

# EC700-ADN/ EC710-ADN

Intel® Processor N-series/Atom® Processor X Series  
Fanless Embedded System



## KEY FEATURES



### On Board OOB built-in

Hardware status remote control&monitor, BIOS remote setup/update, OS remote recovery, Open-SSH/ UEFI Shell/In-Band Windows support



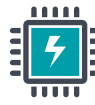
### Slim and Fanless

Slim and fanless design for limited-space condition



### Intel TCC within the system

Supported by X series CPU and TSN standard up to 2.5GbE (Opt.)



### On Board DDR5 & eMMC Support

LPDDR5 4800 MHz memory down eMMC module –Easy maintenance



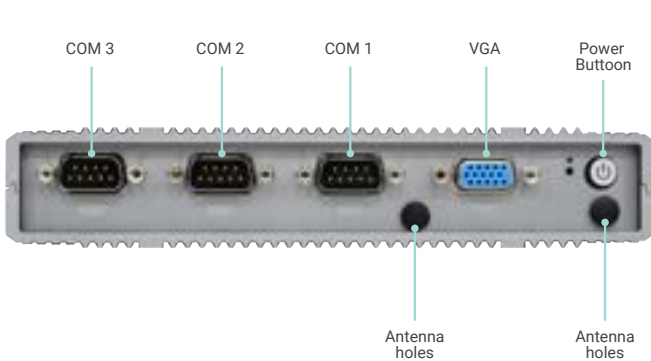
### Up to Quad Display Support

Support via HDMI/USB-C/VGA, Quad display support by Dev

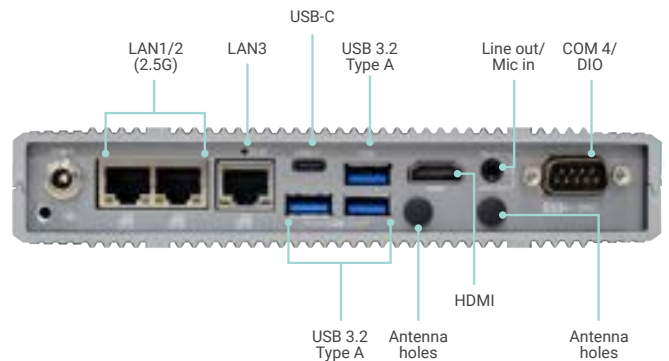


## PANEL: EC700-ADN

System Height = 33mm



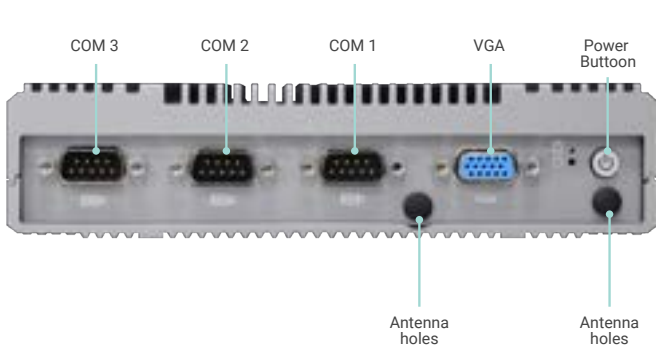
Front View



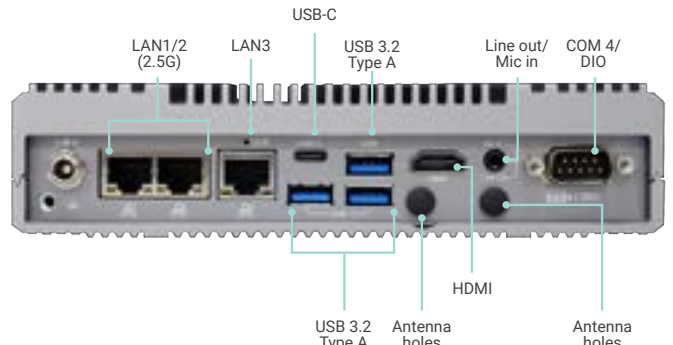
Rear View

## PANEL: EC710-ADN

System Height = 43mm

