



## SONOVE M2 Maritime PC Box





- ✓ Designed for Maritime Applications
- ✓ Box Sizes: M, L
- ✓ Serial: Optional up to 4 x COM (RS232, RS422/485)
- ✓ USB: Optional up to 9 x USB
- ✓ CPU: Up to 11th Generation
- ✓ „Made in Germany“
- ✓ Certifications: DNV, EU RO MR, Tested according to EN 60945

### Sizes

M2-PC Box M <sup>(1)</sup>	317 x 253 x 58 mm (Length x Width x Height)
M2-PC Box L <sup>(1)</sup>	390 x 253 x 58 mm (Length x Width x Height)

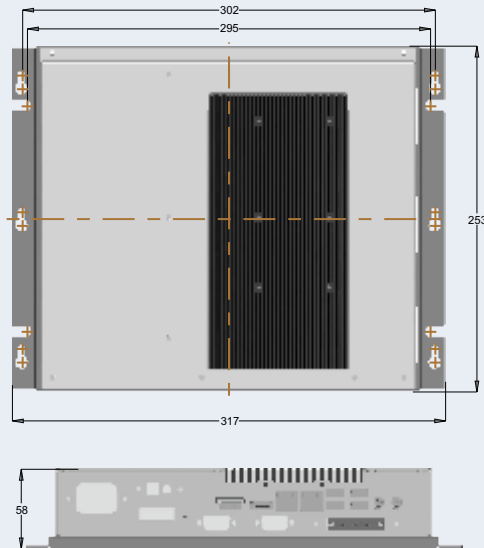
### Performance

CPU	Up to 11th Generation Intel® Core™ Processors
Memory	Up to 64 GB RAM
Storage	Up to 2 x 2 TB (RAID)
Graphics	Up to Intel® Iris® Xe Graphics

<sup>(1)</sup> Available Q3/2022, Type Approval in progress

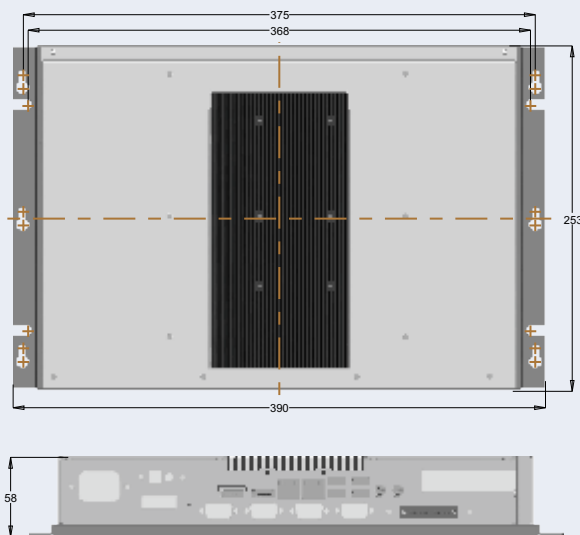
## Mounting Options

### Size: M



- ✓ 317 x 253 x 58 mm (Length x Width x Height)
- ✓ Black, RAL 9005 powder coated
- ✓ 6 adjustable holes

### Size: L

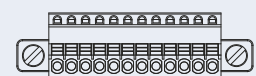


- ✓ 390 x 253 x 58 mm (Length x Width x Height)
- ✓ Black, RAL 9005 powder coated
- ✓ 6 adjustable holes
- ✓ 1 x PCIe slot (low profile)

## M2 PC Remote Control Interface

- ✓ RS 232/485/422 for Remote Control
- ✓ Internal Buzzer
- ✓ Buzzer Control IN and Relais OUT for External Buzzer
- ✓ Analog OUT for Multi-Color Status LED

