

# M133KML(HB), 13.3-inch Ultra Rugged Tablet

Military-Grade Tablet Ready for Challenging Tasks and Tough Environments

M133KML (HB) is the next generation of the 13.3-inch rugged tablet with robust set of features designed to withstand industrial use while providing high tech solutions that increase productivity, improve safety, and reduce operational costs. The processing power comes from Intel's 7th generation Core i5-7200U processor and the tablet features a brilliant, wide viewing angle with direct optical bonding, projected capacitive touch screen, which is outdoor viewable and offers a 1920 x 1080 resolution display. Equipped with a built-in kickstand, the M133KML (HB) is a powerful workstation with reliable performance in a mobile and ultra-rugged design.



## Highlights

- 7<sup>th</sup> Gen. Core™ i5-7200U, 2.5 GHz (turbo up to 3.1 GHz)
- 13.3" 1920 x 1080 Resolution Transflective TFT-LCD Panel
- With daylight-readable screen 500 nits and optical bonding for clarity increasing and readability enhancing
- Optional high brightness 800 nits
- Adjustable Kickstand that is Convertible to a handle (Optional)
- With IP65 dust and water-resistant certification
- Magnesium Alloy Housing with All-Around Elastomeric Rubber
- MIL-STD-38999 connector for LAN/ USB2.0 and Power/ RS232/422/485 Input
- Fully Sealed and Fanless Thermal Design
- MIL-STD-810G Compliant

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## Display Specification

|                  |   |
|------------------|---|
| Size             | 13.3-inch   |
| Resolution       | 1920 x 1080   |
| Panel Brightness | 500 nits with Optical Bonding (Optical 800 nits)                                    |
| Touch            | Multi-touch Projected Capacitive with Glove/Rain/Stylus Modes Active Stylus Support |
| Contrast Ratio   | 1000:1  |
| Viewing Angle    | 89/89/89/89   |
| Technology       | Intel HD Graphics (built-in CPU) video controller                                   |

## System Specification

|                  |   |
|------------------|---|
| Processor        | Intel® Core™ i5-7200U<br>2.5 GHz (Turbo up to 3.10 GHz) |
| System Memory    | 4GB SODIMM DDR4-2400 (up to 16GB)                       |
| Storage 1        | 1 x 128GB M.2 SSD (up to 512GB)                         |
| Storage 2        | Optional M.2 SSD (up to 512GB)                          |
| Operating System | Windows 10 IoT Enterprise                               |

## Wireless Communication

|           |                        |
|-----------|------------------------|
| WLAN      | 802.11 a/b/g/n/ac      |
| Bluetooth | Bluetooth              |
| GPS       | GPS/GLONASS            |
| WWAN      | Optional 4G/ LTE or 3G |

## Interface

|                         |   |
|-------------------------|---|
| HDMI Connector          | 1 x HDMI  |
| Reset                   | 1 x Reset Button                                    |
| SD Card Slot            | 1 x Micro SD Slot                                   |
| Audio Jack              | 1 x Headphone Combo Jack                            |
| USB Type-C Connector    | 1 x USB 3.1 Type-C (Gen1) 2                         |
| USB3.0                  | 2 x USB 3.0   |
| RS232 Serial Port       | 1 x RS232 Serial COM Port                           |
| MIL-STD-38999 connector | 1 x LAN/USB2.0 Port<br>1 x Power/RS232/422/485 Port |

## Keyboard and Input

|        |   |
|--------|---|
| Touch  | 10-point multi-touch, support Hand / Gloves, Rain Mode, and Active Pen  |
| Button | On-screen QWERTY keyboard<br>7 membrane keys: 1 x power, 1 x menu, 3 x function key (Programmable function key) |

## Status Indicators

|                |                         |
|----------------|-------------------------|
| LED Indicators | Power, Battery, SSD, RF |
|----------------|-------------------------|

## Audio

|            |  |
|------------|--|
| Microphone | 1 x built-in Digital Mic with Noise Cancellation |
| Speaker    | 2 x 1 watt speaker                               |

## Cameras

|             |  |
|-------------|--|
| Web Camera  | 2MP webcam                                   |
| Rear Camera | 5MP rear camera with autofocus and LED light |

## Certifications

|                |                 |
|----------------|-----------------|
| Certifications | CE, FCC, IC, UL |
|----------------|-----------------|

