

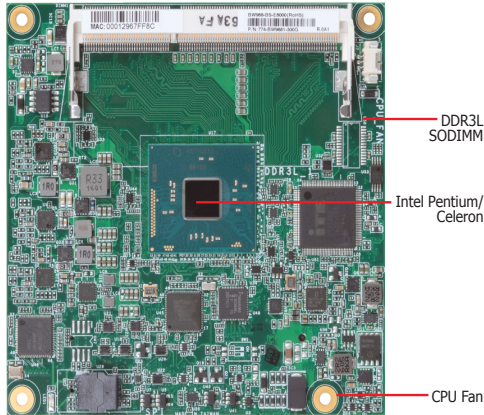


**Intel® Pentium®/Celeron® Processor N3000 Family
COM Express® Compact**



BW968

Atom



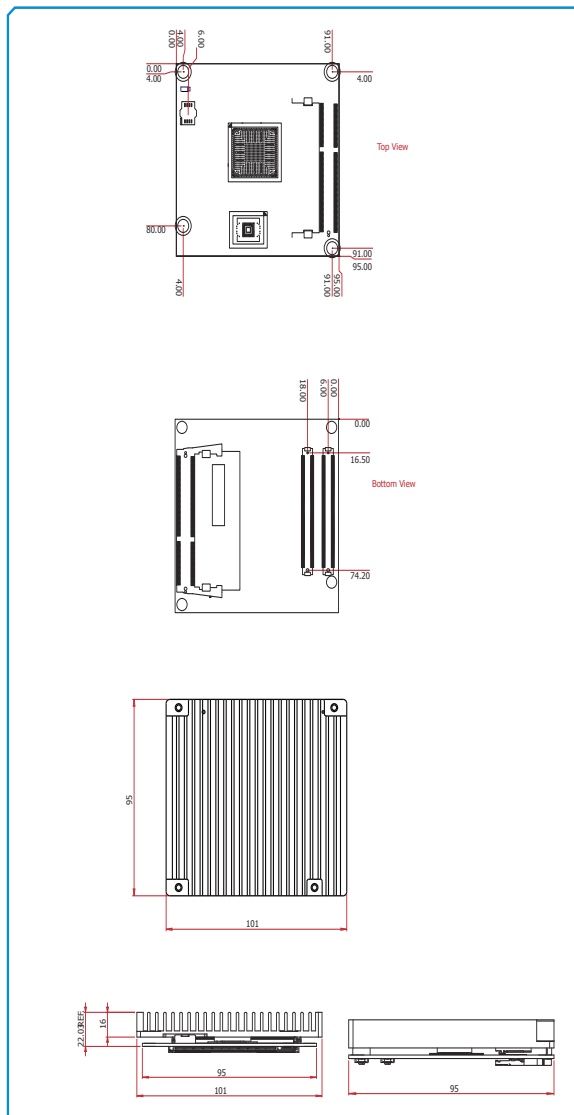
Features

- Dual channel DDR3L 1600MHz SODIMM up to 8GB
- Three independent displays: VGA*/DDI + LVDS*/eDP + DDI
- DP++ resolution supports up to 3840x2160 @ 30Hz
- Multiple expansion: 3 PCIe x1, 1 LPC, 1 I²C, 1 SMBus
- Rich I/O: 1 Intel GbE, 4 USB 3.0, 8 USB 2.0