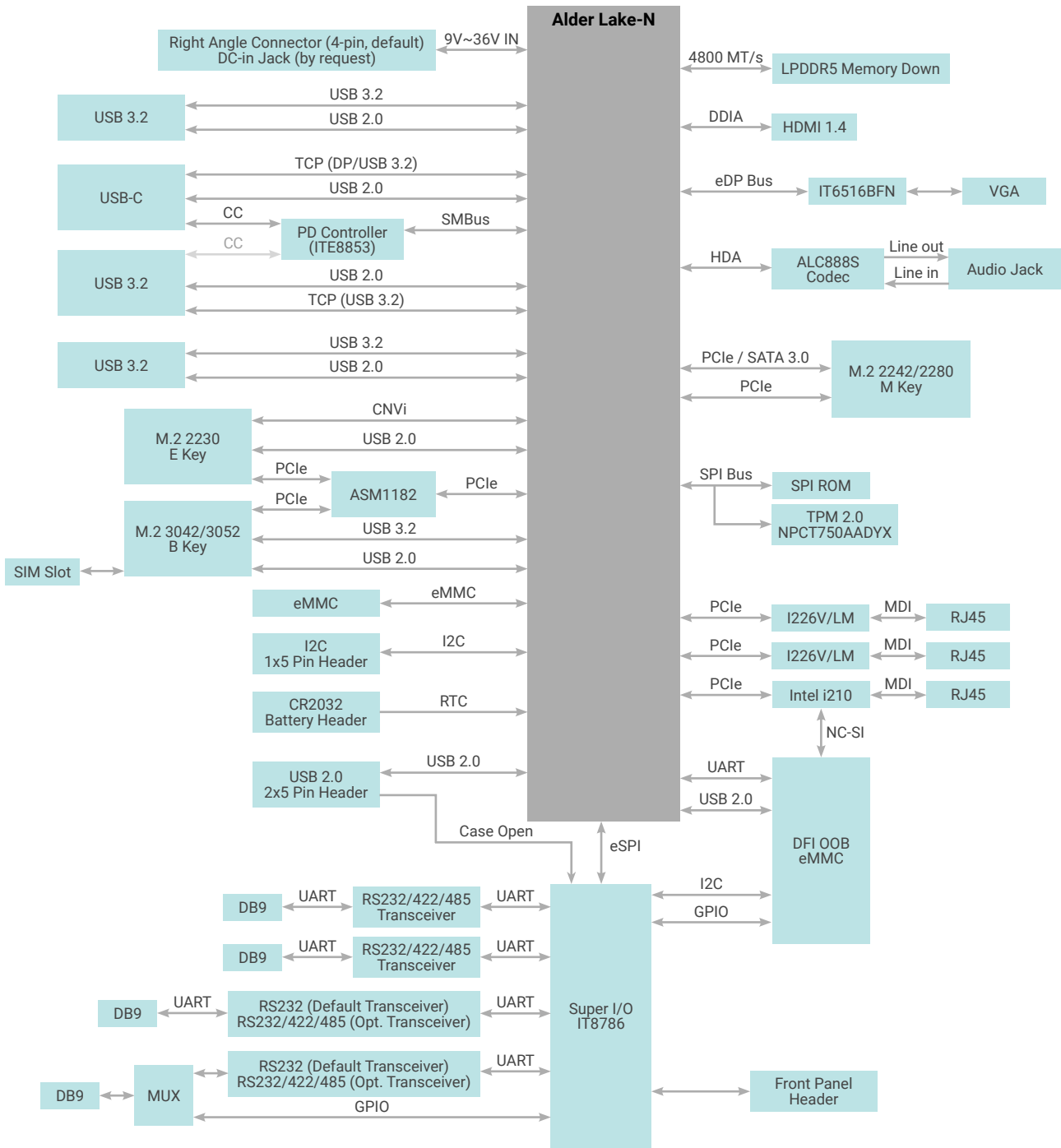


Front View



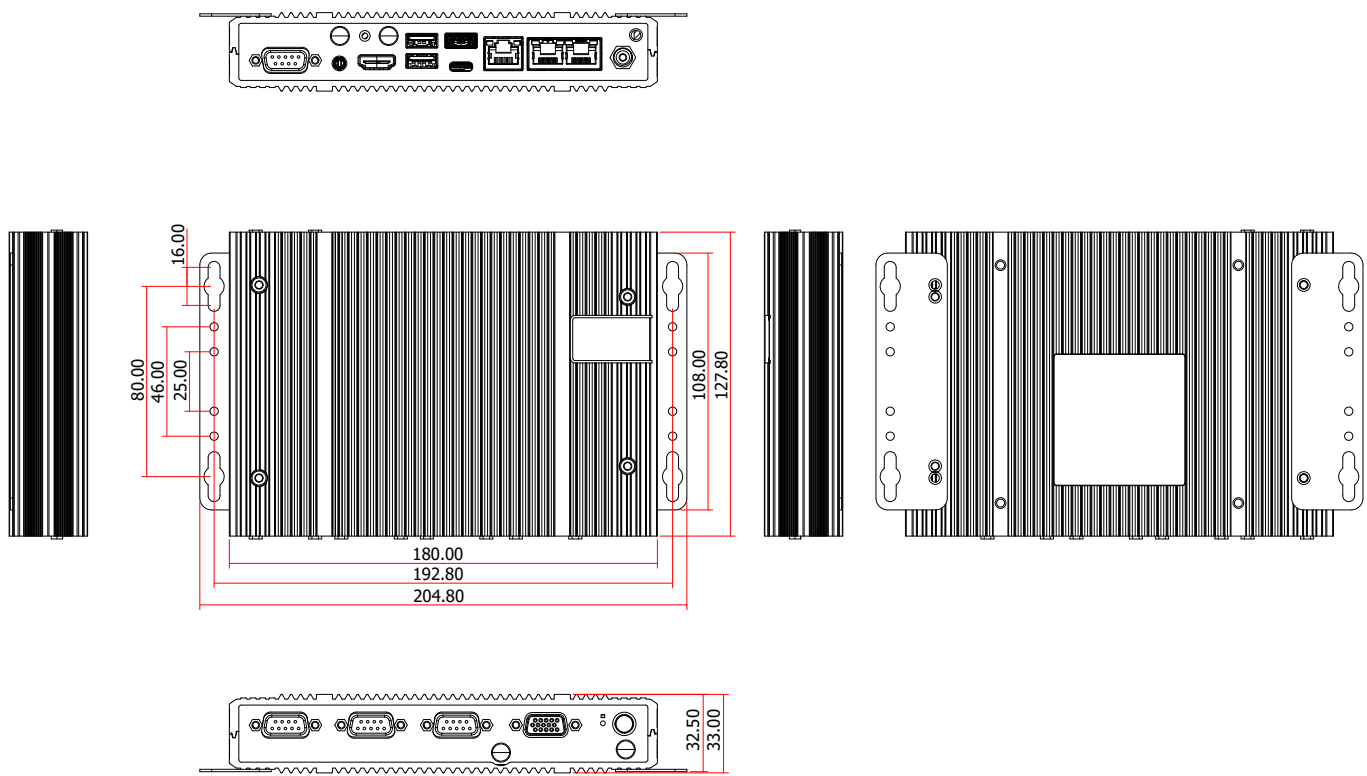
Rear View

# BLOCK DIAGRAM



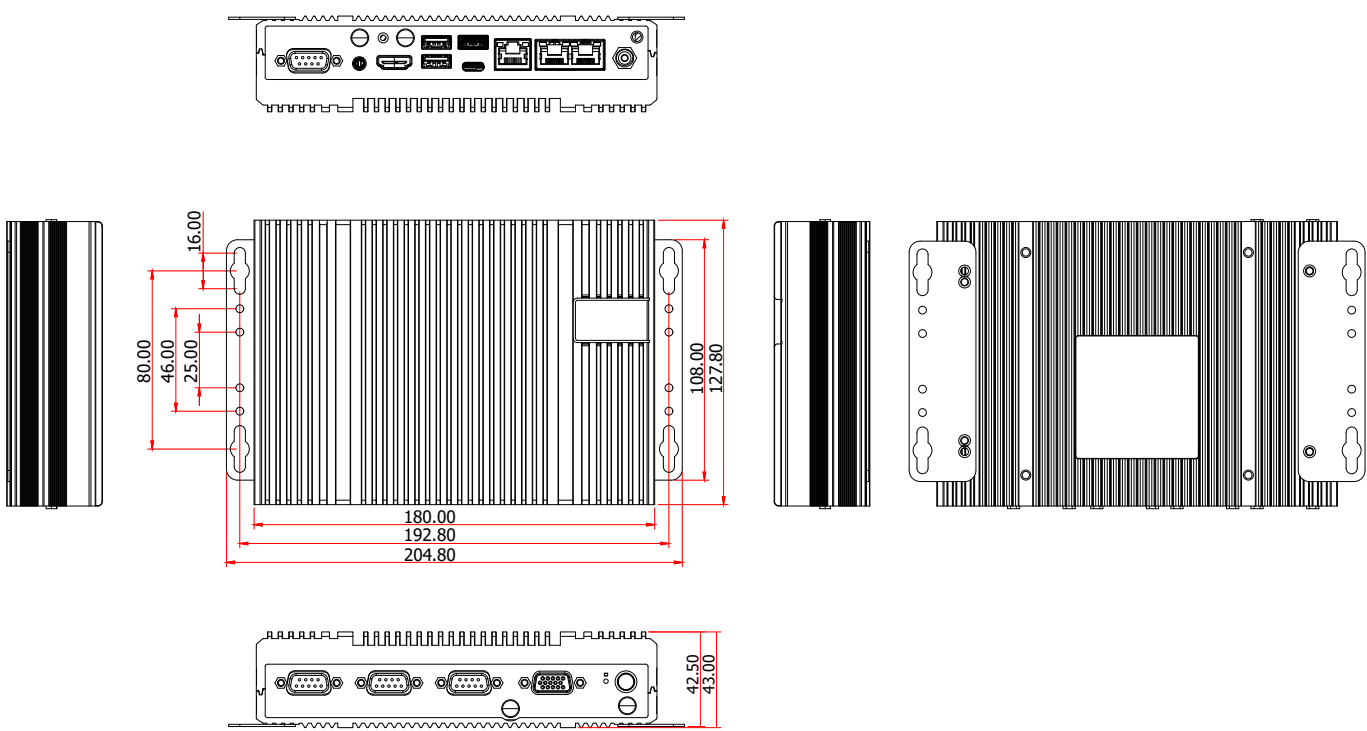
## DIMENSIONS: EC700-ADN

System Height = 33mm



## DIMENSIONS: EC710-ADN

System Height = 43mm



## SPECIFICATION

Model Name		EC700-ADN	EC710-ADN
SYSTEM	Processor	Intel Alder Lake-N Series Intel PC Client Series Intel® Processor N50 2 Cores, 1.0GHz to 3.4 GHz Intel® Processor N97 4 Cores, 2.0GHz to 2.9 GHz Intel® Processor N200 4 Cores, 1.0GHz to 3.2 GHz Intel® Embedded Series (Support TCC) Intel® Atom® X7211E 2 Cores, 1.0GHz to 2.9 GHz Intel® Atom® X7213E 2 Cores, 1.7GHz to 2.9 GHz Intel® Atom® X7425E 4 Cores, 1.5GHz to 2.7 GHz *TCC default disable in BIOS setting	Intel Alder Lake-N Series Intel PC Client Series Intel® Core™ i3-N305 8 Cores, 1.0GHz to 3.0 GHz (TDP 15W by conditional support)
	Memory	8GB/16GB LPDDR5 4800 Memory down	8GB/16GB LPDDR5 4800 Memory down
	BIOS	AMI SPI 256Mbit (supports UEFI boot only)	AMI SPI 256Mbit (supports UEFI boot only)
