

L156AD-M1

15.6inch Ultra Rugged Laptop with Intel® Alder Lake Processor



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



OVERVIEW



Endless Expansion with Larger Screen

Uncompromised intelligence and comfort:

Combining the powerful Intel® 12th generation Alder Lake Processor with a crystal-clear high def. 15.6-inch and FHD Panel resolution, the L156AD heavy duty laptop is built for endless expansion. The optional discrete Nvidia Graphic card offers powerful and brilliant for various on-field and industrial applications.

Sunlight readable:

The display is designed to thrive beneath daylight conditions with optical bonding and anti-glare technologies for an outdoor viewable.



Durability That Survives the Elements

Tough exterior:

Built with a magnesium alloy enclosure with double injection for drop protection, the Winmate laptop has passed the drop test from a meter high and impact resistance with performance assurance according to the US Defence Standard MIL-STD-810H. Also, IP65 ingress protection ensures protection against dust and moisture.



Connect Wherever

Boost field productivity:

Easily dock, connect, and share with any device using various peripherals and docking options. The heavy duty laptop powered by the Intel® Alder Lake Processor enhances the work performance for rugged computing solutions.

Collaborate from anywhere:

Limit downtime with WLAN, BT support, GPS / GLONASS, and 5G LTE(optional) connectivity options for faster data transmission rates, lower latency, and increased capacity even in remote environments.



Optional GPU Graphic Cards

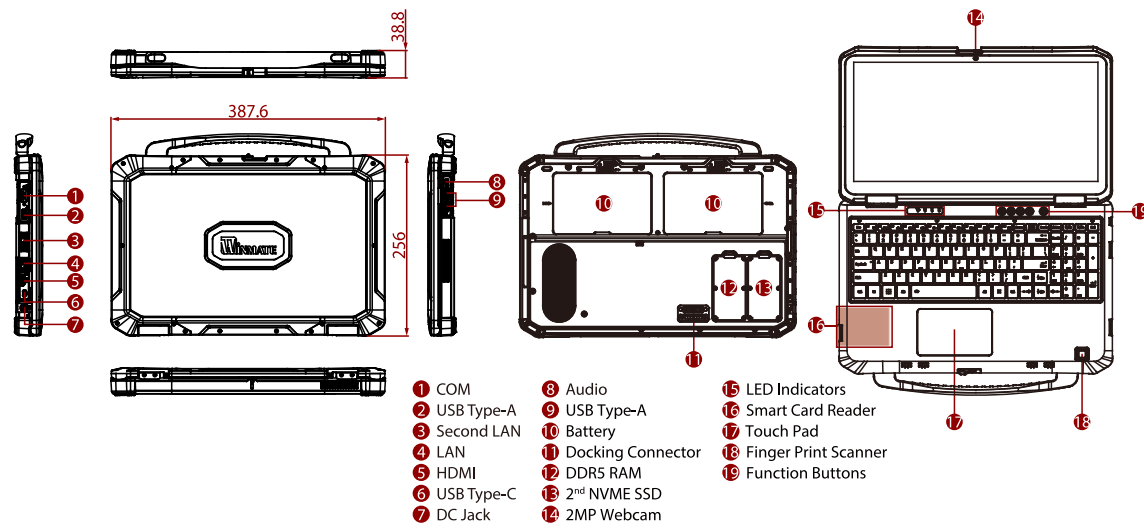
Winmate's Rugged Laptop L156 Series offers optional graphic cards from industry leaders NVIDIA and Intel, such as the NVIDIA T1000, A2000, and Intel A370M. These cards excel in driving advanced laptop workstations for various sectors. They ensure optimal connectivity and superior performance, catering to diverse professional needs.

SPECIFICATIONS

Display			
Bonding	Optical Bonding for Sunlight Viewability	Type	Projected Capacitive Multi Touch
Resolution	1920x1080	Size	15.6 inches
Contrast Ratio	800:1	Panel Brightness	800.0 nits
View Angles	85,85,85,85		
System Specification			
Processor	Intel Core i7-12700H (up to 4.7GHz) Intel Core i9 Processor (Optional)	Memory	8+8GB DDR5 SDRAM 16+16GB DDR5 SDRAM (Optional) 32+32GB DDR5 SDRAM (Optional)
Storage	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)	Security	Trusted Platform Module (TPM) 2.0 Kensington Lock
Operating System	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise LTSC (64 bit) (Optional)	WLAN	Support
BT	Support	WWAN	4G LTE (Optional)
GNSS	GPS, GLONASS	RFID	HF RFID reader 13.56 MHz (Optional)
Smart Card Reader	Smart Card Reader	Fingerprint Scanner	Fingerprint scanner (Optional)
Discrete GPU	M1: T1000 MXM Graphic card (Optional) M2: A2000 MXM Graphic card (Optional) M3: A370 MXM Graphic card (Optional)		
Camera			
Front Camera	2MP front camera		
Mechanical			
Dimension	387.6 x 256 x 38.8 mm	Weight	2.8kg
Cooling System	Fan Design		
IO Ports			
USB Port	3 x USB 3.0 (Type A), 1 x USB 3.0 (Type C)	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, Battery, HDD, RF status
Environment			
Operating Humidity	10% to 90% RH, non-condensing	Operating Temperature	-20°C to 60°C
Storage Temperature	-30°C to 70°C	Shock	MIL-STD-810H Method 516.8 Procedure I
Vibration	MIL-STD-810H Method 514.8 Procedure I	IP rating	IP65
Drop	MIL-STD-810H Method 516.8, 3 ft	EMC	MIL-STD-461G CE101, CE102, RE101, RE102, CS118 (Default) MIL-STD-461G CS101, CS114, CS115, CS116, RS101, RS103 (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.