

# L140AD-4

14-inch Ultra Rugged Laptop with Intel® Core™ i5-1235U



## KEY FEATURES

- 12th Gen. Intel® Processor Family – Alder Lake Processor
- 14" 1920 x 1080 FHD LED panel with direct optical bonding
- Antiglare technology for sunlight readability
- Dual battery with hotswappable design for wholeday work
- Magnesium alloy enclosure with double injection for drop protection
- Integrated smart card reader or 2nd GigaLAN port

## INTRODUCTION

Winmate L140AD-4 is a 14-inch Ultra Rugged Laptop with Intel® Core™ i5-1235U engineered for industrial automation, embedded systems, and mission-critical applications. It combines Intel® Core™ i5-1235U, 14-inch display with 1920x1080 resolution, and 12th Gen. Intel® Processor Family – Alder Lake Processor to support reliable operation in harsh industrial environments. With 14" 1920 x 1080 FHD LED panel with direct optical bonding, the L140AD-4 helps OEMs, system integrators, and project teams deploy durable, configurable solutions for demanding field, factory, and mission-critical applications.

## SPECIFICATIONS

### Display

|                         |                                          |                       |             |
|-------------------------|------------------------------------------|-----------------------|-------------|
| <b>Bonding</b>          | Optical Bonding for Sunlight Viewability | <b>Resolution</b>     | 1920x1080   |
| <b>Size</b>             | 14.0 inches                              | <b>Contrast Ratio</b> | 800:1       |
| <b>Panel Brightness</b> | 700 nits(Default)<br>1200 (Optional)     | <b>View Angles</b>    | 85,85,85,85 |
| <b>Type</b>             | Projected Capacitive Multi Touch         |                       |             |

### System Specification

|                          |                                                                                                                                                                        |                            |                                                      |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------|
| <b>Processor</b>         | Intel Core i5-1235U (up to 4.4GHz) (Default)<br>Intel Core 5 120U (up to 5GHz)(Optional)                                                                               | <b>Memory</b>              | 8GB (Default)<br>16GB (Optional)<br>32GB (Optional)  |
| <b>Storage</b>           | 128GB SSD (Default)<br>256GB SSD (Optional)<br>512GB SSD (Optional)<br>1TB SSD (Optional)<br>2TB SSD (Optional)<br>2nd storage available with up to 2TB SSD (Optional) | <b>Security</b>            | Trusted Platform Module (TPM) 2.0<br>Kensington Lock |
| <b>Operating System</b>  | Windows 11 IoT Enterprise LTSC (64 bit) (Default)<br>Windows 10 IoT Enterprise LTSC (64 bit) (Optional)                                                                | <b>WLAN</b>                | Support                                              |
| <b>BT</b>                | Support                                                                                                                                                                | <b>WWAN</b>                | 4G LTE (Optional)<br>5G (Optional)                   |
| <b>GNSS</b>              | GPS, GLONASS                                                                                                                                                           | <b>RFID</b>                | HF RFID reader 13.56 MHz (Optional)                  |
| <b>Smart Card Reader</b> | Smart Card Reader (Mutually exclusive with 2nd LAN)                                                                                                                    | <b>Fingerprint Scanner</b> | Fingerprint scanner (Optional)                       |

### Camera

|                     |                  |
|---------------------|------------------|
| <b>Front Camera</b> | 2MP front camera |
|---------------------|------------------|

## Mechanical

|                       |                   |               |        |
|-----------------------|-------------------|---------------|--------|
| <b>Dimension</b>      | 340 x 230 x 38 mm | <b>Weight</b> | 2.8 kg |
| <b>Cooling System</b> | Fan Design        |               |        |

## IO Ports

|                     |                                                                                                                           |                      |                                                                                                    |
|---------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------|
| <b>USB Port</b>     | 1 x USB 3.0 (Type C)<br>3 x USB 3.0 (Type A) (One USB-A is mutually exclusive with 2nd LAN)                               | <b>Serial Port</b>   | 1 x DB9 (RS232 / RS422 / RS485, switchable with optional software)                                 |
| <b>SD Card Slot</b> | 1 x Micro SDXC Slot                                                                                                       | <b>SIM Card Slot</b> | 1 x Nano SIM card slot                                                                             |
| <b>Video</b>        | 1 x HDMI 4K Output (Optional)                                                                                             | <b>Audio</b>         | 1 x Audio combo 3.5mm audio combo jack<br>Dual Digital Mic With Noise Cancellation<br>Dual Speaker |
| <b>LAN</b>          | 1 x RJ45-10/100/1000 GigaLAN port (Default)<br>2nd LAN (Mutually exclusive with one USB-A & Smart Card Reader) (Optional) | <b>Indicator</b>     | 3x LED Indicator for Power, Battery, Capslock status                                               |