GRAPHICS	Controller	Intel® UHD Graphics	Intel® UHD Graphics
	Feature	<b>Execution Units:</b> Up to 32 EUs <b>3D API:</b> Open GL 4.6, DirectX12, Vulkan 1.2 (Windows) Mesa 3D, OpenGL 4.6, Vulkan 1.2 (Linux) <b>Precision:</b> FP32, FP16, INT8 <b>Compute:</b> OpenCL 3.0	<b>Execution Units:</b> Up to 32 EUs <b>3D API:</b> Open GL 4.6, DirectX12, Vulkan 1.2 (Windows) Mesa 3D, OpenGL 4.6, Vulkan 1.2 (Linux) <b>Precision:</b> FP32, FP16, INT8 <b>Compute:</b> OpenCL 3.0
	Display	1 x VGA 1 x HDMI 1.4 1 x USB-C (DP1.2 Alt. Mode)	1 x VGA 1 x HDMI 1.4 1 x USB-C (DP1.2 Alt. Mode)
STORAGE	Internal	1 x M.2 2280 M key (PCIe Gen3/SATA) *A heatsink & a thermal pad are required.	1 x M.2 2280 M key (PCIe Gen3/SATA) *A heatsink & a thermal pad are required.
	eMMC	eMMC module insert available <b>750-EC7004-700G: 64GB EMMC (default)</b>	eMMC module insert available
