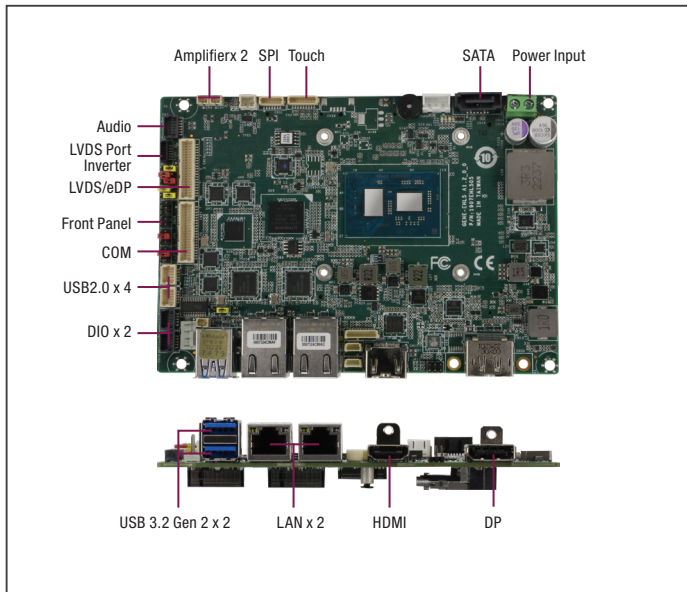


GENE-EHL5

3.5" SubCompact Board with Intel Atom® x6000E Series, and Intel® Pentium® and Celeron® N and J Series Processors



Specifications

System	
Form Factor	3.5" SubCompact Board
CPU	Intel Atom® x6000E series, Pentium®, and Celeron® N and J series Processors: Intel Atom® x6425RE (4C/4T, 1.90 GHz, 12W) Intel Atom® x6425E (4C/4T, 2.00 GHz, 12W) Intel Atom® x6211E (2C/2T, 1.30 GHz, 6W) Intel® Pentium® Processor J6426 (4C/4T, 2.00 GHz, 10W) Intel® Celeron® Processor J6412 (4C/4T, 2.00 GHz, 10W) Intel® Celeron® Processor N6210 (2C/2T, 1.20 GHz, 6.5W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR4 3200, Single Channel SODIMM x 1, Max. 32GB, Non-ECC *IB ECC supported by selected CPU SKU
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0 (Optional)
RTC Battery	Lithium Battery 3V/240mAh
Dimensions	5.75" x 4" (146mm x 101.7mm), 1.10 lbs (0.50 kg)
OS Support	Windows 10 (64bit) Windows® 11 (64-bit) Linux Ubuntu 20.04.3 (IoT)/Kernel 5.13
Power	
Power Requirement	+9V~36V (Optional: +12V)
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector
Power Consumption	Intel Atom® x6425E, DDR4 32GB, 3.26A @+12V (Typical) Intel Atom® x6425E, DDR4 32GB, 3.42A @+12V (Max)
Display	
Controller	Intel® UHD Graphics for 10th Gen Intel® Processors
LVDS/eDP	LVDS x 1, Dual Channel 18/24bit, up to 1920 x 1080 eDP 1.3 x 1, up to 1920 x 1200 (Optional)
Display Interface	HDMI 2.0 x 1, up to 3840 x 2160@60Hz DP 1.4 x 1, up to 3840 x 2160@120Hz (support DP++) VGA x 1, up to 2560 x 1440 (Optional)
Multiple Display	Up to 3 Simultaneous Displays
Audio	
Codec	Realtek ALC256
Audio Interface	Line-In / Line-Out / Mic (Audio function not available for WiTAS SKU)
Speaker	2W Speaker (Audio function not available for WiTAS SKU)
External I/O	
Ethernet	Intel® I210 1GbE, RJ45 x 2
USB	USB 3.2 Gen 2 x 2
Serial Port	—
Video	HDMI 2.0 x 1 DP 1.4 x 1 (Optional:VGA x 1)

