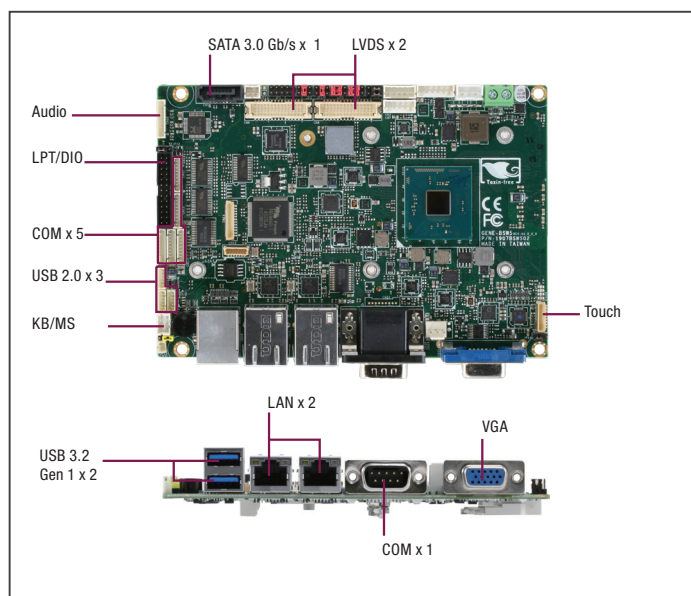


# GENE-BSW5

3.5" SubCompact Board with Intel® Pentium & Celeron® N3000 Series Processor SoC



## Specifications

System	
Form Factor	3.5" SubCompact Board
CPU	Intel® Celeron® N Processor: Intel® Celeron® N3160 (4C/4T, 1.60GHz, up to 2.24GHz)
Chipset	Integrated with Intel® SoC
Memory Type	DDR3L up to 1600MHz, SODIMM x 1, up to 8GB, Non-ECC
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	—
RTC Battery	Lithium Battery 3V/240mAh
Dimensions	5.75" x 4" (146mm x 101.7mm)
OS Support	Windows 7/10 (64bit) Linux Ubuntu 21.04.0/Kernel 5.10
Power	
Power Requirement	+12V Only
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector
Power Consumption	Intel®N3160,DDR3L 1600MHz 8GB,1.63A @+12V(TYPICAL) Intel®N3160,DDR3L 1600MHz 8GB,1.95A @+12V(MAX)
Display	
Controller	Intel® HD Graphics for Intel® Celeron® Processor N3000 Series
LVDS/eDP	LVDS1 Dual Channel 18/24bit x 1, up to 1920 x 1080 LVDS2 Dual Channel 18/24bit x 1(Optional: HDMI1.4b)
Display Interface	VGA x 1, up to 1920 x 1200
Multiple Display	Up to 3 Simultaneous Displays
Audio	
Codec	Realtek ALC897/892
Audio Interface	Line-In / Line-Out / Mic (Audio function not available for WITAS SKU)
Speaker	—
External I/O	
Ethernet	Realtek RTL8119-CG, 10/100/1000Base-TX, RJ-45 x2
USB	USB 3.2 Gen1 x 2
Serial Port	COM1 (RS232)
Video	VGA x 1 HDMI x1(optional)
Internal I/O	
USB	USB2.0 x 3
Serial Port	COM2,COM3 (RS232/422/485, supports 5V/12V/RI) COM4,COM5,COM6 (RS232)
Video	LVDS1 x 1 LVDS2/HDMI x 1(Default: LVDS2)

## Features

- Onboard Intel® Pentium®/Celeron® N3000 Series Processor SoC
- DDR3L 1600 SODIMM x 1, Up to 8 GB
- Gigabit Ethernet x 2
- VGA, LVDS1, LVDS2/HDMI (Co-design)
- 2CH HD Audio
- Mini-Card x 1 (Full-Size)
- mSATA x 1 (Shared with Mini-Card, Half-size)
- USB 3.2 Gen 1 x 2, USB2.0 x 3, COM x 6, Digital I/O 8-bit
- +12V DC, AT/ATX



