

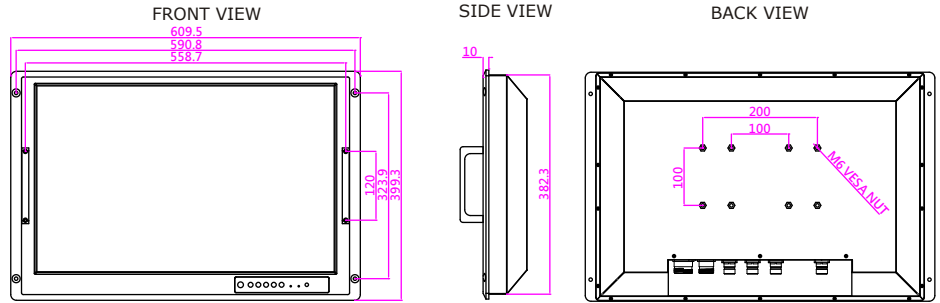
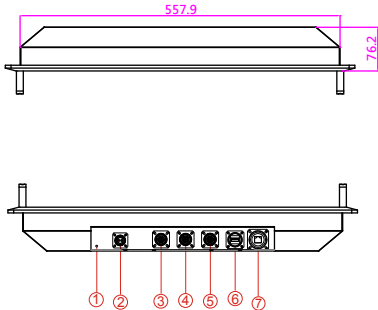
Military Grade 24" Rack Mount Panel PC (Intel® Core i7 Platform)

MODEL #: W24IH3S-MLS1-89

Mechanical Design



- 24" 1920x1200 High Resolution TFT-LCD
- Intel® Core i7 4650U 3.30GHz Processor
- Anti-Corrosion Housing / Fanless
- Compliant with MIL-STD-810F/G
- Flush Rack / Rack Mount Mechanical Design (9U)
- Convenient On-Screen Display Controls
- AC 110~240V Power input default / Isolation DC 9~36V Power input (Optional)
- Built-in Light Sensor for auto brightness control
- Military Grade Power Connector (MIL-DTL-38999/1 & 38999/3)



1. Ground
2. AC Power in (MIL-DTL-38999/1)
3. VGA (MIL-DTL-38999/3)
4. RS-232 (MIL-DTL-38999/3)
5. RS-232 (Optional)
6. USB 2.0 A Type (MIL-DTL-38999/3)
7. LAN (MIL-DTL-38999/3)

Measurements shown in mm.

- * Tolerance of all dimensions is shown as follow 0~30 mm ± 0.1 mm, 30~50 mm ± 0.15 mm, 50~120 mm ± 0.2 mm, above 120 mm ± 0.25 mm.
- * Note: this is a simplified drawing and some components are not marked in detail. Please contact our sales representative if you need further product information.

Display Specification

Characteristics :

- Resolutions : 1920 x 1200
- Brightness : 300 cd/m² (typ.)
- Contrast Ratio : 1000 : 1 (typ.)
- Viewing Angles : -89~89(H); -89~89(V)
- Max Colors : 16.7M (Colors)

System Specifications :

- Processor : Intel® Core i7 4650U 3.30GHz
- BIOS : AMI 16Mbit Flash
- Processor Graphics : Intel® HD Graphics 5000
- System Memory : 1 x SO-DIMM DDR3L 1600, Default 4GB
- Lan Controller : Intel® Ethernet Controller 1211-AT + Intel® Gigabit Ethernet PHY 1218-LM
- Storage : mSATA SSD, Default 64GB
- Expansion Slot : 1 x Mini PCIe slot (for USB module)

* A customized housing is needed if you would like to have the PCI expansion.

Power Specifications :

- Power Input : Default AC 110~240V in
Optional isolation DC 9~36V in

I/O Connectors :

- Plug & Play : VESA DDC 1/2B
- Back Panel I/O Port : 1 x Power Input (MIL-DTL-38999/1)
1 x VGA (MIL-DTL-38999/3)
1 x RS232 (MIL-DTL-38999/3)
1 x USB A 2.0 Type (MIL-DTL-38999/3)
1 x LAN (MIL-DTL-38999/3)

Environmental (MIL-STD 810F/G Compliance)

- Vibration : MIL-STD-810F/G Method 514.5
- Humidity : MIL-STD-810F/G Method 507.4
- Transit Drop : MIL-STD-810F/G Method 516.5

Environment Considerations :

- Operating Temperature : 0°C~50°C
- Storage Temperature : -10°C~60°C
- Operating Humidity : 95%RH ±3%

Environmental (MIL-STD 461E/F Compliance)

- RE : RE101 / RE102
- CE : CE 101 / CE102
Optional with EMI Glass / Touch
- RS : RS101 / RS103
- CS : CS 101 / CS 106 / CS 109 / CS 114 /
CS 115 / CS 116

* If you require external test report, Winmate will charge NRE fee.