## Security Function

|                          |   |
|--------------------------|---|
| Security                 | <ul style="list-style-type: none"> <li>Trusted Platform Module (TPM) V2.0 <sup>3</sup></li> <li>Computrace theft protection agent <sup>4</sup></li> <li>Kensington lock slot</li> </ul> |
| Mobile Device Management | SOTI Mobicontrol compatible   |

## Mechanical and Environment

|                       |   |
|-----------------------|---|
| Dimension (W x L x H) | 338.5 x 240 x 44 mm (13.3 x 9.4 x 1.18 inches) <sup>5</sup> |
| Housing               | Rear Magnesium Alloy Die-Casting Design                     |
| Cooling System        | Fanless thermal design                                      |
| Weight                | 2.4 Kg (Without Kickstand),<br>2.8 Kg (With Kickstand)      |
| Operating Temperature | -10°C to 50°C (14°F to 122°F)                               |
| Storage Temperature   | -20°C to 60°C (-4°F to 140°F)                               |
| Humidity              | 30% to 80% RH, non-condensing                               |
| IP Proof              | IP65  |
| Shock                 | MIL-STD-810G Method 516.6 Procedure I                       |
| Vibration             | MIL-STD-810G Method 514.6 Procedure I                       |
| Drop                  | MIL-STD-810G Method 516.6, 4 ft to concrete                 |
| ESD (Contact/Air)     | 12kV/12kV   |

## Power Management

|                        |   |
|------------------------|---|
| Power Input            | 24V DC  |
| Battery                | 7.4V, typ. 10280 mAh Li-Polymer Battery (2S2P)<br>Optional Hot-Swap |
| Battery Operating Time | 11 Hours (BAPCo TabletMark v3)                                      |

## Accessories

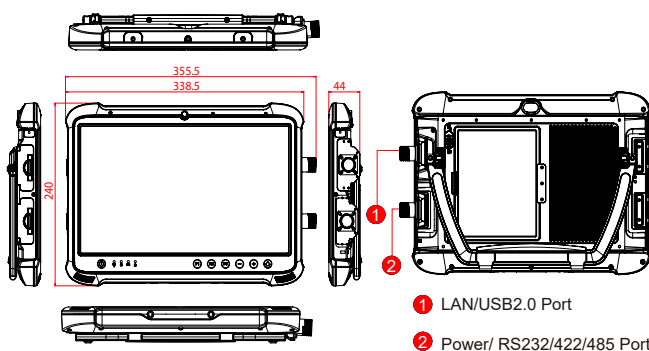
### Standard Accessories

Adapter and Power Cord  
Standard Battery  
Stylus  
Stand with Integrated Handle  
Power/RS232 External Cable  
LAN/USB2.0 External Cable

### Optional Accessories <sup>6</sup>

Shoulder Strap  
Battery Charger  
Active Pen

## Drawing <sup>7</sup>



<sup>7</sup>Military 38999 connector for LAN/USB2.0, Power/RS232 port signal



Do Not Expose the Battery Pack to Excessive Heat, or Extreme Heat (Near Fire, in Direct Sunlight for example)  
Do not expose bare skin to this product when handling this unit in extreme hot or cold environments

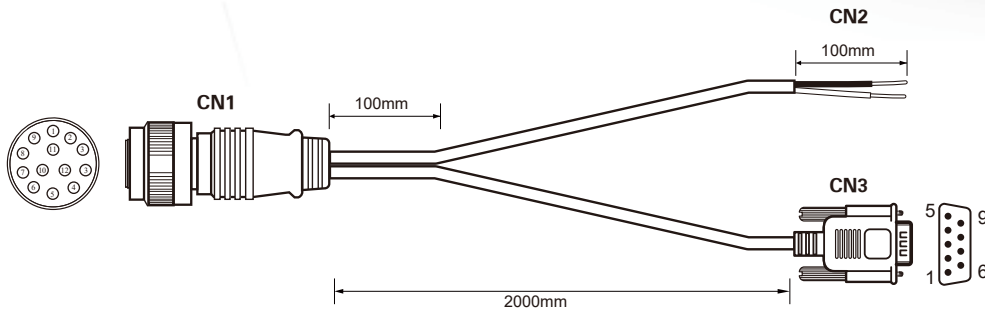
- Total usable memory will be less depending upon actual system configuration.
- The USB Type-C connector follows USB3.0, standard, which does not support Alternate Mode (ALT) or USB Power Delivery (USB-PD)
- TPM 2.0 available upon request.
- Computrace theft protection and SOTI are available upon request.
- Length measurements do not include protrusions. Weight varies with options.
- Accessories and Integrated Options may vary depending on your configuration.
- This is a simplified drawing and some components are not marked in detail.