- ✓ Screwless  
Cable Entry Plug



## Technical Data

### 6th Generation Intel® Core™ Processors

<b>System</b>	Processor	<b>6th Generation Intel® Core™ Processors</b> Intel® Core™ i7-6600U, Dual Core, 4M Cache, 2.60 GHz up to 3.40 GHz Intel® Core™ i5-6300U, Dual Core, 4M Cache, 2.40 GHz up to 3.00 GHz	
	Memory	Up to 16GB, Dual Channel DDR3L 1600MHz	
	Storage	1 x mSATA SSD up to 1TB 2 x SSD up to 2TB RAID 0/1/5	
<b>Graphics</b>	Controller	Intel® HD Graphics 520	
	Feature	OpenGL 4.4, DirectX 12, OpenCL 2.1 HW Decode: AVC/H264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8/9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9	
	Displays	Triple Displays; Internal Display + 1 x DP + 1 x DP++	
<b>Expansion</b>	Interface	1 x PCIe x4 (Gen3) Low Profile	
<b>Rear I/O</b>	Ethernet	2 x GbE (RJ-45)	Optional up to 6 x GbE
	USB	4 x USB 3.0	Optional up to 8 x USB
	Display	1 x DP, 1 x DP++	
	Audio	1 x Line-out, 1 x Mic-in	
	Serial		Optional up to 4 x COM (RS232, RS422/485)
<b>Optional (M2 CB)</b>	Controller	M2 Controller Board	
	Feature	1 x Internal Alarm-Buzzer 1 x Out for ext. Alarm-Buzzer 1 x Potentiometer In, 2 x Push Button In 2 x Out for Status LED	
<b>Watchdog Timer</b>	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>Security</b>	TPM	dTPM 2.0 (available upon request)	
<b>Power Options</b>	DC	24 VDC	
	AC	230/115 VAC (50/60Hz)	
	DCAC	24 VDC + 230/115 VAC (redundant)	
<b>OS Support</b>		Windows 7 Windows 8.1 Windows 10 Linux	
<b>Environment</b>	Operating Temp.	-15 to +55°C	
	Storage Temp.	-20 to +70°C	
	IP Rating	IP20	
<b>Type Approval</b>	Type Approval in progress, expected Q3/2022	DNV EU RO MR, Tested according to EN 60945	

Options and additional features are configurable. Contact your Sonove sales representative for further information.  
Depending on the product configuration, interfaces or slot brackets may differ from the figures in this document.

## Technical Data

### 7th Generation Intel® Core™ Processors

<b>System</b>	Processor	<b>7th Generation Intel® Core™ Processors</b> Intel® Core™ i7-7600U, 2 Cores, 4M Cache, 2.80 GHz up to 3.90 GHz Intel® Core™ i5-7300U, 2 Cores, 4M Cache, 2.60 GHz up to 3.50 GHz Intel® Core™ i3-7100U, 2 Cores, 4M Cache, 2.40 GHz Intel® Celeron® 3965U, 2 Cores, 2M Cache, 2.20 GHz	
	Memory	Up to 32GB, Dual Channel DDR4 1866/2133MHz	
	Storage	1 x M.2 SSD up to 1TB or SATA3.0/PCIe Gen3 x2 NVMe 2 x SSD up to 2TB RAID 0/1/5	
<b>Graphics</b>	Controller	Intel® HD Graphics GT Series	
	Feature	OpenGL 4.4, DirectX 12, OpenCL 2.1 HW Decode: AVC/H264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265,VP8,VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9	
	Displays	Triple Displays; Internal Display + 2 x DP++	
<b>Expansion</b>	Interface	1 x PCIe x4 (Gen 3) Low Profile	
<b>Rear I/O</b>	Ethernet	2 x GbE (RJ-45)	Optional up to 6 x GbE
	USB	4 x USB 3.0	Optional up to 8 x USB
	Display	2 x DP++	
	Audio	1 x Line-out, 1 x Mic-in	
	Serial		Optional up to 4 x COM (RS232, RS422/485)
<b>Optional (M2 CB)</b>	Controller	M2 Controller Board	
	Feature	1 x Internal Alarm-Buzzer 1 x Out for ext. Alarm-Buzzer 1 x Potentiometer In, 2 x Push Button In 2 x Out for Status LED	
<b>Watchdog Timer</b>	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>Security</b>	TPM	TPM 2.0 (Opt.)	
<b>Power Options</b>	DC	24 VDC	
	AC	230/115 VAC (50/60Hz)	
	DCAC	24 VDC + 230/115 VAC (redundant)	
<b>OS Support</b>		Windows 10 Linux	
<b>Environment</b>	Operating Temp.	-15 to +55°C	
	Storage Temp.	-20 to +70°C	
	IP Rating	IP20	
<b>Type Approval</b>	Type Approval in progress, expected Q3/2022	DNV EU RO MR, Tested according to EN 60945	

