

MilDef RS13



13.3" Small form factor laptop

There are three important factors when considering rugged mobile computers; weight, ruggedness and performance – The MilDef RS13 series excels in each area and keeps it into a slim design.

Without sacrificing any of its rugged performance for military applications, the MilDef RS13 packs all the performance needed, and more. With main features such as an Intel® Core™ i7-7600U CPU, Intel® HD graphics 620, removable SATA III SSD and up to 32 GB RAM, the user will have all the performance required in a highly rugged package that weighs only 3.2 kg including battery.

Despite its low weight and size, the MilDef RS13 is designed for extreme environments and is made to be used in the field. MIL-STD-810G and IP65 certification is standard.

Customizable

Are you looking for features and functions beyond the standard solutions offered by large commercial manufacturers? MilDef products are designed to enable customization to your specific program requirements, e.g. connectors, chassis modifications, mounting solutions, etc. Contact your nearest MilDef Sales Office and we will help you to find a solution that meets your requirements.

Guaranteed performance

All MilDef products come with comprehensive lifecycle sustainment support to ensure your equipment maintains peak performance for many missions to come. We also guarantee the availability of spare parts for 5 years after product end-of-life.

Features

- Intel® Core™ i7-7600U
- Up to 32 GB RAM
- 13.3" display
- Docking connector
- Wi-Fi, BT, & GPS (optional)
- TPM 2.0 (optional)
- Rugged Connectors (optional)



Technical Specification

CPU	Intel® Core™ i7-7600U
Display	13.3" FHD LCD (1920 x 1080) Brightness: 350 nits High Brightness: 800 nits optional
Keyboards	83-key w. Backlight (Membrane Type) Resistive Touchpad (Single touch)
Case	CNC milled Aluminium (Black or Green)
Software	
Operating system	Windows 10
Memory	
RAM	Up to 32 GB DDR4 2133 MHz
Storage	Removable 2.5" SATA III SSD
Graphics	
GPU	Intel® HD Graphics 620
Battery	
Battery	11.1 V / 6040 mAh Li-Polymer
Sound	
Audio	HD Audio
Security & Management	
TPM	TPM2.0 optional
Smart card	Smart Card reader optional
Interfaces	
Ethernet	1x Ethernet 1000Base-T 1x Additional Ethernet 1000Base-T optional
WiFi/Bluetooth	802.11 a/b/g/n/ac optional Bluetooth 5.0 optional
GPS	Ublox Neo-M8N GPS/GLONASS optional
USB	1x USB 3.1 Gen 1 (w. fast charging) 1x USB 3.1 Gen 1
Video out	1x Display port 1x VGA optional
Docking port	Yes
Speaker	Stereo Speakers
Audio	Yes optional
Mic	Digital Mic optional
Serial	1x COM* 1x Additional COM* optional

Technical Specification (cont.)

Size & Weight	
Dimensions with bumpers (W x D x H)	344 x 268 x 31.5 mm (13.54 x 10.55 x 1.24 Inches)
Weight	~ 2.5 kg (5.5 lbs)
Temperature Range	
Operational DC	-20°C to +60°C (-4°F to +140°F)
Extended temp:	-30°C to +60°C (-22°F to +140°F)
	optional
	Battery is charging between 0°C to +45°C (+32°F to +113°F)
Operational Battery	-20°C to +60°C (-4°F to +140°F)
Storage	-40°C to +71° (-40°F to +160°F)
Reliability	
MTBF (Ground Benign)	58 681 hours
MTTR	15.092 minutes
Power	
Power input	19 VDC 12- 32 VDC w. surge protector optional
Operating time	8 hours
Power consumption	50W (w/o battery charge / LCD 100% brightness)
AC Adapter	Please see the accessories section
Standards	
CE / FCC	Yes / Yes
REACH	Yes
Environment	MIL-STD-810G IP65
EMC/EMI	MIL-STD-461G Ground Navy MIL-STD-461G Ground Army optional
Warranty	
Warranty	5 years
Customization	
Need anything not included in the data sheet? MilDef products are designed to enable customization to your specific program requirements. Please contact your MilDef sales team member to find the best solution for your requirements.	