EXPANSION	Interface	1 x M.2 2230 E key (USB 2.0/PCIe, support CNVi) 1 x M.2 3042/3052 B key: USB3.0/USB2.0/ PCIe with SIM 1 x M.2 2242/2280 M key (*PCIe/SATA)	1 x M.2 2230 E key (USB 2.0/PCIe, support CNVi) 1 x M.2 3042/3052 B key: USB3.0/USB2.0/ PCIe with SIM 1 x M.2 2242/2280 M key (*PCIe/SATA)
AUDIO	Audio Codec	REALTEK ALC888S	REALTEK ALC888S
ETHERNET	Controller	2 x Intel Ethernet controller i226 2.5GbE (TSN support by project) 1 x Intel Ethernet controller i210 GbE (support DFI OOB function)	2 x Intel Ethernet controller i226 2.5GbE (TSN support by project) 1 x Intel Ethernet controller i210 GbE (support DFI OOB function)
LED	Indicators	1 x Power LED 1 x Storage LED	1 x Power LED 1 x Storage LED
FRONT I/O	Serial	<b>COM 1/2:</b> RS232/422/485 <b>COM 3:</b> RS232	<b>COM 1/2:</b> RS232/422/485 <b>COM 3:</b> RS232
	Antenna Hole	2 x antenna holes	2 x antenna holes
	Display	1 x VGA	1 x VGA
	Button	1 x Power Button 1 x Reset Button	1 x Power Button 1 x Reset Button
REAR I/O	Ethernet	2 x 2.5GbE RJ45 1 x GbE RJ45 (support DFI OOB)	2 x 2.5GbE RJ45 1 x GbE RJ45 (support DFI OOB)