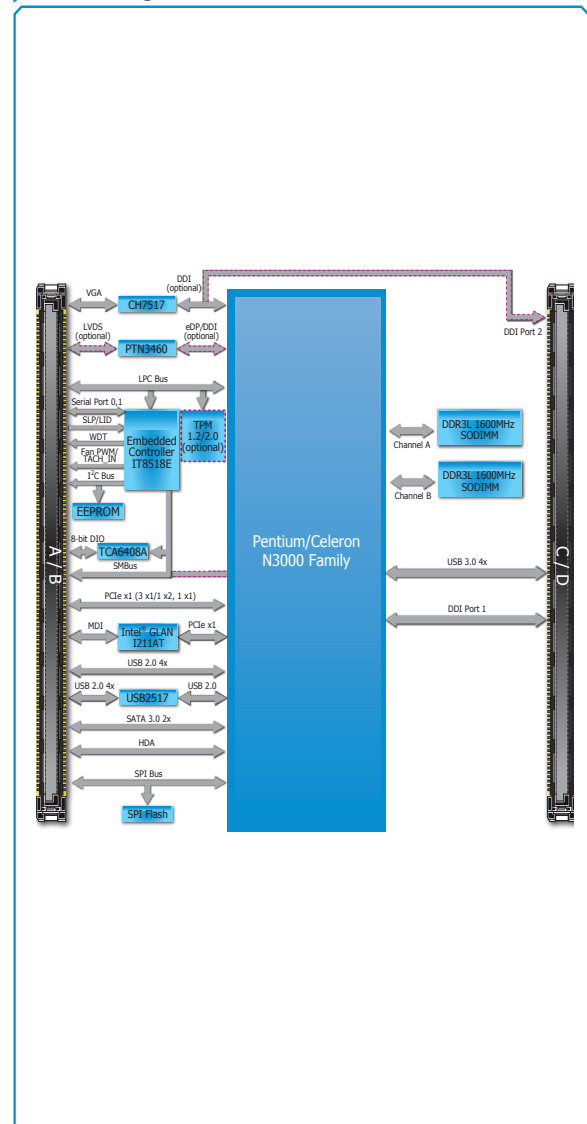
* Populated by default



Mechanical Drawing



Block Diagram





Specifications

SYSTEM	Processor	Intel® Pentium®/Celeron® Processor N3000 Family, BGA 1170 Intel® Atom™ Processor x5-E8000, Quad Core, 2M Cache, 1.04GHz, 5W Intel® Pentium® Processor N3710, Quad Core, 2M Cache, 1.6GHz (2.56GHz), 6W Intel® Celeron® Processor N3160, Quad Core, 2M Cache, 1.6GHz (2.24GHz), 6W Intel® Celeron® Processor N3060, Dual Core, 2M Cache, 1.6GHz (2.48GHz), 6W Intel® Celeron® Processor N3010, Dual Core, 2M Cache, 1.04GHz (2.24GHz), 4W	
	Memory	Two 204-pin SODIMM up to 8GB	Dual Channel DDR3L 1600MHz
	BIOS	Insyde SPI 64Mbit	
	Controller	Intel® HD Graphics	
GRAPHICS	Feature	OpenGL 4.2, Direct X 11.1, OpenCL 1.2, OGL ES 3.0 HW Decode: H.264, MPEG2, VC1, VP8, H.265, MPEG4 HW Encode: H.264, MPEG2, MPEG4	
	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 2560x1440 @ 60Hz HDMI: resolution up to 3840x2160 @ 30Hz or 2560x1600 @ 60Hz DP: resolution up to 3840x2160 @ 30Hz or 2560x1600 @ 60Hz
	Triple Displays	VGA + LVDS + DDI	DDI + eDP + DDI (available upon request)
	Interface	3 x PCIe x1 (Gen 2) 1 x LPC 1 x I ² C 1 x SMBus 2 x Serial (TX/RX)	
EXPANSION	Interface	3 x PCIe x1 (Gen 2) 1 x LPC 1 x I ² C 1 x SMBus 2 x Serial (TX/RX)	
AUDIO	Interface	HD Audio	
ETHERNET	Controller	1 x Intel® I211AT PCIe (10/100/1000Mbps)	
I/O	USB	4 x USB 3.0 8 x USB 2.0	
	SATA	2 x SATA 3.0 (up to 6Gb/s)	
	DIO	1 x 8-bit DIO	
	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
WATCHDOG TIMER	TPM	Available Upon Request	
SECURITY	Type	12V, 5VSB, VCC_RTC (ATX mode)	12V, VCC_RTC (AT mode)
	Consumption	Typical: N3710: 12V @ 0.28A (3.41Watt) Max.: N3710: 12V @ 0.61A (7.35Watt)	
OS SUPPORT		Windows 8.1 64-bit Windows 7 (WES7) 32/64-bit Windows 10 IoT Enterprise 64-bit	Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Ubuntu 15.10 (Intel graphic driver available)
ENVIRONMENT	Temperature	Operating: 0 to 60°C	Storage: -40 to 85°C
	Humidity	Operating: 10 to 90% RH	Storage: 10 to 90% RH
	MTBF	746,818 hrs @ 25°C; 402,691 hrs @ 45°C; 241,711 hrs @ 60°C Calculation Model: Telcordia Issue 2, Method Case 3 Environment: GB, GC – Ground Benign, Controlled	
MECHANICAL	Dimensions	COM Express® Compact	95mm (3.74") x 95mm (3.74")
	Compliance	PICMG COM Express® R2.1, Type 6	

Ordering Information

Model Name	P/N	Processor	Memory	VGA/DDI	LVDS/eDP	GbE	USB 3.0	USB 2.0	Power	Thermal	Temp.
BW968-BS-N3710	770-BW9681-000G	N3710	2 SODIMM	VGA	LVDS	1	4	8	ATX/AT	Fanless	0 to 60°C
BW968-BS-N3060	770-BW9681-200G	N3060	2 SODIMM	VGA	LVDS	1	4	8	ATX/AT	Fanless	0 to 60°C
BW968-BS-E8000	770-BW9681-300G	x5-E8000	2 SODIMM	VGA	LVDS	1	4	8	ATX/AT	Fanless	0 to 60°C

Note: N3160 and N3010 are supported upon request with MOQ requirement.

Packing List

• 1 BW968 board	
• 1 DVD	
• 1 Heat sink (Height: TBD)	TBD

Optional Items

• COM332-B carrier board kit	770-CM3321-000G
• Heat spreader (Height: 11mm)	A71-011070-000G

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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