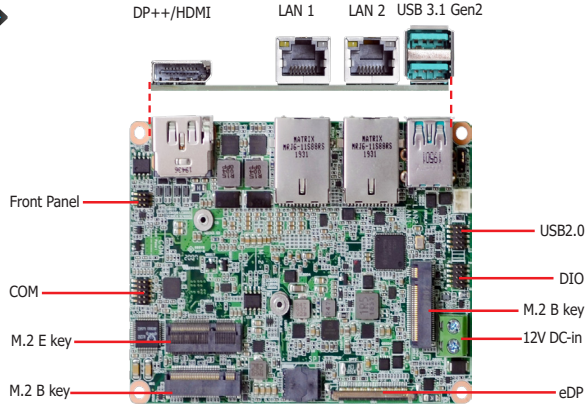




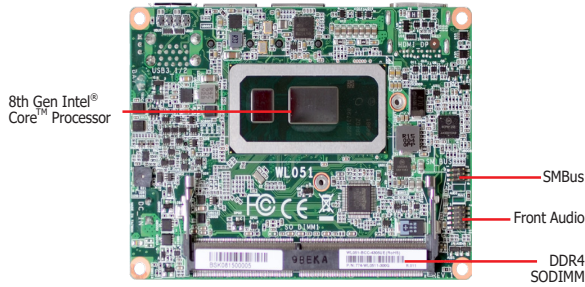
8th Gen Intel® Core™ Processor
2.5" Pico-ITX



WL051



Top View



Bottom View

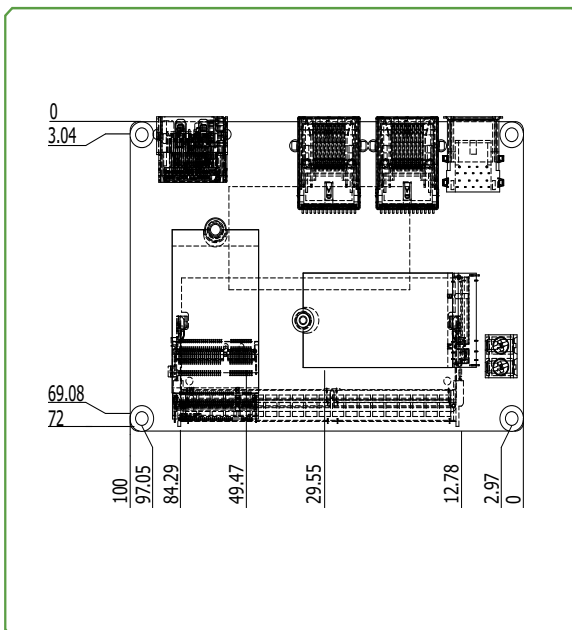
Features

- **Small form factor 2.5" Pico-ITX for space-limited applications**
- **1 DDR4 SODIMM up to 16GB**
- **Triple independent displays: DP++ + HDMI + eDP**
- **Expansion and Storage: 1 M.2 E key, 2 M.2 B key**
- **Rich I/O: 2 Intel GbE, 1 COM, 2 USB 3.1 Gen 2, 2 USB 2.0**