SATA	SATA III x 1 +5V SATA Power Connector x 1
Audio	Audio Header x 1 (Audio function not available for WITAS SKU)
DIO/GPIO	8-bit
SMBus/I2C	I2C/SMBus x1 (Default: SMBus)
Touch	4/5/8-wire Touch Controller x 1 (optional)
Fan	DC Fan x 1 (optional: Smart Fan)
Sim	—
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
Expansion	
Mini PCIe/mSATA	Full-size mPCIe x 1 Half size mPCIe/mSATA x 1(Default mSATA, BOM Option: mPCIe)
M.2	—
Others	—
Environment & Certification	
Operating Temp.	32°F ~ 140°F (0°C ~ 60°C)
Storage Temp.	-40°F ~ 176°F (-40°C ~ 80°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	325,391
EMC	CE/FCC Class A

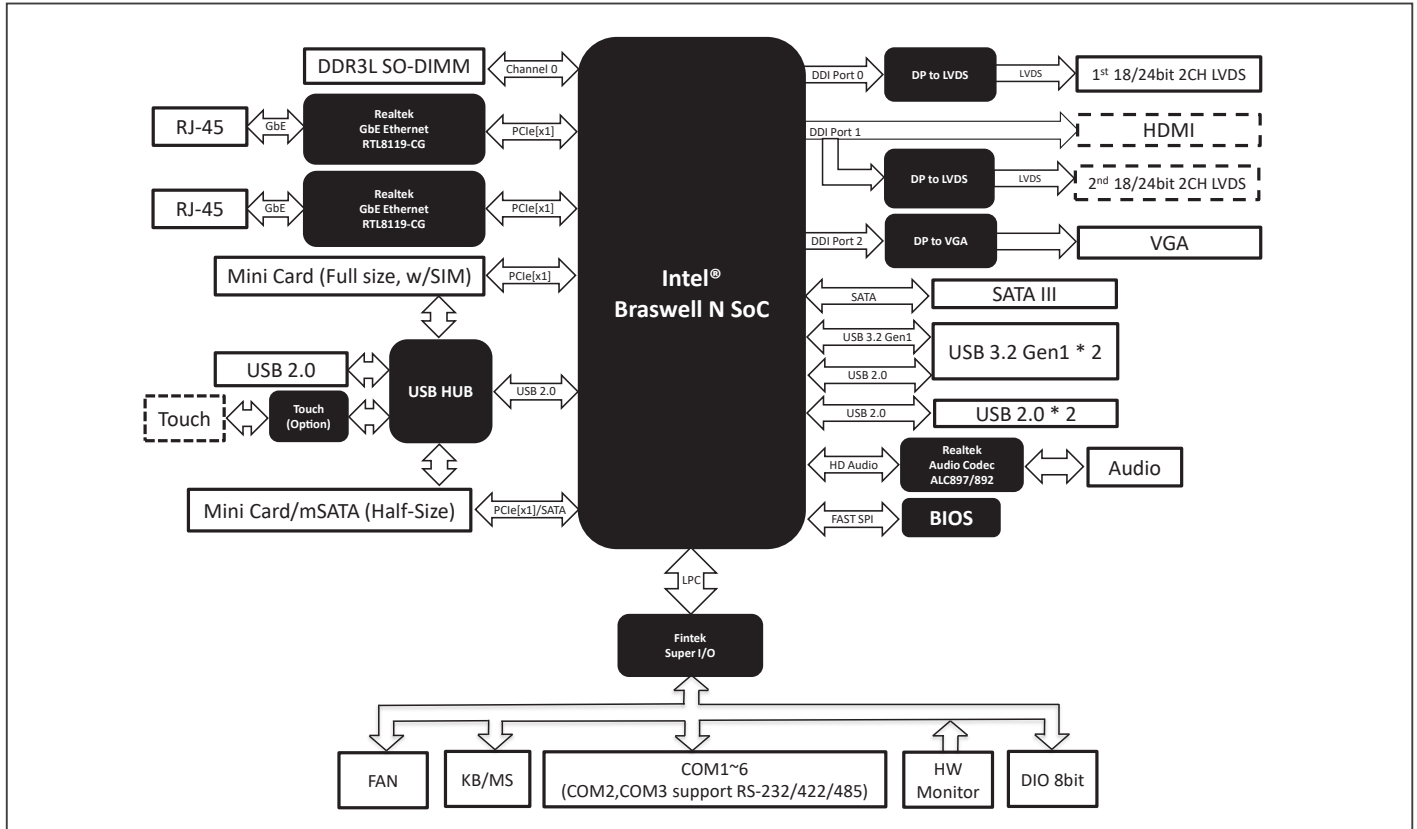
## Optional Accessories

Part Number	Description	QTY per Board
1702150155	SATA Power Cable, 15cm	1
170220020B	ATX Power Cable, 20cm	1
1709070500	SATA CABLE, 50cm	1
