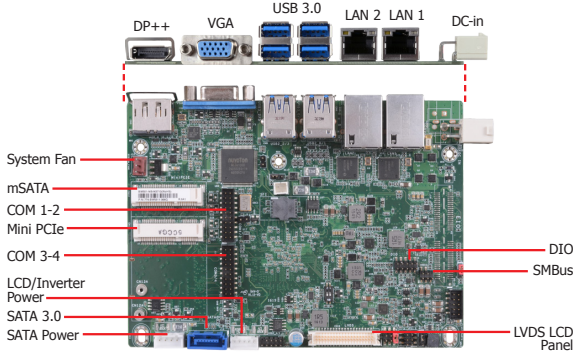
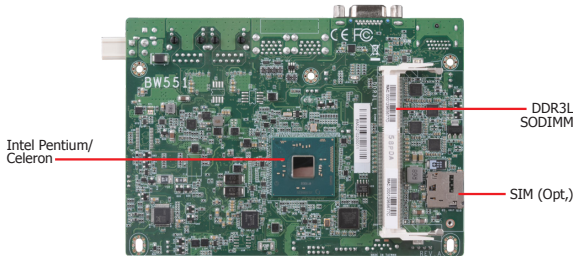


3.5" Board



Top View



Bottom View

Features

- 1 DDR3L SODIMM up to 8GB
- Three independent displays: VGA + LVDS + DP++
- DP++ resolution up to 3840x2160 @ 60Hz
Dual Channel LVDS resolution up to 1920x1200 @ 60Hz
- Wireless communication: Mini PCIe
- Rich I/O: 2 Intel GbE, 4 COM, 4 USB 3.0, 2 USB 2.0

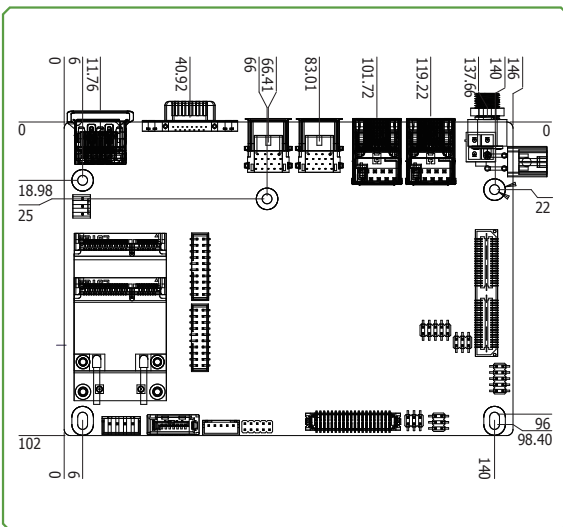


Ordering Information

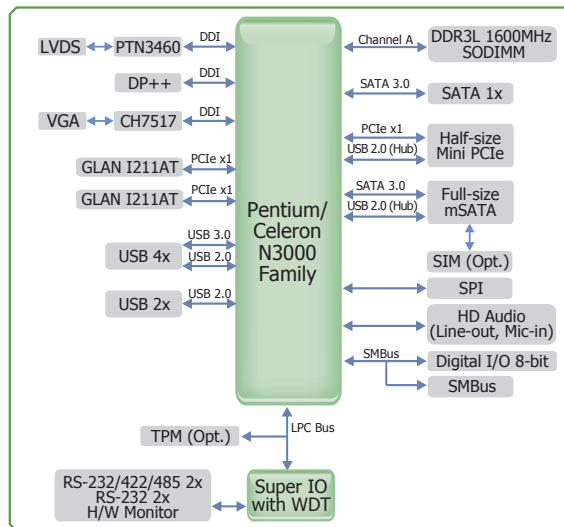
Model Name	P/N	Processor	Memory	GbE	RS-232/422/485	RS-232	USB 3.0	USB 2.0	Power	Thermal	Temp.
BW551-NB-E8000	770-BW5511-300G	x5-E8000	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C
BW551-NB-N3710	770-BW5511-000G	N3710	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C
BW551-NB-N3060	770-BW5511-100G	N3060	1 SODIMM	2	2	2	4	2	12V DC	Fanless	0 to 60°C

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

Mechanical Drawing



Block Diagram



3.5" Board

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	One 204-pin SODIMM up to 8GB Single Channel DDR3L 1600MHz
	BIOS	Insyde SPI 64Mbit
	GRAPHICS	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 1 x LVDS 1 x DP++ VGA: resolution up to 2560x1600 @ 60Hz LVDS: dual channel 48-bit, resolution up to 1920x1200 @ 60Hz DP: resolution up to 3840x2160 @ 30Hz or 2560x1600 @ 60Hz
	Triple Displays	VGA + LVDS + DP++
EXPANSION	Interface	1 x Half-size Mini PCIe (PCIe/USB) 1 x Full-size mSATA (USB/SATA) 1 x SIM (available upon request)
AUDIO	Audio Codec	Realtek ALC888S-VD2-GR
ETHERNET	Controller	2 x Intel® I211AT PCIe (10/100/1000Mbps)
REAR I/O	Ethernet	2 x GbE (RJ-45)
	USB	4 x USB 3.0
	Display	1 x VGA 1 x DP++
INTERNAL I/O	Serial	2 x RS-232/422/485 (2.0mm pitch) 2 x RS-232 (2.0mm pitch)
	USB	2 x USB 2.0 (2.0mm pitch)
	Display	1 x LVDS LCD Panel Connector 1 x LCD/Inverter Power
	Audio	1 x Audio (Line-out/Mic-in)
	SATA	1 x SATA 3.0 (up to 6Gb/s) 1 x SATA Power
	DIO	1 x 8-bit DIO
	SMBus	1 x SMBus
	WATCHDOG TIMER	Output & Interval
SECURITY	TPM	Available Upon Request
POWER	Type	Single 12V +/-10% DC
	Connector	Right Angle Connector (4-pin) DC-in Jack(available upon request) Vertical Type Connector (4-pin) (available upon request)
	Consumption	BW551 Typical: N3710:12V @ 0.53A (6.36Watt) Max.: N3710:12V @ 1.14A (13.68Watt)
	RTC Battery	Lithium 3V (210mAH)
OS SUPPORT	Microsoft/Linux	Windows 7 (/WES7) 32/64-bit Windows 8.1 (64-bit) Windows 10 IoT Enterprise 32/64-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	BW551 : 411,490 hrs @ 25°C; 250,359 hrs @ 45°C ; 160,650 hrs @ 60°C
MECHANICAL	Dimensions	3.5" SBC Form Factor 146mm (5.75") x 102mm (4.02")
	Height	PCB: 1.6mm Top Side: 15.5mm, Bottom Side: 8.0mm
CERTIFICATIONS		CE, FCC Class B, RoHS

Packing List

• 1 BW551 board	
• 1 COM port cable (Length: 300mm, 2 x COM ports)	A81-015020-001G
• 1 Serial ATA data cable (Length: 500mm)	332-553001-005G
• 1 Serial ATA power cable (Length: 250mm)	A81-004041-016G
• 1 DVD	
• 1 Heat sink (Height: 16.5mm)	A71-010034-000G

Optional Items

• USB port cable (Length: 200mm)	A81-001032-016G
• COM port cable (Length: 300mm, 2 x COM ports)	A81-015020-001G
• Power adapter (60W, 12V, DC Jack)	671-106012-000G
• Heat spreader (Height: 8mm)	A71-808300-000G
• 1 Audio cable (Length: 160mm)	A81-022007-016G