MilDef RB14

17” Military-Rugged Workstation

The MilDef RB14 military-rugged workstation gives the rugged reliability expected from MilDef, plus a wide array of high-performance functionality in a portable platform for forward-deployed mission execution. Featuring a 17” HD screen, Intel Xeon processor, up to 128GB of RAM, RAID support, and nVIDIA GPU, the RB14 is ideal for viewing maps, Intel Fusion, GEOINT, video and imagery analysis, and other mission essential applications required at the tactical edge. In addition, with an informed range of use-case accessories and configuration possibilities, the RB14 enables the creation of a customized solution to meet all of your mission requirements. MilDef - designed for tactical military environments where reliability and performance are key.

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® Xeon® E-2176M
- Up to 128 GB RAM
- 17.3” display
- 1000 nit Full HD LCD
- 4x Removable SSD, RAID capable
- 2x Removable Battery
- Docking connector
- WiFi, BT, & GPS (optional)
- NVIDIA GPU (optional)
- Smart Card slot (optional)
- TPM 2.0 (optional)

MilDef RB14

Technical Specification

CPU	Intel® Xeon® E-2176M Processor
Display	17.3" FHD LCD (1920 x 1080) Brightness: 1000 nits (typical)
Keyboards	83-key w. Backlight (Membrane Type) Resistive Touchpad (Single touch)
Case	CNC milled Aluminium (Black or Green)
Software	
Operating system	Windows 10, Windows Server 2016* & Windows Server 2019*
Memory	
RAM	Up to 128 GB DDR4 2400 MHz (4x SO-DIMM) ECC / non ECC
Storage	Up to 4 x SATA III SSD Intel RAID 0, 1, 5, 10 support
Graphics	
GPU	Intel® UHD Graphics P630 Nvidia® GeForce® GTX1050 4GB o***ptional***
Battery	
Battery	2x 10,8V / 6900 mAh Li-Ion (standard)
Battery (extended temperature)	2x 10,8V / 5000mAh Li-Ion ***optional*** (needed for - 30°C option)
Sound	
Audio	HD Audio and Stereo Speakers
Security & Management	
TPM	TPM2.0 ***optional***
Smart card	Smart Card reader ***optional***
Intel vPro	Supported
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	2x USB 3.1 Gen 2 (w. fast charging) 2x USB 3.1 Gen 2
Video out	1x VGA 1x Display port
Docking port	Yes
Speaker	Stereo Speakers
Audio out / Line in	Stereo / Stereo
Mic	Mic in mono Digital Mic ***optional***
Serial	2x COM** 2x Additional COM* ***optional***

Technical Specification (cont.)

Size & Weight	
Dimensions with bumpers (W x D x H)	436 x 328 x 52 mm (17.2 x 12.9 x 2 inch)
Weight	~ 7 kg (15 lbs)
Temperature Range	
Operational DC	-20°C to +60°C (-4°F to +140°F) Battery is charging between 10°C to +45°C (+50°F to +113°F) -30°C*** to +60°C (-22°F*** to +140°F)
Operational DC (-30°C option)	Battery is charging between 0°C to +45°C (+32°F to +113°F)
Operational Battery (Standard Battery)	-20°C +60°C (-4°F to +140°F)
Operational Battery (Ext. Temp Battery)	-30°C + 60°C (-22°F to +140°F)
Storage	-40°C to +71° (-40°F to +160°F)
Reliability	
MTBF (Ground Benign)	51 896 h ours
MTTR	15.961 minutes
Power	
Power input	19 VDC 12- 32 VDC w. surge protector ***optional***
Operating time	5 hours Configuration: 64GB RAM, 128GB SSD, 100% brightness
Power consumption	Idle: 25W Full load: 100W (with battery charge)
AC Adapter	Please see the accessories section
Standards	
CE / FCC	Yes / Yes
REACH	Yes
Environment	MIL-STD-810H IP65
EMC/EMI	MIL-STD-461G Ground Navy *(Designed to meet)* 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.