Order Information (Optional):

- Touch : 5 Wires Resistive / 5 Wire Resistive with EMI Coating
- Glass : EMI Coating Glass (Default AR Glass)
- OS : Windows Embedded Standard 7
Windows Embedded 8 Standard
Windows Embedded 8.1 Industry
Windows 10 IoT Enterprise
- Storage : mSATA SSD up to 256GB
- RAM : SO-DIMM DDR3 1666, max up to 8GB
- Power : Optional isolation 9~36V DC in

Default Accessories

- 1 x MIL-DTL-38999/1 Power cord / Cable
- 1 x MIL-DTL-38999/3 VGA Cable
- 1 x MIL-DTL-38999/3 RS232 Cable
- 1 x Driver & Manual CD



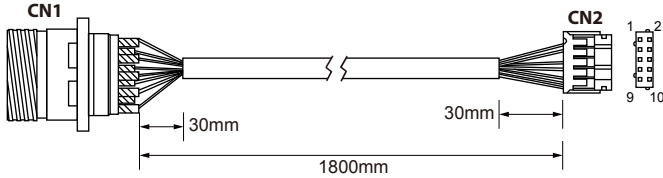
Note: All Specifications are subject to change without prior notice!

Revised Date: 03-Mar-2020 V2.2

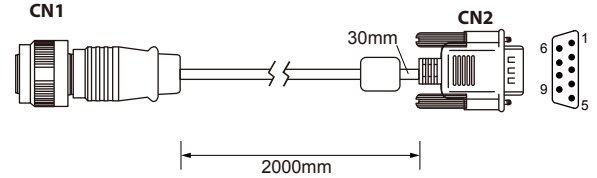
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MODEL #: W24IH3S-MLS1-89

MIL-DTL-38999/3 RS232 Cable



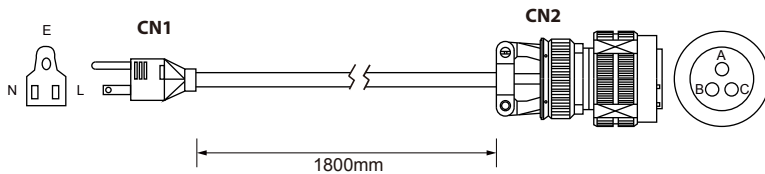
MIL-DTL-38999/3 VGA Cable



PIN NO.	SYMBOLS	COLOR		PIN NO.	SYMBOLS	COLOR	
CN1-1	R	Red	↔	CN2-4	R	Red	Coaxial cable
CN1-2	R-GND	Black	↔	CN2-9	GND	Black	
CN1-3	G	Green	↔	CN2-6	G	Green	
CN1-4	G-GND	Black	↔	CN2-9	GND	Black	Coaxial cable
CN1-5	B	Blue	↔	CN2-8	B	Blue	
CN1-6	B-GND	Black	↔	CN2-10	GND	Black	Coaxial cable
CN1-7	SDA	Yellow	↔	CN2-1	SDA	Yellow	
CN1-8	HS	Orange	↔	CN2-5	HS	Orange	
CN1-9	VS	White	↔	CN2-7	VS	White	
CN1-10	SCL	Brown	↔	CN2-3	SCL	Brown	

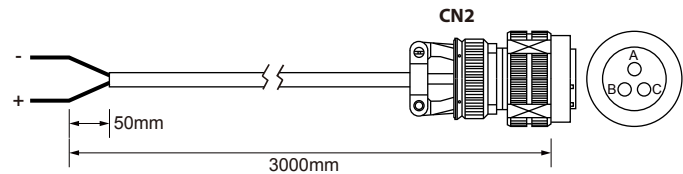
PIN NO.	SYMBOLS	COLOR		PIN NO.	SYMBOLS	COLOR	
CN1-1	DCD	Green	↔	CN2-1	DCD	Green	Braid
CN1-2	DSR	Brown	↔	CN2-6	DSR	Brown	
CN1-3	RXD	Red	↔	CN2-2	RXD	Red	Braid
CN1-4	RTS	Orange	↔	CN2-7	RTS	Orange	
CN1-5	TXD	Blue	↔	CN2-3	TXD	Blue	Braid
CN1-6	CTS	White	↔	CN2-8	CTS	White	
CN1-7	DTR	Purple	↔	CN2-4	DTR	Purple	Braid
CN1-8	RI	Yellow	↔	CN2-9	RI	Yellow	
CN1-9	GND	Black	↔	CN2-5	GND	Black	Braid
			↔				

MIL-DTL-38999/1 AC Power Cable (For US)



PIN NO.	SYMBOLS	COLOR		PIN NO.	SYMBOLS	COLOR	
CN1-1	N	White	↔	CN2-1	A	White	
CN1-2	L	Black	↔	CN2-2	B	Black	
CN1-3	E	Green	↔	CN2-3	C	Green	

MIL-DTL-38999/1 DC Power cable (optional)



PIN NO.	SYMBOLS	COLO		PIN NO.	SYMBOLS	COLOR	
OPEN	VCC+	White	↔	CN2-A	VCC+	White	
OPEN	VCC-	Black	↔	CN2-B	VCC-	Black	