170204010R	Power Cable, 10cm	1
1709100254	Audio JACK Cable, 25cm	1
1701090150	COM Cable, 15cm	5
1700050207	USB CABLE, 20cm	3
1700060152	PS/2 KB/MS Cable, 15cm	1
175011901M	BATTERY.3V.w/Wire 110mm.MITSUBISHI.Longtrump.CR2032-HAT00(MLF)	1

## Packing List

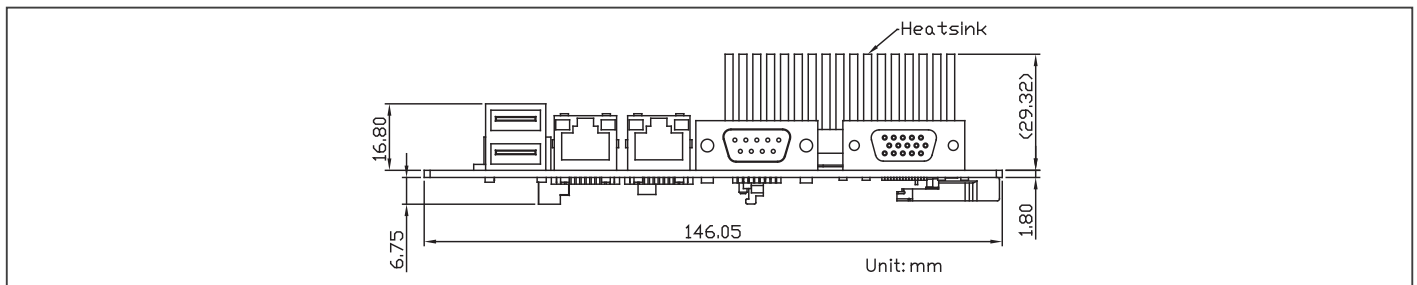
Part Number	Description	QTY
GENE-BSW5	GENE-BSW5 MB	1
M16BT05000	Heatsink	1

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Display	LAN	USB	RS-232	RS-232/422/485	Storage	Expansion Slot	Power	Operating Temp	Others
GENE-BSW5-A12-0001	N3160	VGA+LVDS	Gbe x 2	USB 3.2 Gen 1 x 2 USB 2.0 x 3	2	2	SATA x 1 mSATA x 1 (half-size)	Mini Card x 1(Full-Size)	+12V	0°C ~ 60°C	DIO x 8
GENE-BSW5-A12-0002	N3160	VGA+LVDS x 2	Gbe x 2	USB 3.2 Gen 1 x 2 USB 2.0 x 3	4	2	SATA x 1 mSATA x 1 (half-size)	Mini Card x 1(Full-Size)	+12V	0°C ~ 60°C	Touch Controller, SIM, DIO x 8