Features

- DDR4 SODIMM Slot x 1, up to 32GB, support IB ECC
- LVDS/eDP x 1 (Default: LVDS), DP 1.4 x 1 (Optional VGA x 1), HDMI 2.0b x 1
- SATA 6Gb/s x 1, eMMC x 1
- USB 3.2 Gen 2 x 2 (Rear I/O), USB 2.0 x 4 (Pin header)
- M.2 2280 B-Key (PCIe [x1]), M.2 2242 B-Key (PCIe [x1]), M.2 2230 E-Key x 1, M.2 3052 B-Key x 1
- Wide DC Input 9~36V (Optional: 12V Only)



Internal I/O	
USB	USB2.0 x 4
Serial Port	COM 1, COM 4 (RS-232/422/485) COM 2, COM 3 (RS-232/422/485, supports 5V/12V/RI)
Video	LVDS/eDP x 1 (Default: LVDS) Inverter x 1 (12V/2A)
SATA	SATA 6.0 Gb/s x 1 +5V SATA Power Connector x 1
Audio	Audio Header x 1 (Optional, Audio function not available for WiTAS SKU) Speaker Header x 2 (Optional, Audio function not available for WiTAS SKU)
DIO/GPIO	GPIO 16-bits (8 In / 8 Out)
SMBus/I2C	SMBus/I2C x 1 (Default: SMBus)
Touch	4/5/8 wire Touch Controller x 1 (Optional)
Fan	4pins Smart Fan x 1
Sim	Nano SIM x 1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	eMMC5.1 32GB CANBUS x 2, TX/RX (Celeron J6412 and Celeron N6210 don't support CANBUS)
Expansion	
Mini PCIe/mSATA	—
M.2	M.2 2230 E-Key x 1 (PCIe 3.0 [x1], USB 2.0) M.2 2242 B-Key x 1 (PCIe 3.0 [x2]/SATA, Default: PCIe [x2]) M.2 2280 B-Key x 1 (PCIe 3.0 [x1], USB 2.0, PCIe 3.0 [x2] select by BIOS) M.2 3052 B-Key x 1 (USB 3.2 Gen 2, USB2.0)
Others	—
Environment & Certification	
Operating Temp.	32°F ~ 140°F (0°C ~ 60°C) WiTAS 2: -40°F ~ 185°F (-40°C ~ 85°C) on selected CPU SKU
Storage Temp.	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	335,427
EMC	CE/FCC Class A

