L156AD
15.6inch 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
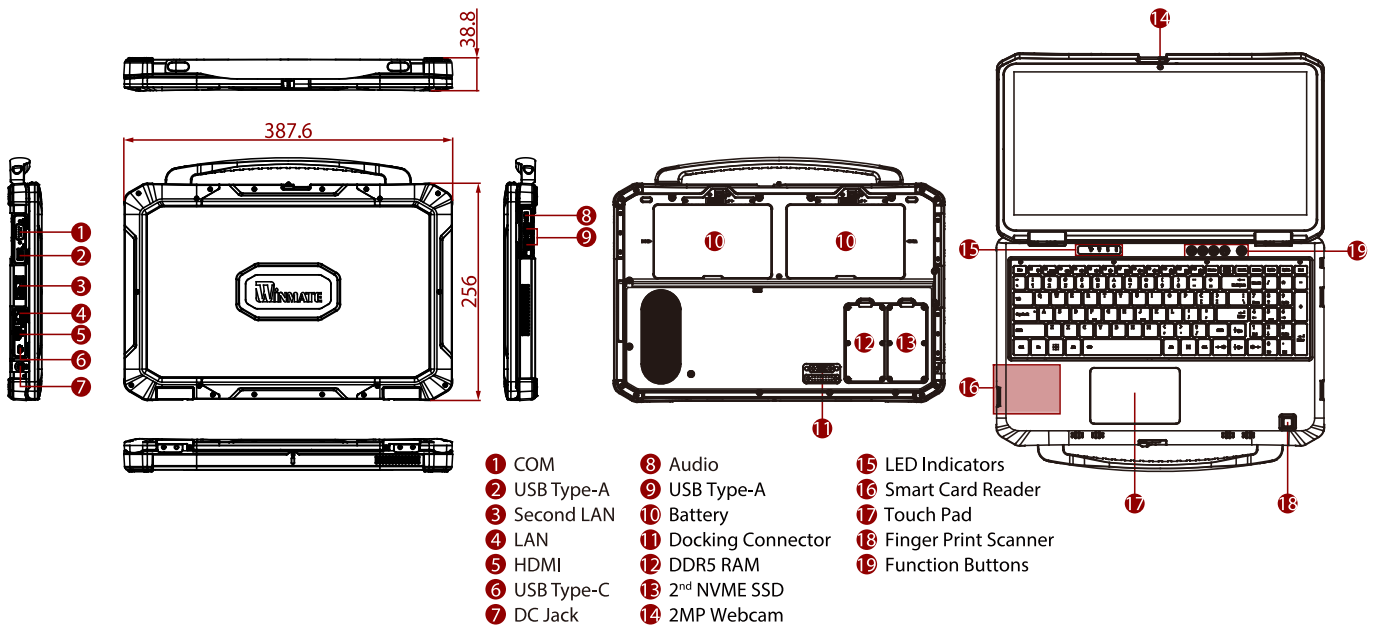- IP65 waterproof and dustproof

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 i7-1255U (up to 4.7GHz) (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 SAC (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

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 / 19V DC

Accessory

Accessory	Adapter and Power Cord Standard Battery

DIMENSIONS   UNIT:MM

1 COM
2 USB Type-A
3 Second LAN
4 LAN
5 HDMI
6 USB Type-C
7 DC Jack
8 Audio
9 USB Type-A
10 Battery
11 Docking Connector
12 DDR5 RAM
13 2nd NVME SSD
14 2MP Webcam
15 LED Indicators
16 Smart Card Reader
17 Touch Pad
18 Finger Print Scanner
19 Function Buttons

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.