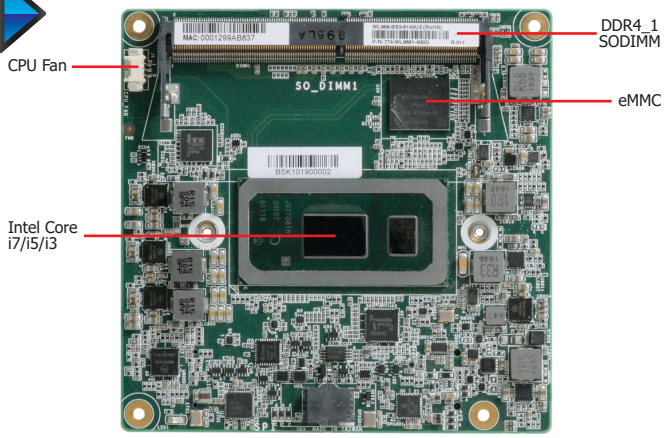
8th Gen Intel® Core™ Processor
COM Express® Compact

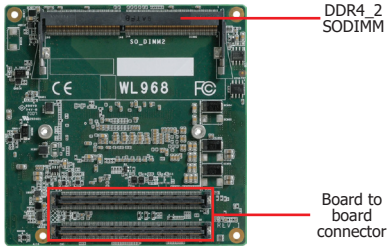
IoT Solutions Alliance

WL968

ULT



Front View



Bottom View

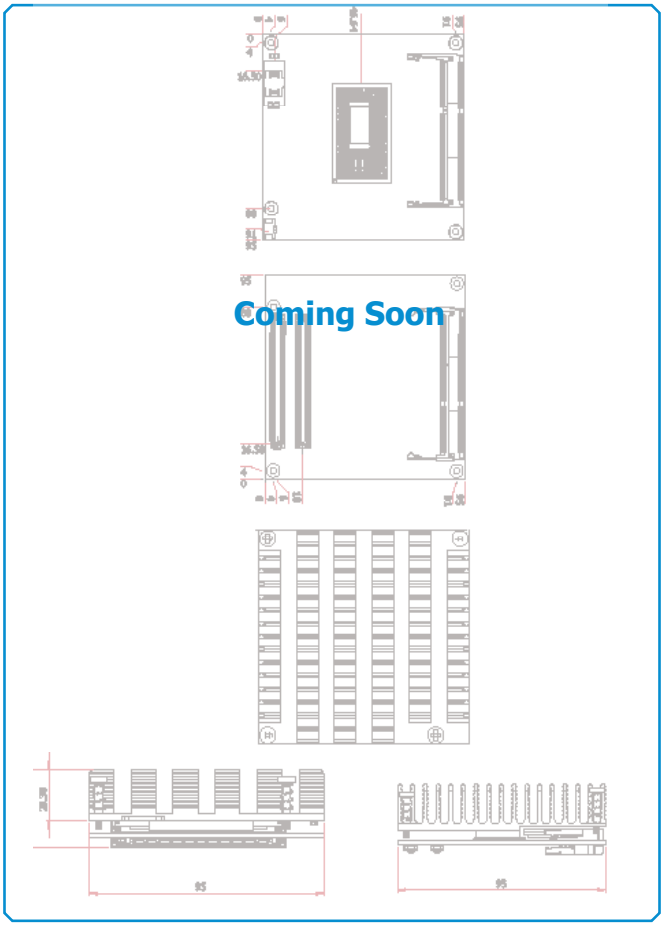
Features

- Dual Channel DDR4 2400MHz SODIMM up to 64GB
- Three independent displays: VGA*/DDI + LVDS*/eDP + DDI
- DP++ supports 4K x 2K resolution
- Multiple expansion: 8 PCIe x1, 1 LPC, 1 I²C, 1 SMBus
- Rich I/O: 1 Intel GbE, 4 USB 3.0, 8 USB 2.0

