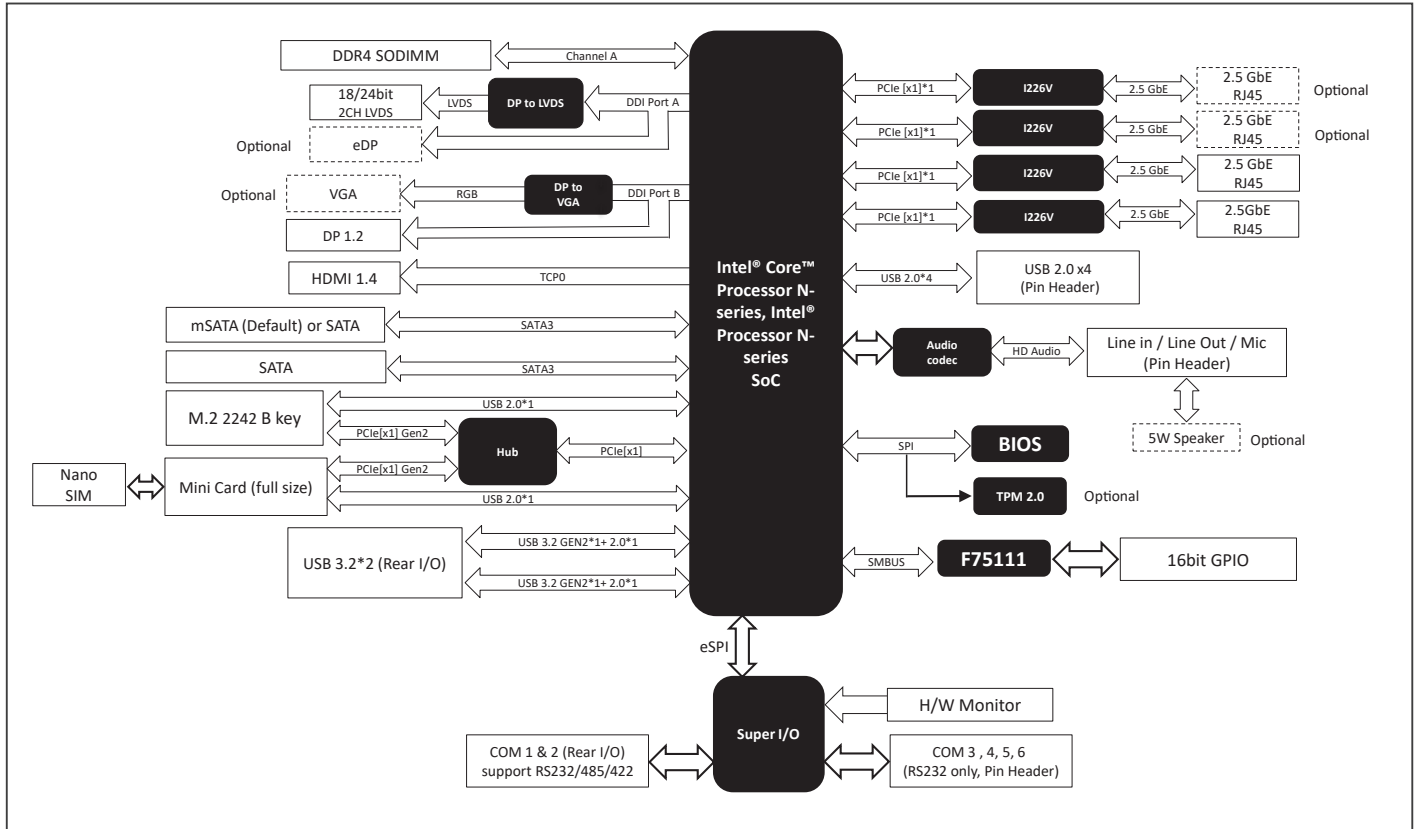
- EPIC-TWL9 x 1
- Screw kit x 1

Optional Accessories

Part Number	Description
EPIC-ADN9-HSK01	Heat sink. 165*101.6*20mm. Silver
1700050207	USB2.0 Connector Cable
1701090150	COM Port Cable
1709070150	SATA Cable
1702150155	SATA 5V power cable
170X000603	Front Panel cable

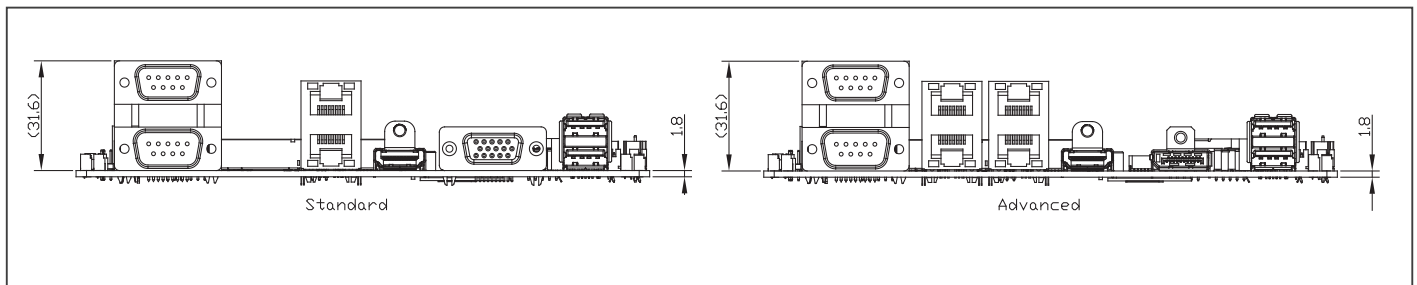


Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Display	Storage	LAN	USB	COM Port	Expansion	TPM	Power	Operating Temperature	Others
EPIC-TWL9-A11-0001	Intel® Core™ 3 Processor N355	DDR4 SODIMM x 1	LVDS x 1, DP x 1, HDMI x 1	SATA 6.0Gbps x 1	I226V 2.5GbE x 4	USB 3.2 Gen 2 x 2 USB 2.0 x 4	RS232/422/485 x 2 RS232 x 4	Full-size mPCIe x 1 Full-size mSATA x 1 M.2 2242 B-Key x 1	TPM2.0	+9V to +36V (2 Pin Phoenix Connector)	-20°C ~ 70°C	NanoSIM x 1 GPIO 16 bits 5W Speaker
EPIC-TWL9-A11-0002	Intel® Processor N150	DDR4 SODIMM x 1	LVDS x 1, DP x 1, HDMI x 1	SATA 6.0Gbps x 1	I226V 2.5GbE x 4	USB 3.2 Gen 2 x 2 USB 2.0 x 4	RS232/422/485 x 2 RS232 x 4	Full-size mPCIe x 1 Full-size mSATA x 1 M.2 2242 B-Key x 1	TPM2.0	+9V to +36V (2 Pin Phoenix Connector)	-20°C ~ 70°C	NanoSIM x 1 GPIO 16 bits 5W Speaker