

# RUGGED LAPTOP

# RS13

## SLIM & COMPACT



- The slim yet durable laptop gives excellent outdoor usage experiences
- Powered with Intel® i7-7600U Processor to enhance your working efficiency
- Reliable CNC milled aluminum case with MIL-STD-810G & IP65 compliant to withstand harsh and extreme environments.
- Upgraded with EMC solution of Optional MIL-STD-461G (Ground Navy and Ground Army) available.



# RUGGED LAPTOP RS13



## Standard Unit

Items	Descriptions
<b>Platform</b>	– Intel® Kaby Lake-U Platform
<b>Operation System</b>	– Windows 10
<b>Processor</b>	– Intel® Core™ i7-7600U Processor – 4MB Intel® Smart Cache, up to 3.90 GHz
<b>Graphic</b>	Intel® HD Graphics 620
<b>Display</b>	– 13.3" FHD (1920 x 1080) LCD – Optical Bonding – Brightness (min.~ typ.): Std.: 250~350 nits
<b>Memory</b>	– 260 pin DDR4-2400/2666 SO-DIMM x 1 – 8GB/16GB/32GB DDR4-2133, up to 32GB
<b>Storage</b>	Removable 2.5" SATAIII SSD* x 1 *Height: 7mm
<b>Audio</b>	– HD Audio and Stereo Speakers
<b>Sensor</b>	Ambient Light Sensor
<b>Keyboard</b>	83-key with Backlight (Membrane Type)
<b>Touchpad</b>	PS/2 Resistive Single-Touch Touchpad
<b>Buttons</b>	Power Button (Black)
<b>LED Indicators</b>	– Power/S3 (Green/Flashing Green) – SSD/Heater (Green/Orange) – Charge/Battery low (Orange/Flashing Orange)
<b>Security</b>	– Password Security (Supervisor Password, User Password) – Kensington Lock Slot
<b>Case</b>	CNC milled Aluminum
<b>Color</b>	– Black – NATO Green
<b>Environmental Specifications</b>	– Operating Temperature: Std: -20°C ~ +60°C – Storage Temperature: -40°C ~ +70°C
<b>Dimensions</b>	338 x 265 x 32 mm
<b>Weight</b>	Approximately 3.2 kg
<b>Certifications</b>	– CE/FCC/UKCA – WEEE – REACH – RoHS2.0 – IP65 (without I/O caps) – MIL-STD-810G

Power	
<b>Main Battery</b>	– Battery Pack BR3B3A: Li-polymer 11.1V/6040mAh
<b>AC Adapter</b>	– 90W, 100-240VAC, 50/60Hz
<b>DC-in</b>	– Std.: DC-in 19V – Std.:DC-in Conn.: 2 pin

Communications	
<b>GLAN</b>	– 10/100/1000 base-T Ethernet Std: 1st GLAN: Intel® I219LM on MB

I/O Interfaces	
<b>Left</b>	– 1st GLAN RJ45 x 1 (Intel® I219M on MB) – USB 3.1 Gen. 1 x 1 – USB 3.1 Gen. 1 x 1 (1.5A Fast Charging)
<b>Right</b>	– 2.5" SATAIII SSD
<b>Rear</b>	– DC-in Conn. x 1 – Serial Port DB9 x 1 – Std.: USB to COM, default RS232. – Optional: LPC interface, COM port card – Display Port or optional VGA* (DB15) x 1 *VGA (DB15): Trade off with Fischer VGA – Optional Fischer I/O: Choose 1~3 out of 6 as below Each function can only be chosen once, except COM port.: – USB 2.0 – VGA Port – 2nd GLAN (Intel® I210 Mini PCIe Card) – Audio – COM (RS232, RS422)* *COM Port Card: 1. RS232 x 2 or RS422 x 2 2. Mini PCIe form factor
<b>Bottom</b>	– D/U Port x 1 Signals: PCI-e, USB 3.1, USB 2.0, +Vbata/1A & 5V/1A
<b>Internal</b>	– Mini PCIe full-size card x 2 (On MB, for 2nd GLAN, COM port card) – M.2 2230 E key x 1 (WLAN/Bluetooth® Module) – M.2 2242 M key x 1 (On MB) – Audio/ Headset x 1 – VGA Port x 1 – USB 3.1 Gen.1 x 1 – USB 2.0 x 2

## Optional Devices

Items	Descriptions
<b>Display</b>	– Brightness (min.~typ.): 720~900 nits
<b>WLAN/Bluetooth®</b>	– Intel® Dual Band Wireless AC9260 – Wi-Fi Certified: 802.11 a/b/g/n/ac – Bluetooth® 5.0 – Interface: PCIe (WLAN)/ USB (Bluetooth®) – Form Factor: M.2 2230
<b>GNSS</b>	– Ublox Neo-M8N GPS/GLONASS (Interface: USB)
<b>Camera</b>	– Front Camera 1M
<b>2nd GLAN Card</b>	– Intel® I210 GLAN Card (mini PCIe full-size)
<b>Memory</b>	–8GB/16GB/32GB DDR4-2400/2666 SO-DIMM
<b>TPM 2.0</b>	– Available (On MB)
<b>Digital Mic</b>	– Embedded Digital Mic
<b>DC-in</b>	– 12~32V with BVA & Surge Protector – DC-in Conn.: Military 3 pin
<b>BVA &amp; Surge Protector Module</b>	– Available
<b>VGA (DB15)</b>	Trade-off with Optional Fischer VGA
<b>COM (DB9)</b>	– Default: RS232 (Rear Side), LPC interface – COM port card (RS232 x 2/RS422 x 2)
<b>Fischer Conn.</b>	Audio, VGA, 2nd GLAN, USB 2.0, RS232, RS422
<b>Wide Temp. -30°C ~ +60°C</b>	-30°C ~ +60°C *Heater and sensor placed in LCD
<b>Certifications</b>	– MIL-STD-461G (Ground Navy and Ground Army)
<b>External Vehicle Adapter</b>	– EVA 1275 – EVA19040
<b>Dock Under</b>	– DURS