** Radio frequency devices and Intel onboard graphics are not supported by Windows Server 2016 & 2019*

*** Can be selected via BIOS RS232/RS422/RS485*

****LCD Heater active up to -20C* / -4°F*

Accessories & Options	
AC/DC Adapters	
AC Adapter 200W (EU) – Indoor Use	110/220VAC (100~240 VAC), 50/60 Hz
AC Adapter 200W (US) – Indoor Use	110/220VAC (100~240 VAC), 50/60 Hz
AC Adapter 200W Ground Army – Indoor Use (EU)	110/220VAC (100~240 VAC), 50/60 Hz
AC Adapter 200W Ground Army – Indoor Use (US)	110/220VAC (100~240 VAC), 50/60 Hz
AC 150 – AC adapter 150W Ground Navy (IP65, MIL-STD-810G, MIL-STD-461F & Wide temp)	110/220VAC (90~264 VAC), 50/60 Hz or 400Hz
AC 150 – AC adapter 150W Ground Army (IP65, MIL-STD-810G, MIL-STD-461F & Wide temp)	110/220VAC (90~264 VAC), 50/60 Hz or 400Hz
Chargers	
Multi battery charger	Charger for 2x 10,8V batteries
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
Carrying Handle	Standard option.
Operating system	
Windows 10	
Windows Server 2016	
Windows Server 2019	

Environmental Specification

Low Air pressure	
Low air pressure – Rapid Decompression MIL-STD-810H, Method 500.6, *Procedure I - Storage/Air Transport*	12.192 m / 40.000 ft
Low air pressure - Operating MIL-STD-810H, Method 500.6, *Procedure II - Operation/Air Carriage*	4.572 m / 15.000 ft
IP Class	
IP	IP65
Freeze/Thaw	
Freeze/Thaw – Operational MIL-STD-810H, Method 524.1 Procedure III - Rapid Temperature Change	According to method and procedure
Humidity	
Humidity – Storage MIL-STD-810H, Method 507.6 Procedure II (Aggravated) - Figure 507.6-7	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
Rain	
Rain – Operating MIL-STD-810H, Method 506.6 *Procedure II*	276kPa(40psig) 5-surfaces 40-minutes/surface
Shock	
Functional Shock - Operating MIL-STD-810H, Method 516.8 Procedure I - Figure 516.8-IV	Table 516.7-IV Terminal-peak sawtooth shock pulse 40g, 11ms
Salt Fog	
Salt fog MIL-STD-810H Method 509.7	5 % +- 1 % (by weight) 24 h wet + 24 h dry /cycle Total 2 cycles / 96 hours
Temperature	
Low temperature - Operating MIL-STD-810HMethod 502.7 *Procedure II – Operation*	-20 °C / -4 °F (optional -30 °C / -22 °F)
Low temperature - Storage MIL-STD-810H Method 502.7 *Procedure I – Storage*	-40 °C / -40 °F
High temperature - Operating MIL-STD-810H Method 501.7 *Procedure II – Operation*	60 °C / 140 °F
High temperature - Storage MIL-STD-810H Method 501.7 *Procedure I – Storage*	71 °C / 160 °F
Temperature Shock – Non-Operating MIL-STD 810H Method 503.7 *Procedure I–C (Figure 503.7-3)*	-40°C / -40°F to 71°C / 160°F
Vibrations	
Vibration - Operational MIL-STD-810H, Method 514.8 *Category 20* - Ground Vehicles-ground mobile	Table 514.8C-VII Composite wheeled vehicle vibration exposure Figure 514.8C-6, 60-minutes/axis
Vibration Storage MIL-STD-810H, Method 514.8 *Category 24 - General minimal integrity*	60-minutes/axis

EMC Specification

MIL-STD-461G	
MIL-STD-461G, Method CE101	Conducted Emissions, Power Leads 30Hz to 150kHz
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	Bulk Cable Injection 10kHz to 200MHz
MIL-STD-461G, Method CS115	Conducted susceptibility, bulk cable injection, impulse excitation
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~18GHz