* Can be selected via BIOS RS232/RS422/RS485



Accessories & Options

AC/DC Adapters

AC Adapter 90W – Indoor Use	100 - 240V _{AC} , 50-60 Hz
ACS90 AC adapter 90W - Ruggedized (IP65, MIL-STD-810G, MIL-STD-461G & Wide temp)	100 - 240V _{AC} , 50-60 Hz or 400Hz

Different AC plugs available for different outlets. EMI improved adapters available

Mounting & Transport

Docking and mounting solutions	Please get in contact with your MilDef sales office for options
Bag / Backpack	Please get in contact with your MilDef sales office for options

Operating system

Windows 10



Environmental Specification

Low Air pressure

Low air pressure – Rapid Decompression MIL-STD-810G w/ change 1, Method 500.6, <i>Procedure I - Storage/Air Transport</i>	12.192 m / 40.000 ft
Low air pressure - Operating MIL-STD-810G w/ change 1, Method 500.6, <i>Procedure II - Operation/Air Carriage</i>	4.572 m / 15.000 ft

IP Class

IP	IP65
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Freeze/Thaw

Freeze/Thaw – Operational MIL-STD-810G w/ change 1, Method 524.1 <i>Procedure III - Rapid Temperature Change</i>	According to method and procedure
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Humidity

Humidity – Storage MIL-STD-810G w/ change 1, Method 507.6 <i>Procedure II (Aggravated) - Figure 507.6-7</i>	24-hours per cycle / Total of 10 cycles Between 30°C (86°F) and 60°C (140°F) with the relative humidity at 95% constant
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Rain

Rain – Operating MIL-STD-810G w/ change 1, Method 506.6 <i>Procedure II</i>	276kPa(40psig) 5-surfaces 40-minutes/surface
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Shock

Functional Shock - Operating MIL-STD-810G w/ change 1, Method 516.7 <i>Procedure I - Figure 516.7-10</i>	Table 516.7-IV 40g, 11ms, terminal-peak sawtooth shock pulse
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Salt Fog

Salt fog - Storage MIL-STD-810G w/ change 1, Method 509.6	5% +- 1% (by weight) 24 h wet + 24 h dry /cycle Total 2 cycles / 96 hours
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Temperature

Low temperature - Operating MIL-STD-810G w/ change 1, Method 502.6 <i>Procedure II – Operation</i>	-20°C / -4°F (optional -30°C / -22°F)
Low temperature - Storage MIL-STD-810G w/ change 1, Method 502.6 <i>Procedure I – Storage</i>	-40°C / -40°F
High temperature - Operating MIL-STD-810G w/ change 1, Method 501.6 <i>Procedure II – Operation</i>	60°C / 140°F
High temperature - Storage MIL-STD-810G w/ change 1, Method 501.6 <i>Procedure I – Storage</i>	71°C / 160°F
Temperature Shock – Operating MIL-STD-810G w/ change 1, Method 503.6 <i>Procedure I-A (Figure 503.6-1 Single shock 1/2 cycle)</i>	-20°C / -4°F to 60°C / 140°F
Temperature Shock – Storage MIL-STD-810G w/ change 1, Method 503.6 <i>Procedure I-C (Figure 503.6-3)</i>	-40°C / -40°F to 71°C / 160°F

Vibrations

Vibration - Operational	
A.	MIL-STD-810G w/ change 1, Method 514.7 Category 20 (Ground Vehicles-ground mobile) Table 514.7C-V (Composite wheeled vehicle vibration exposure), Figure 514.7C-4, 60-minutes/axis
B.	MIL-STD-810G w/ change 1, Method 514.7 Category 14 (Rotary wing aircraft-Helicopter) Table 514.7D-IIIa (OH-58AC), Figure 514.7D-3, 60-minutes/axis
C.	MIL-STD-810D, Method 514.6 Procedure I, Category 20 (Tracked Vehicle) Figure 514.6D-8, (M548) 60-minutes/axis

Vibration – Storage

MIL-STD-810G w/Change 1, Method 514.7 Category 24, General minimal integrity, 60-minutes/axis

EMC Specification

MIL-STD-461G

MIL-STD-461G, Method CE101	Conducted emissions, power leads 30Hz to 10kHz
MIL-STD-461G, Method CE102	Conducted emissions, power leads 10 kHz to 10 MHz
MIL-STD-461G, Method CS101	Conducted susceptibility, power leads 30 Hz to 150 kHz Curve #1
MIL-STD-461G, Method CS114	Conducted susceptibility, bulk cable injection 10kHz to 200MHz
MIL-STD-461G, Method CS115	Conducted susceptibility, bulk cable injection, impulse excitation 10KHz to 200MHz
MIL-STD-461G, Method CS116	Conducted susceptibility, damp sinusoidal transients, cables and power leads 10 kHz to 100 MHz
MIL-STD-461G, Method CS118	Personnel borne electrostatic discharge – All (ESD)
MIL-STD-461G, Method RE101	Radiated emissions, magnetic field 30Hz to 100kHz
MIL-STD-461G, Method RE102	Radiated emissions, electric field 10kHz to 18GHz
MIL-STD-461G, Method RS101	Radiated susceptibility, magnetic field 30Hz to 100kHz
MIL-STD-461G, Method RS103	Radiated susceptibility, electric field 2MHz~40GHz