* Populated by default

DDR4 | 4K2K Display | AMT | Wide Temperature (85°C / -40°C) | R 3.0 Type 6

Mechanical Drawing



Block Diagram



PCIe L0~3				PCIe L4~5		PCIe L6~7	
x4				-		-	
x2		x2		x2		-	
x1	x1	x1	x1	x1	x1	x1	x1

* 5 PCIe x1 or 4 PCIe x1 + 1 PCIe x4 or 3 PCIe x1 + 2 PCIe x2 (support up to 5 devices and 8 lanes)

Specifications

SYSTEM	**Processor**	8th Gen Intel® Core™ Processor, FCBGA1528 Intel® Core™ i7-8665UE Processor, Quad Core, 8M Cache, 1.7GHz (4.4GHz), 15W Intel® Core™ i5-8365UE Processor, Quad Core, 6M Cache, 1.6GHz (4.1GHz), 15W Intel® Core™ i3-8145UE Processor, Dual Core, 4M Cache, 2.1GHz (3.9GHz), 15W Intel® Celeron® Processor 4305UE, Dual Core, 2M Cache, 2.0GHz (2.0GHz), 15W	
	Memory	Two 260-pin SODIMM up to 64GB	Dual Channel DDR4 2400MHz
	BIOS	AMI SPI 128Mbit	
GRAPHICS	**Controller**	Intel® HD Graphics	
	Feature	OpenGL 5.0, 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 VGA/DDI (DDI available upon request) 1 x LVDS/eDP (eDP available upon request) 1 x DDI	VGA: resolution up to 1920x1200 @ 60Hz LVDS: dual channel 24-bit, resolution up to 1920x1200 @ 60Hz eDP: resolution up to 4096x2304 @ 60Hz HDMI: resolution up to 4096x2160 @ 30Hz DP++: resolution up to 4096x2304 @ 60Hz
	Triple Displays	VGA + LVDS + DDI	DDI + eDP + DDI
EXPANSION	**Interface**	5 PCIe x1 or 4 PCIe x1 + 1 PCIe x4 or 3 PCIe x1 + 2 PCIe x2 (support up to 5 devices and 8 lanes) 1 x LPC 1 x I^2C 1 x SMBus 2 x UART (TX/RX)	
	eMMC	1 x 8GB/16GB/32GB/64GB/128GB eMMC 5.1 (available upon request)	
AUDIO	**Interface**	HD Audio	
ETHERNET	**Controller**	1 x Intel® I219LM with iAMT11.0 PCIe (10/100/1000Mbps)	
I/O	**USB**	4 x USB 3.0 8 x USB 2.0	
	SATA	3 x SATA 3.0 (up to 6Gb/s)	RAID 0/1/5
	DIO	1 x 8-bit DIO	
WATCHDOG TIMER	**Output & Interval**	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	**TPM**	Available Upon Request	
POWER	**Type**	12V, 5VSB, VCC_RTC (ATX mode)	12V, VCC_RTC (AT mode)
	Consumption	TBD	
OS SUPPORT		Windows: Windows 10 IoT Enterprise 64-bit	Ubuntu 18.04
ENVIRONMENT	**Temperature**	Operating: 0 to 60°C -40 to 85°C (with heat spreader)	Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	MTBF	TBD	
MECHANICAL	**Dimensions**	COM Express® Compact	95mm (3.74") x 95mm (3.74")
	Compliance	PICMG COM Express® R3.0, Type 6	
STANDARDS AND CERTIFICATIONS	**Certification**	CE, FCC, RoHS	

Packing List

• 1 WL968 board	
• 1 CPU Cooler (for -40 to 85°C, H=35.2mm)	A71-108124-000G
• 1 Heat sink (for 0 to 60°C, H=26.8mm)	A71-008137-000G

Optional Items

• COM332-B carrier board kit	770-CM3321-000G
• Heatspreader (H=11mm)	A71-808324-000G

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