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Fully Ultra Rugged Tablet that Can Survive Any Environment and Get Real Work Done

## Pin Definition

### Power/RS232 Cable

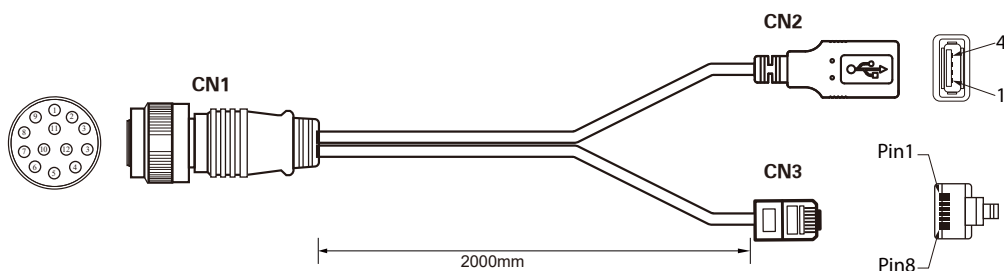


| Pin No | Symbols   | Color          |
|--------|-----------|----------------|
| CN1-1  | VCC+      | White          |
| CN1-2  | VCC-      | Black          |
| CN1-3  | NC        |                |
| CN1-4  | NC        |                |
| CN1-5  | RS232 DCD | No assignation |
| CN1-6  | RS232 RXD | No assignation |
| CN1-7  | RS232 TXD | No assignation |
| CN1-8  | GND       | No assignation |
| CN1-9  | RS232 DTR | No assignation |
| CN1-10 | RS232 DSR | No assignation |
| CN1-11 | RS232 RTS | No assignation |
| CN1-12 | RS232 CTS | No assignation |
| CN1-13 | RS232 RI  | No assignation |

| Pin No | Symbols | Color |
|--------|---------|-------|
| CN2-1  | VCC+    | White |
| CN2-2  | VCC-    | Black |

| Pin No | Symbols   | Color          |
|--------|-----------|----------------|
| CN3-1  | RS232 DCD | No assignation |
| CN3-2  | RS232 RXD | No assignation |
| CN3-3  | RS232 TXD | No assignation |
| CN3-4  | GND       | No assignation |
| CN3-5  | RS232 DTR | No assignation |
| CN3-6  | RS232 DSR | No assignation |
| CN3-7  | RS232 RTS | No assignation |
| CN3-8  | RS232 CTS | No assignation |
| CN3-8  | RS232 RI  | No assignation |

### LAN/USB2.0 Cable



| Pin No | Symbols | Color        |
|--------|---------|--------------|
| CN1-1  | USB 5V  | Red          |
| CN1-2  | USB GND | Black        |
| CN1-3  | USB D-  | White        |
| CN1-4  | USB D+  | Green        |
| CN1-5  | DA+     | Orange/White |
| CN1-6  | DA-     | Orange       |
| CN1-7  | DB+     | Green/White  |
| CN1-8  | DC+     | Blue         |
| CN1-9  | DC-     | Blue/White   |
| CN1-10 | DB-     | Green        |
| CN1-11 | DD+     | Brown/White  |
| CN1-12 | DD-     | Brown        |
| CN1-13 | NC      |              |

| Pin No | Symbols | Color        |
|--------|---------|--------------|
| CN2-1  | USB 5V  | Red          |
| CN2-4  | USB GND | Black        |
| CN2-2  | USB D-  | White        |
| CN2-3  | USB D+  | Green        |
| CN3-1  | DA+     | Orange/White |
| CN3-2  | DA-     | Orange       |
| CN3-3  | DB+     | Green/White  |
| CN3-4  | DC+     | Blue         |
| CN3-5  | DC-     | Blue/White   |
| CN3-6  | DB-     | Green        |
| CN3-7  | DD+     | Brown/White  |
| CN3-8  | DD-     | Brown        |



## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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