Packing List

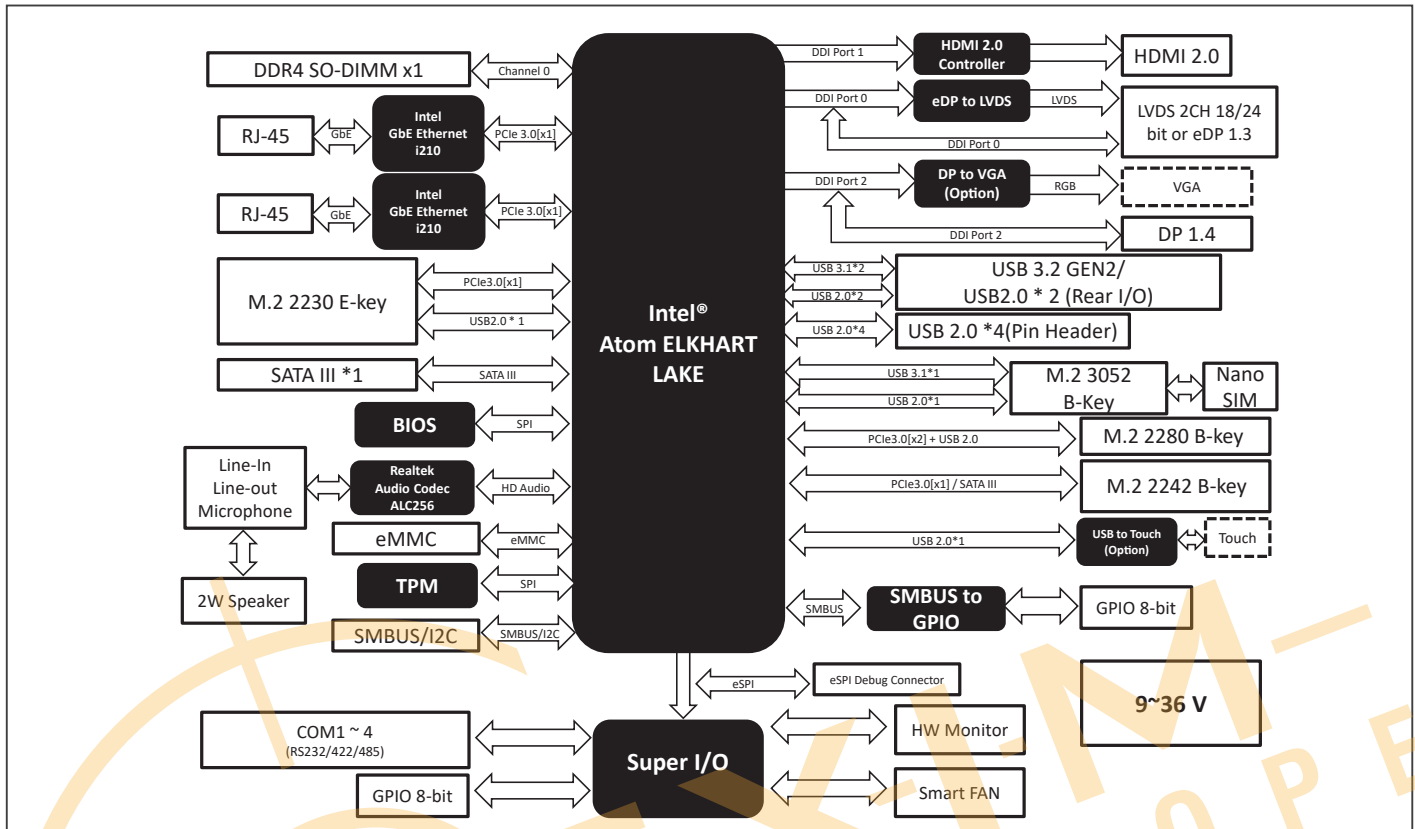
Part Number	Description	QTY
GENE-EHL5	GENE-EHL5 MB	1
M16BT07020	Heat Sink	1

Optional Accessories

Part Number	Description	QTY per Board
170X000156	Audio Cable, 25cm	1
1709070500	SATA Cable, 50cm	1
1702150155	SATA HDD Power, Cable 15cm	1
170010010D	USB 2.0 Cable, 10cm	2
170204010R	Power Cable, 10cm	1
170X000317	COM cable, 15cm	1
170220020B	ATX Power Cable, 20cm	1

