

# L156AD-M1

15.6inch Ultra Rugged Laptop with Intel® Alder Lake Processor



**With discrete GPU**



## KEY FEATURES

- 12th generation Intel® Processor Family – Alder Lake Processor
- 15.6" FHD Panel resolution with PCAP touch
- Optional discrete Nvidia Graphic card
- Dual battery with hot-swappable design for whole-day-work
- Anti-glare technology for sunlight readability
- Magnesium alloy enclosure with double injection for drop protection
- IP65 waterproof and dustproof
- Optional GPU Graphic Cards
- Optional IP66 Waterproof and Dustproof Upgrade

## INTRODUCTION

Winmate L156 Series Rugged Laptop is a high-performance solution for professionals working in demanding environments. Powered by Intel® Alder Lake processors, it features a 15.6" FHD or optional 4K display with PCAP touch and anti-glare technology for sunlight readability. With a magnesium alloy enclosure, IP65-rated protection, and dual hot-swappable batteries, it ensures durability and all-day productivity. Optional NVIDIA and Intel GPU support makes it ideal for graphics-intensive tasks, from industrial applications to field operations.

## SPECIFICATIONS

### Display

<b>Bonding</b>	Optical Bonding for Sunlight Viewability	<b>Type</b>	Projected Capacitive Multi Touch
<b>Resolution</b>	1920x1080	<b>Size</b>	15.6 inches
<b>Contrast Ratio</b>	800:1	<b>Panel Brightness</b>	800 nits 1000 nits(Optional)
<b>View Angles</b>	85,85,85,85		

### System Specification

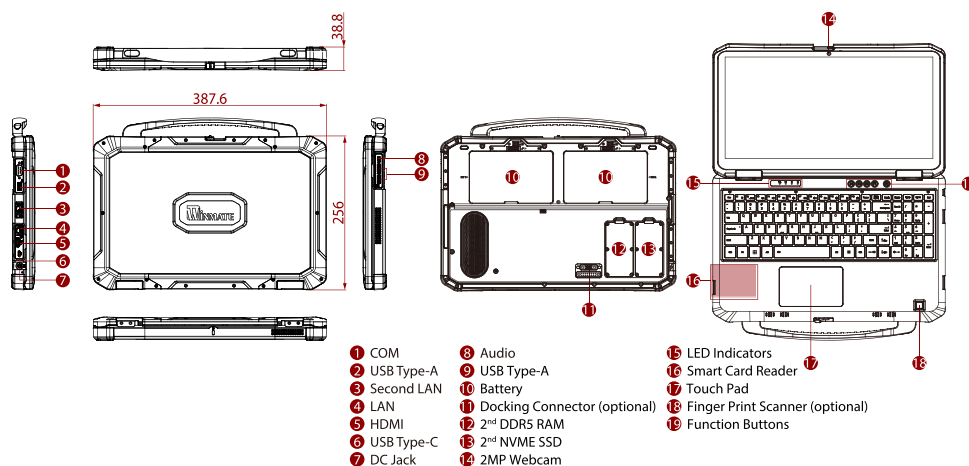
<b>Processor</b>	Intel Core i7-12700H (up to 4.7GHz) Intel Core i9 Processor (Optional)	<b>Memory</b>	8+8GB DDR5 SDRAM 16+16GB DDR5 SDRAM (Optional) 32+32GB DDR5 SDRAM (Optional)
<b>Storage</b>	256GB M.2 NVMe SSD 512GB M.2 NVMe SSD (Optional) 1TB M.2 NVMe SSD (Optional) 2TB M.2 NVMe SSD (Optional) 2nd storage available with up to 2TB M.2 NVMe SSD (Optional)	<b>Security</b>	Trusted Platform Module (TPM) 2.0 Kensington Lock
<b>Operating System</b>	Windows 11 IoT Enterprise LTSC (64 bit) Windows 10 IoT Enterprise LTSC (64 bit) (Optional)	<b>WLAN</b>	Support
<b>BT</b>	Support	<b>WWAN</b>	4G LTE (Optional)
<b>GNSS</b>	GPS, GLONASS	<b>RFID</b>	HF RFID reader 13.56 MHz (Optional)
<b>Smart Card Reader</b>	Smart Card Reader	<b>Fingerprint Scanner</b>	Fingerprint scanner (Optional)

Discrete GPU		M1: A1000 MXM Graphic card (Optional) M2: A2000 MXM Graphic card (Optional) M3: A500 MXM Graphic card (Optional)	
Camera			
Front Camera	2MP front camera		
Mechanical			
Dimension	387.6 x 256 x 38.8 mm	Weight	3.8 kg
Cooling System	Fan Design		
IO Ports			
USB Port	1 x USB 3.0 (Type C with ALT, PD function) 3 x USB 3.0 (Type A)	Serial Port	1 x DB9 (RS232 / RS422 / RS485, software switchable)
SD Card Slot	1 x Micro SDXC Slot	SIM Card Slot	1 x Nano SIM card slot
Video	1 x HDMI 4K Output (Optional)	Audio	1 x Audio combo 3.5mm audio combo jack Dual Digital Mic With Noise Cancellation Dual Speaker
LAN	2 x RJ45-10/100/1000 GigaLAN port	Indicator	4x LED Indicator for Power, Drive, Battery1, Bttery2
Environment			
Operating Humidity	10% to 90% RH, non-condensing	Operating Temperature	-20°C to 60°C
Storage Temperature	-30°C to 70°C	Shock	USA: MIL-STD-810H Method 516.8 Procedure I NATO: STANAG 4370/AECTP400 Edition 3 Method AECTP 402–Procedure I (Optional)
Vibration	USA: MIL-STD-810H Method 514.8 Procedure I NATO: STANAG 4370/AECTP400 Edition 3 Method AECTP 401–Procedure I (Optional)	IP rating	IP65
Drop	USA: MIL-STD-810H Method 516.8, 4 ft NATO: STANAG 4370/AECTP400 Edition 3 Method AECTP 404 – Procedure II, 4 ft (Optional)	EMC	USA: MIL-STD-461G CE101, CE102, RE101, RE102, CS118(Default) MIL-STD-461G CS101, CS114, CS115, CS116, RS101, RS103 (Optional) MIL-STD-461G RE102 Ground Army Grade (Optional) NATO: STANAG 4370/AECTP501 NCE01, NCE02, NRE01, NRE02, NCS12(Default) STANAG 4370/AECTP501 NCS01, NCS07, NCS08, NCS09, NRS01, NRS02 (Optional) STANAG 4370/AECTP501 NRE02-2 Land Environment (Optional)
TEMPEST	USA: NSA NSTISSAM TEMPEST/192 (Optional) NATO: SDIP27 (Optional)		
Certification			
Certification	CE, FCC		
Security Function			
SOTI MobiControl	SOTI MobiControl Compliance	Kensington Lock	Kensington Lock Support
Control			
Button	1 x Power, 4 x Programmable Function Keys		
Power			
Battery	Hotswappable 2 x 11.55V typ. 3220 mAh Lilon Battery (3S1P)	Battery Operating Time	Standard. Battery: 11 hours
Power Rating	19V DC	Adapter	100-240V, 50-60Hz, 230W / 20V DC
Accessory			
Accessory	Adapter and Power Cord Standard Battery	Optional Accessory	Spare Battery (Optional) Battery Charger (Optional) Vehicle Charger (Optional)

## DIMENSIONS UNIT:MM

## NOTE

1.This is a simplified drawing and some



components are not marked in detail.  
 2. Please contact our sales representative if you need further product information.  
 3. All specifications are subject to change without prior notice.  
 4. The product shown in this datasheet is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.