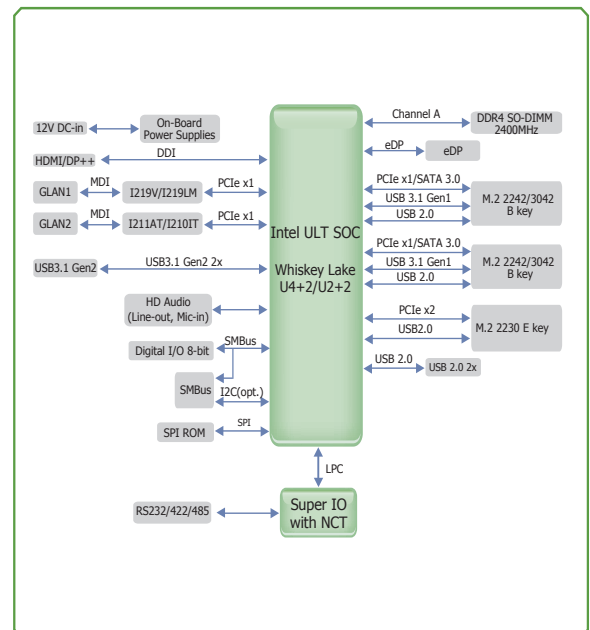
* Populated by default



Mechanical Drawing



Block Diagram





Specifications

SYSTEM	Processor	8th Generation Intel® Core™ Processors, BGA 1528 Intel® Core™ i7-8665UE, Quad Core, 8M Cache, 1.7GHz (4.4GHz), 15W Intel® Core™ i5-8365UE, Quad Core, 6M Cache, 1.6GHz (4.1GHz), 15W Intel® Core™ i3-8145UE, Dual Core, 4M Cache, 2.2GHz (3.9GHz), 15W Intel® Core™ Celeron® 4305UE, Dual Core, 2M Cache, 2.0GHz (2.0GHz), 15W
	Memory	One 260-pin SODIMM up to 16GB Single Channel DDR4 up to 2400MHz
	BIOS	AMI SPI 128Mbit
GRAPHICS	Controller	Intel® UHD Graphics 620/ Intel® UHD Graphics 610 (for Celeron 4305UE)
	Feature	OpenGL 4.5, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9
	Display	1 x DP++/HDMI 1 x eDP DP++: resolution up to 4096x2304 @ 60Hz HDMI: resolution up to 4096x2160 @30Hz eDP: resolution up to 4096x2304 @ 60Hz
EXPANSION	Triple Displays	DP++ + HDMI + eDP
	Interface	1 x M.2 E key 2230 (PCIe x2/USB 2.0) 2 x M.2 B key 3042/2242 (PCIe x1 or SATA 3.0/USB 3.1 Gen1/USB 2.0)
AUDIO	Audio Codec	Realtek ALC262-VC2-GR
ETHERNET	Controller	1 x Intel® I219V/I219LM (only Core i7/i5 supports iAMT) 1 x Intel® I211AT/I210IT
REAR I/O	Ethernet	2 x GbE (RJ-45)
	USB	2 x USB 3.1 Gen 2
	Display	1 x DP++/HDMI 1 x eDP
INTERNAL I/O	Serial	1 x RS-232/422/485 (1.27mm pitch)
	USB	2 x USB 2.0 (1.27mm pitch)
	Display	1 x eDP Connector
	Audio	1 x Audio (Line-out/Mic-in)
	DIO	1 x 8-bit DIO
	SMBus	1 x SMBus
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	TPM	FTPM2.0
POWER	Type	Single 12V +/-10% DC
	Connector	2-pin Terminal Block
	RTC Battery	CR2032 Coin Cell
	Consumption	TBD
OS SUPPORT (UEFI Only)	Microsoft/Linux	Windows 10 IoT Enterprise (64-bit) Linux
ENVIRONMENT	Temperature	Operating: 0 to 60°C, -30 to 80 °C Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH Storage: 5 to 90% RH
	MTBF	TBD
MECHANICAL	Dimensions	2.5" Pico-ITX Form Factor 100mm (3.94") x 72mm (2.83")
	Height	PCB: 1.6mm Top Side: 15mm, Bottom Side: 8mm
CERTIFICATIONS		CE, FCC, RoHS

Ordering Information

Model Name	P/N	Processor	Memory	Display	GbE	RS-232/422/485	USB 3.1 Gen 2	USB 2.0	Power	Thermal	Temp.
WL051-BCC-8665UE	770-WL0511-000G	i7-8665UE	1 SODIMM	DP++/HDMI + eDP	2	1	2	2	12VDC	Fanless	0 to 60°C
WL051-BCC-8365UE	770-WL0511-100G	i5-8365UE	1 SODIMM	DP++/HDMI + eDP	2	1	2	2	12VDC	Fanless	0 to 60°C
WL051-BCC-8145UE	770-WL0511-200G	i3-8145UE	1 SODIMM	DP++/HDMI + eDP	2	1	2	2	12VDC	Fanless	0 to 60°C
WL051-BCC-4305UE	770-WL0511-300G	4305UE	1 SODIMM	DP++/HDMI + eDP	2	1	2	2	12VDC	Fanless	0 to 60°C

Packing List

- 1 WL051 board

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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