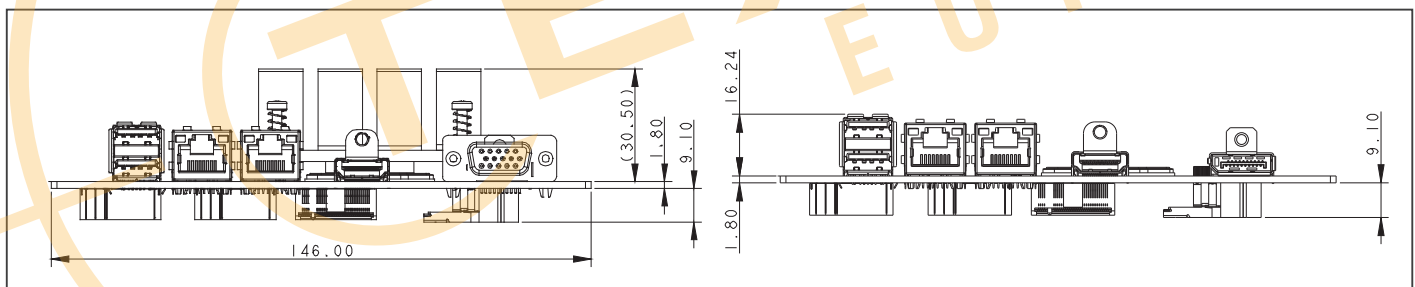


Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Display	LAN	USB	RS-232/422/485	Storage	Expansion Slot	TPM	Power	Temp	Others
GENE-EHL5-A12-0003	Intel® Celeron® Processor J6412	DP++ x 1, HDMI x 1 LVDS x 1	GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	4	SATA x 1 eMMC 32GB	M.2 B-Key 2280 x 1, M.2 B-Key 2242 x 1 M.2 E-Key 2230 x 1, M.2 B-Key 3052 x 1	2.0	9~36V	0°C ~ 60°C	GPIO x 16, nano SIM, Touch Controller, SMBUS, Audio
GENE-EHL5-A12-0004	Intel® Celeron® Processor J6412	VGA x 1, LVDS x 1	GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	4	SATA x 1	M.2 B-Key 2280 x 1, M.2 B-Key 2242 x 1 M.2 E-Key 2230 x 1, M.2 B-Key 3052 x 1	NA	12V	0°C ~ 60°C	GPIO x 16, nano SIM, SMBUS, Audio
GENE-EHL5-A12-0005	Intel® Pentium® Processor J6426	DP++ x 1, HDMI x 1 LVDS x 1	GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	4	SATA x 1	M.2 B-Key 2280 x 1, M.2 B-Key 2242 x 1 M.2 E-Key 2230 x 1, M.2 B-Key 3052 x 1	2.0	9~36V	0°C ~ 60°C	GPIO x 16, nano SIM, Touch Controller, SMBUS, CANBUS x 2, Audio
GENE-EHL5-A12-0007	Intel Atom® x6425E	DP++ x 1, HDMI x 1 LVDS x 1	GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	4	SATA x 1 eMMC 32GB	M.2 B-Key 2280 x 1, M.2 B-Key 2242 x 1 M.2 E-Key 2230 x 1, M.2 B-Key 3052 x 1	2.0	9~36V	0°C ~ 60°C	GPIO x 16, nano SIM, Touch Controller, SMBUS, CANBUS x 2, Audio
GENE-EHL5W2-A12-0008	Intel Atom® x6425E	VGA x 1, LVDS x 1	GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	4	SATA x 1	M.2 B-Key 2280 x 1, M.2 B-Key 2242 x 1 M.2 E-Key 2230 x 1, M.2 B-Key 3052 x 1	NA	12V	-40°C ~ 85°C	GPIO x 16, SMBUS

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Texim Europe B.V. its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Texim"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Texim makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product.

It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.





Headquarters & Warehouse

Elektrostraat 17
NL-7483 PG Haaksbergen
The Netherlands

T: +31 (0)53 573 33 33
E: info@texim-europe.com
Homepage: www.texim-europe.com



The Netherlands

Elektrostraat 17
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33
E: nl@texim-europe.com



Belgium

Zuiderlaan 14, box 10
B-1731 Zellik

T: +32 (0)2 462 01 00
E: belgium@texim-europe.com



UK & Ireland

St Mary's House, Church Lane
Carlton Le Moorland
Lincoln LN5 9HS

T: +44 (0)1522 789 555
E: uk@texim-europe.com



Germany

Bahnhofstrasse 92
D-25451 Quickborn

T: +49 (0)4106 627 07-0
E: germany@texim-europe.com



Germany

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: muenchen@texim-europe.com



Austria

Warwitzstrasse 9
A-5020 Salzburg

T: +43 (0)662 216 026
E: austria@texim-europe.com



Nordic

Stockholmsgade 45
2100 Copenhagen

T: +45 88 20 26 30
E: nordic@texim-europe.com



Italy

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: italy@texim-europe.com