	Serial	<b>COM 4:</b> RS232/DIO	<b>COM 4:</b> RS232/DIO
	USB	3 x USB 3.2 type A 1 x USB-C 3.2	3 x USB 3.2 type A 1 x USB-C 3.2
	Display	1 x HDMI	1 x HDMI
	Audio	1 x 3.5mm Line out/Mic In	1 x 3.5mm Line out/Mic In
	Antenna Hole	2 x antenna holes	2 x antenna holes
	Storage	1 x MicroSD (Opt.)	1 x MicroSD (Opt.)
WATCHDOG TIMER	Output & Interval	System reset, programmable via software from 1 to 255 seconds	System reset, programmable via software from 1 to 255 seconds
SECURITY	TPM	TPM 2.0 Support	TPM 2.0 Support
POWER	Type	Wide range 9~36VDC	Wide range 9~36VDC
	RTC Battery	RTC battery CR2032	RTC battery CR2032
	Connector	2.5mm DC Jack	2.5mm DC Jack
OS SUPPORT	Microsoft	Windows® 11 IoT Enterprise	Windows® 11 IoT Enterprise
	Linux	Ubuntu 22.04	Ubuntu 22.04
ENVIRONMENT	Operating Temperature	-5 to 60°C with 0.2m/s air flow	-5 to 60°C with 0.2m/s air flow
	Storage Temperature	-40 to 85°C	-40 to 85°C
	Relative Humidity	10 to 90% RH (non-condensing)	10 to 90% RH (non-condensing)

