

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

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: 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
Cooling System Fan Design
Weight 3.8 kg

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
Storage Temperature -30°C to 70°C
Operating Temperature -20°C to 60°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

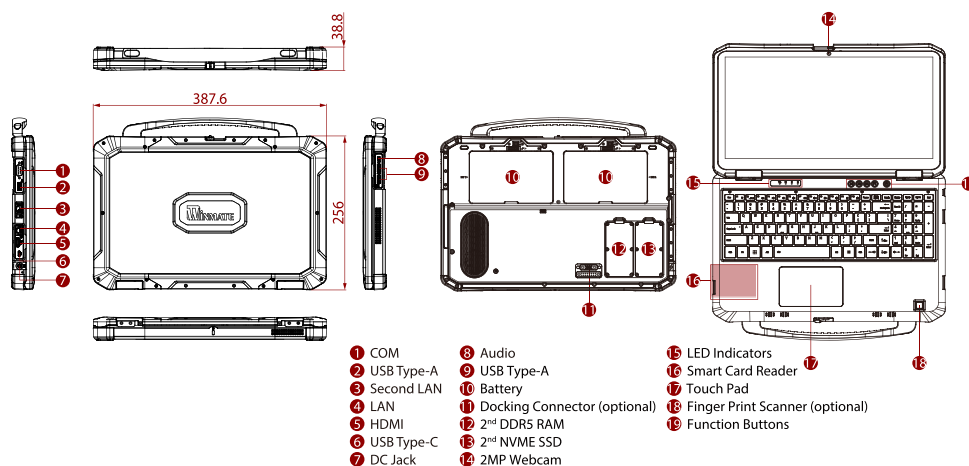
Accessory

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.