L156AD

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
- 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

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.

SPECIFICATIONS

Display

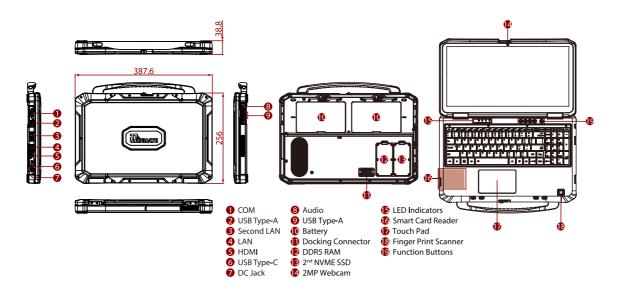| Bonding	Optical Bonding for Sunlight Viewability	Type	Projected Capacitive Multi Touch
Resolution	1920x1080	Size	15.6 inches
Contrast Ratio	800:1	Panel Brightness	800.0 nits
View Angles	85,85,85,85		

System Specification

Processor	Intel Core i5-1235U (up to 4.4GHz) Intel Core i7/i9 Processor (Optional)	**Memory**	8GB DDR5 SDRAM 16GB DDR5 SDRAM (Optional) 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)

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 LiIon Battery (3S1P)	**Battery Operating Time**	Standard. Battery: 11 hours
Power Rating	19V DC	**Adapter**	100-240V, 50-60Hz, 120W / 19.5V DC

Accessory

Accessory	Adapter and Power Cord Standard Battery	**Optional Accessory**	Spare Battery (Optional) Battery Charger (Optional) Vehicle Charger (Optional)

DIMENSIONS   UNIT:MM

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

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.