

# MLB-3002

Embedded System supporting MXM Graphics Module with 8th/9th Generation Intel® Core™ i7/i5/i3 in LGA1151 Socket

Compliant with IEC 60601-1 / IEC 60601-1-2



## Features

- ADLINK MXM Graphics module support (Type A/B, up to 120W TDP)
- 8th/9th Gen Intel® Core™ i7/i5/i3, Celeron® processor
- Dual SODIMMs for up to 64GB DDR4 non-ECC memory (dependent on CPU)
- 6x DisplayPort (2 from CPU, 4 from MXM)
- 1x M.2 E key supporting 1630 or 2230 for Wi-Fi/Bluetooth module, 1x M.2 B key supporting 2242 or 2280 for SATA storage module  
1x M.2 M key supporting 2242 or 2280 for SATA/PCIe x4 storage module
- Reliable Molex type 12V DC-in connector
- 1x Intel® i219-LM and 3x Intel® i210-AT
- 2x PCIe Gen3 x4 expansion slot for Full Height Half Length add on card, each slot is 25W power budget and additional Molex 4 pin power cable (12V/1.5A and 5V/2A) support

## Software Support

- Win10 IoT Enterprise SAC 64bit
- Ubuntu 20.04

## Optional Accessories

- Black plate of GPU card: 32-50032-1000-A0
- MXM cooler for P1000/P2000: 32-20797-0200-A0
- MMXM cooler for A1000/A2000: 32-20932-0000-A0
- MXM cooler for A4500: 32-20965-0000-A0
- MXM cooler for RTX3000: 32-20823-1100-A0
- 12V/220W Medical grade adapter: 31-62185-0000-A0 (supports GPU up to 60W TDP)
- 12V/300W Medical grade adapter: 31-62188-0000-A0 (supports GPU cards up to 120W TDP)
- Wall Mount Bracket 34-34546-0100-A0 2pcs
- Wifi Kit INTEL AC9260 Non-VPRO 91-95266-0020

## Specifications

Model	MLB-3002						
MXM Support	EGX-MXM-P1000	EGX-MXM-P2000	EGX-MXM-T1000	EGX-MXM-RTX3000	EGX-MXM-A1000	EGX-MXM-A2000	EGX-MXM-A4500
Processor	Intel® Core™ i7-9700E, 2.6GHz, 12M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (8C/8T) Intel® Core™ i7-9700TE, 1.8GHz, 12M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (8C/8T) Intel® Core™ i5-9500E, 3.0GHz, 9M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i5-9500TE, 2.2GHz, 9M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i3-9100E, 3.1GHz, 6M Cache, 65W TDP, LGA1151, DDR4 2400MHz support (4C/4T) Intel® Core™ i3-9100TE, 2.2GHz, 6M Cache, 35W TDP, LGA1151, DDR4 2400MHz support (4C/4T) Intel® Core™ i7-8700, 3.2GHz, 12M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (6C/12T) Intel® Core™ i7-8700T, 2.4GHz, 12M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (6C/12T) Intel® Core™ i5-8500, 3.0GHz, 9M Cache, 65W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i5-8500T, 2.1GHz, 9M Cache, 35W TDP, LGA1151, DDR4 2666MHz support (6C/6T) Intel® Core™ i3-8100, 3.6GHz, 6M Cache, 65W TDP, LGA1151, DDR4 2400MHz support (4C/4T) Intel® Celeron® G4900, 3.1GHz, 2M Cache, 54W TDP, LGA1151, DDR4 2400MHz support (2C/2T) Intel® Celeron® G4900T, 2.9GHz, 2M Cache, 35W TDP, LGA1151, DDR4 2400MHz support (2C/2T)						
Chipset	Intel® Q370 Chipset						
Memory	Non-ECC DDR4 2666/2400MHz, 2x SO-DIMM, up to 64GB (dependent on CPU)						
<b>I/O Interfaces</b>							
Display	6x DisplayPort (2 from CPU, 4 from MXM)						
Ethernet	1x GbE (Intel® i219-LM), 3x GbE (Intel® i210-AT)						
Serial Ports	1x RS-232/422/485, 1x RS-232						
USB	6x USB 3.2 Gen1x1 ports, 2x USB 2.0 ports						
M.2	1x M.2 E key supporting 1630 or 2230 for Wi-Fi/Bluetooth module, 1x M.2 B key supporting 2242 or 2280 for SATA storage module 1x M.2 M key supporting 2242 or 2280 for SATA/PCIe x4 storage module						
Digital IO	Standard: None Optional: 1x DI/DO with 4 in, 4 out Note: Optional DIO, Audio and TPM 2.0 must be chosen together.						
Audio	2 x 3.5 mm stereo line-out (6W, L/R channels), 1x 3.5 mm mic-in						
TPM 2.0	Standard: None, optional TPM						
Expansion slot	2x PCIe Gen3 x4 expansion slot for Full Height Half Length add on card, each slot is 25W power budget and additional Molex 4 pin power cable (12V/1.5A and 5V/2A) support						
<b>Storage</b>							
SATA	2x SATA 6Gb/s, one SATA power connector 2x SATA 6Gb/s signals via M.2 M & B key connector Intel® RST RAID Support						
<b>Mechanical</b>							
Dimensions	235 x 182 x 130mm (W x D x H, without foot pads)						
Mounting	Optional wall-mount bracket						
<b>Power Supply</b>							
DC Input	DC 12V input (Molex DC-in jack)						
AC Input	220W (12V/18.34A) AC/DC Medical grade adapter						
<b>Environmental</b>							
Operating Temperature	0°C to 40°C						
Storage Temperature	-20°C to 70°C						
Humidity	5% to 95%, non-condensing						
Vibration	Operating vibration: 2Grms, 5-500Hz, 3 axes, Package (NON-OP) vibration: 3.44Grms, 10-1000Hz, 3 axes (W/MXM, W/SSD)						
EMC	EN55032/35, CE, FCC						
Safety	UL/cUL and CB (62368-1:2014)						
Medical Grade	Compliant with IEC 60601-1:2005 + A1:2012 + A2:2020 (3.2 edition) / IEC 60601-1-2:2014 + A1:2020 (4.1 edition)						

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