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## Technical Data

### 11th Generation Intel® Core™ Processors

<b>System</b>	Processor	<b>11th Generation Intel® Core™ Processors</b> Intel® Core™ i7-1185GRE, 4 Cores, 8M Cache, 1.80 GHz up to 4.40 GHz Intel® Core™ i5-1145GRE, 4 Cores, 8M Cache, 1.50 GHz up to 4.10 GHz	
	Memory	Up to 64GB, Dual Channel DDR4 up to 3200MHz	
	Storage	1 x M.2 SSD up to 1TB or SATA3.0/PCIe Gen3 x4 NVMe 2 x SSD up to 2TB RAID 0/1/5	
<b>Graphics</b>	Controller	Intel® Iris® Xe Graphics for i7/i5 Processors	
	Feature	OpenGL 4.5, DirectX 12, OpenCL 2.1 HW Decode: WMV9, AVC/H264, JPEG/MJPEG, HEVC/H265, VP9, AV1 HW Encode: AVC/H264, JPEG, HEVC/H265, VP9	
	Displays	Triple Displays; Internal Display + 1 x HDMI + 1 x DP++	
<b>Expansion</b>	Interface	1 x PCIe x4 (Gen3 x4) Low Profile	
<b>Rear I/O</b>	Ethernet	3 x GbE (RJ-45)	Optional up to 7 x GbE
	USB	4 x USB 3.1 Gen2 (Type-A) 1 x USB 4.0 Type-C (Thunderbolt 3) (Support USB 3.1 Gen2, DP 1.4)	Optional up to 9 x USB
	Display	1 x DP++, 1 x HDMI	
	Audio		Optional 1 x Line-out, 1 x Mic-in
	Serial		Optional up to 4 x COM (RS232, RS422/485)
<b>Optional (M2 CB)</b>	Controller	M2 Controller Board	
	Feature	1 x Internal Alarm-Buzzer 1 x Out for ext. Alarm-Buzzer 1 x Potentiometer In, 2 x Push Button In 2 x Out for Status LED	
<b>Watchdog Timer</b>	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>Security</b>	TPM	dTPM 2.0/ftPM (Opt.)	
<b>Power Options</b>	DC	24 VDC	
	AC	230/115 VAC (50/60Hz)	
	DCAC	24 VDC + 230/115 VAC (redundant)	
<b>OS Support</b>		Windows 10 Linux	
<b>Environment</b>	Operating Temp.	-15 to +55°C	
	Storage Temp.	-20 to +70°C	
	IP Rating	IP20	
<b>Type Approval</b>	Type Approval in progress, expected Q3/2022	DNV EU RO MR, Tested according to EN 60945	

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## SONOVE M2 Your PC Box for Maritime Applications

### Examples of M2 PC Box standard systems with order information

<b>M2-PC Box L</b>		
M2-PC-L i7(K) DC	415.012.yyyy	PC Box, Intel® Core™ i7-7600U, 8 GB RAM, 128 GB SSD, 24VDC, Windows® 10 IoT Enterprise
M2-PC-L i5(K) AC	415.021.yyyy	PC Box, Intel® Core™ i5-7300U, 16 GB RAM, 2 x 512 GB SSD, 115/230VAC, Windows® 10 IoT Enterprise
M2-PC-L i5(S) DCAC	415.033.yyyy	PC Box, Intel® Core™ i5-6300U, 32 GB RAM, 128 GB SSD, Redundant 24VDC and 115/230VAC, Windows® 7 Professional for Embedded Systems

<b>M2-PC Box M</b>		
M2-PC-M i7(K) DC	416.012.yyyy	PC Box, Intel® Core™ i7-7600U, 16 GB RAM, 512 GB SSD, 24VDC, Windows® 10 IoT Enterprise
M2-PC-M i5(K) AC	416.021.yyyy	PC Box, Intel® Core™ i5-7300U, 8 GB RAM, 128 GB SSD, 115/230VAC, Windows® 10 IoT Enterprise
M2-PC-M i5(K) DCAC	416.023.yyyy	PC Box, Intel® Core™ i5-7300U, 8 GB RAM, 128 GB SSD, Redundant 24VDC and 115/230VAC, Windows® 10 IoT Enterprise

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