L156AD-M1

15.6inch Ultra Rugged Laptop with Intel® Alder Lake Processor

With discrete GPU

CE
FC
IP65
COMPLIANT MIL-STD 461G
COMPLIANT MIL-STD 810H

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

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 11 IoT Enterprise LTSC (64 bit) Windows 10 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	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	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

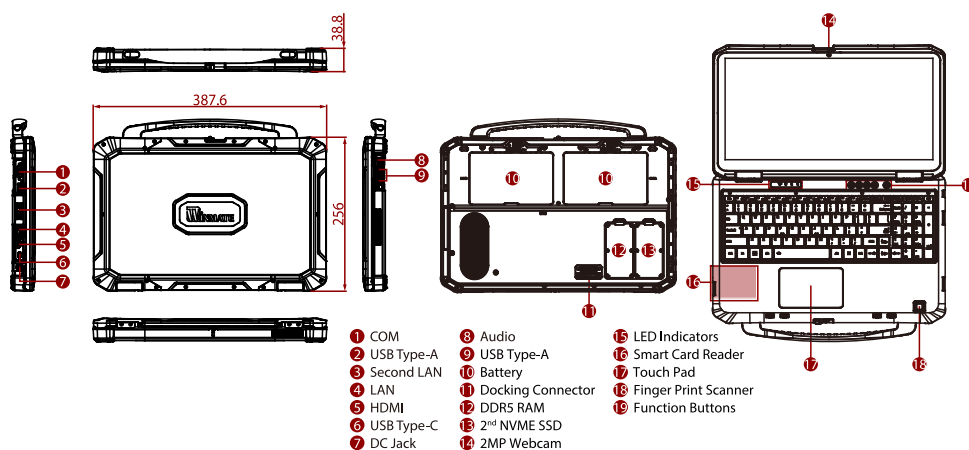|	
Button	1 x Power, 4 x Programmable Function Keys

Power

Battery	Hotswappable 2 x 11.55V typ. 3220 mAh LiIon 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.

❶ COM
❷ USB Type-A
❸ Second LAN
❹ LAN
❺ HDMI
❻ USB Type-C
❼ DC Jack
❽ Audio
❾ USB Type-A
❿ Battery
⓫ Docking Connector
⓬ DDR5 RAM
⓭ 2nd NVME SSD
⓮ 2MP Webcam
⓯ LED Indicators
⓰ Smart Card Reader
⓱ Touch Pad
⓲ Finger Print Scanner
⓳ Function Buttons

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Revised:V.241219.250529

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