## Environment

|                            |                                                                                                                                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operating Humidity</b>  | 10% to 90% RH, non-condensing                                                                                                   | <b>Operating Temperature</b> | -20°C to 60°C                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Storage Temperature</b> | -30°C to 70°C                                                                                                                   | <b>Shock</b>                 | USA: MILSTD810H Method 516.8 Procedure I<br>NATO: STANAG 4370/AECTP400 Edition 3 Method AECTP 402–Procedure I                                                                                                                                                                                                                                                                                          |
| <b>Vibration</b>           | USA: MILSTD810H Method 514.8 Procedure I<br>NATO: STANAG 4370/AECTP400 Edition 3 Method AECTP 401–Procedure I                   | <b>IP rating</b>             | IP65                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Drop</b>                | USA: MIL-STD-810H Method 516.8 Procedure IV, 4 ft<br>NATO: STANAG 4370/AECTP400 Edition 3 Method AECTP 404 – Procedure II, 4 ft | <b>EMC</b>                   | USA:<br>MIL-STD-461G CE101, CE102, RE101, RE102, CS118 (Default)<br>MIL-STD-461G CS101, CS114, CS115, CS116, RS101, RS103 (Optional)<br>MIL-STD-461G RE102 Ground Army Grade<br><br>NATO:<br>STANAG 4370/AECTP501 NCE01, NCE02, NRE01, NRE02, NCS12 (Optional)<br>STANAG 4370/AECTP501 NCS01, NCS07, NCS08, NCS09, NRS01, NRS02 (Optional)<br>STANAG 4370/AECTP501 NRE02-2 Land Environment (Optional) |
| <b>TEMPEST</b>             | USA: NSA NSTISSAM TEMPEST/192 (Optional)<br>NATO: SDIP27 (Optional)                                                             |                              |                                                                                                                                                                                                                                                                                                                                                                                                        |

## Certification

|                      |         |
|----------------------|---------|
| <b>Certification</b> | CE, FCC |
|----------------------|---------|

## Security Function

|                         |                             |                        |                         |
|-------------------------|-----------------------------|------------------------|-------------------------|
| <b>SOTI MobiControl</b> | SOTI MobiControl Compliance | <b>Kensington Lock</b> | Kensington Lock Support |
|-------------------------|-----------------------------|------------------------|-------------------------|

## Control

|               |                                                                                                    |
|---------------|----------------------------------------------------------------------------------------------------|
| <b>Button</b> | 1 x Power, 2 x volume key,<br>2 x Programmable Function Keys<br>QWERTY keyboard with RGB backlight |
|---------------|----------------------------------------------------------------------------------------------------|

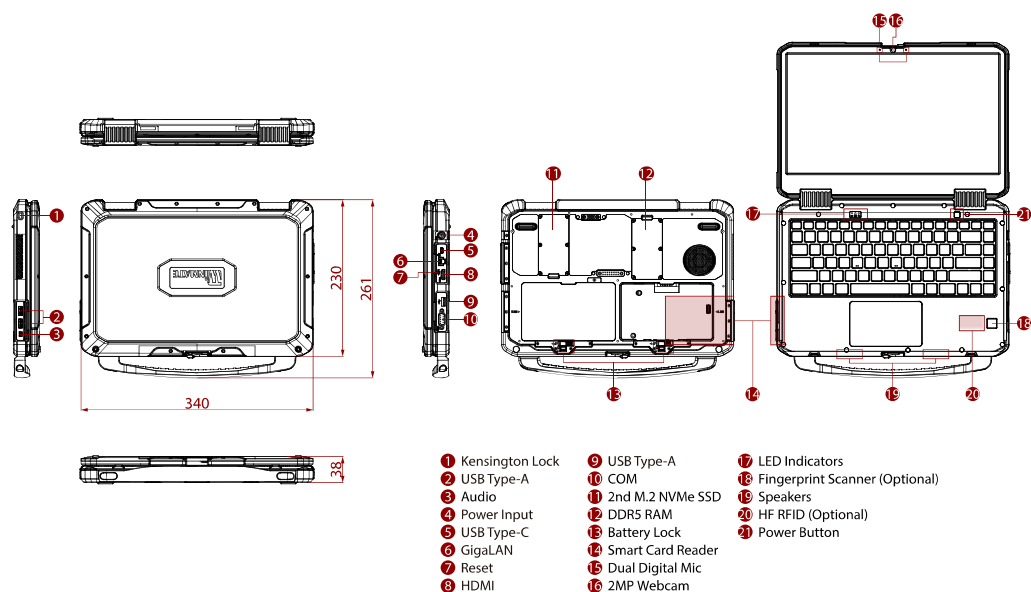
## Power

|                     |                                                               |                               |                            |
|---------------------|---------------------------------------------------------------|-------------------------------|----------------------------|
| <b>Battery</b>      | Hot-swappable 2 x 11.55V, typ. 3220 mAh Li-Ion Battery (3S1P) | <b>Battery Operating Time</b> | Standard Battery: 11 hours |
| <b>Power Rating</b> | 19V DC                                                        | <b>Adapter</b>                | 100-240V, 50-60Hz / 19V DC |

## Accessory

|                  |                                            |                           |                                                                                                                                                  |
|------------------|--------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accessory</b> | Adapter and Power Cord<br>Standard Battery | <b>Optional Accessory</b> | Spare Battery (Optional)<br>High Capacity Battery (Optional)<br>Battery Charger (Optional)<br>Vehicle Charger (Optional)<br>Carry Bag (Optional) |
|------------------|--------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|

## DIMENSIONS UNIT:MM



## NOTE

/ Disclaimer /

- Accessories and Integrated Options may vary depending on your configuration.
  - Total usable memory and storage will be less dependent upon actual system configuration.
  - The actual transfer speed will vary depending on many factors including the processing speed of the host device, file attributes, and other factors related to the system configuration and your operating environment.
  - The USB Type-C connector follows USB 3.0 standard, which does not support Alternate Mode (ALT) or USB Power Delivery (USB-PD).
  - The battery life is measured at dimming LCD brightness. Varies depending on the usage conditions, or when an external device is attached.
  - The 2D drawing is simplified drawing and some components are not marked in detail.
  - Length measurements do not include protrusions. Weight varies with options.
  - TPM 2.0 available upon request.
  - SOTI is available upon request.
  - 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.
- \* Some images or content on this page are created or enhanced using generative AI technology. All AI-generated content has been reviewed before publication.