\*PCIe: PCIe2 support by project

## SPECIFICATION

Model Name		EC700-ADN	EC710-ADN
MECHANICAL	Construction	Aluminum + Metal	Aluminum + Metal
	Mounting	Wall mount/VESA Mount/DIN-Rail	Wall mount/VESA Mount/DIN-Rail
	Dimensions (W x H x D)	180 x 33 x 127.8 mm	180 x 43 x 127.8 mm
	Weight	TBD	TBD
STANDARDS AND CERTIFICATIONS	Shock (During Operation)	30G, IEC-60068-2-27 MIL-STD-810G	30G, IEC-60068-2-27 MIL-STD-810G
	Vibration (During Operation)	3 Grms, IEC 60068-2-64 MIL-STD-810G	3 Grms, IEC 60068-2-64 MIL-STD-810G
	Certifications	CE, FCC, RoHS, UKCA	CE, FCC, RoHS, UKCA

## ORDERING INFORMATION

Model	Part Number	Sys Height	CPU	Mry. Down	Operating Temp.	I/O			Display	Expansion	DFI OOB
						USB	LAN	Serial			
EC700-ADN	750-EC7004-000G	33mm	X7425E	16GB	-5 to 60°C	3 USB-A 1 USB-C	2 2.5GbE 1 GbE	2 RS232/422/485 1 RS232 1 RS232/DIO	• 1 HDMI • 1 VGA • 1 DP 1.2 Alt. Mode via USB-C	• M.2 M key: PCIe/SATA (auto detect)	Yes
	750-EC7004-100G		X7211E	8GB		3 USB-A 1 USB-C			• 1 HDMI • 1 VGA • 1 DP 1.2 Alt. Mode via USB-C	• M.2 B Key: USB3.0/ USB2.0/ PCIe	Yes
	750-EC7004-700G (with 64GB EMMC)		N97	4GB		4 USB-A			• 1 HDMI • 1 VGA	• M.2 E Key: USB2.0/PCIe	N/A

\*One more display output via USB-C by Opt.

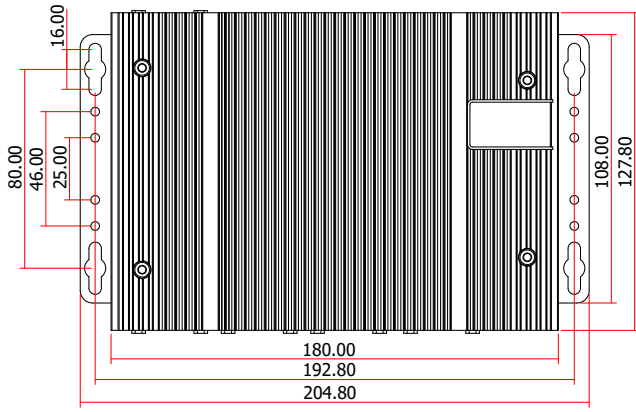
## OPTIONAL ITEMS

Optional Items	Part Number	Description
Adapter	671-106012-000G	60W 12V inlet C14, locable DC Jack 5.5/2.5mm, cable length 1500mm
Power Cord	332-700010-201G	Power Cord US 3pin 1830mm Length
	A81-004003-000G	Power Cord EU 2pin 1830mm Length
	A81-000001-000G	Power Cord China 3pin 1830mm Length
	A81-000046-000G	Power Cord JP 3pin 1830mm length (with DFI PSE logo)
Mount Kits	761-EC7004-000G	EC700-ADN Din Rail Kit for 33mm height chassis
	761-EC7004-100G	EC700-ADN/EC710-ADN Wall mount Kit
	761-EC7004-200G	EC700-ADN/EC710-ADN VESA mount Kit
	761-EC7004-300G	EC710-ADN Din Rail Kit for 43mm height chassis
EMMC module	774-EMMCBD1-300G	EMMC Board 64GB, -25°C ~ +85°C
	774-EMMCBD1-400G	EMMC Board 128GB, -25°C ~ +85°C

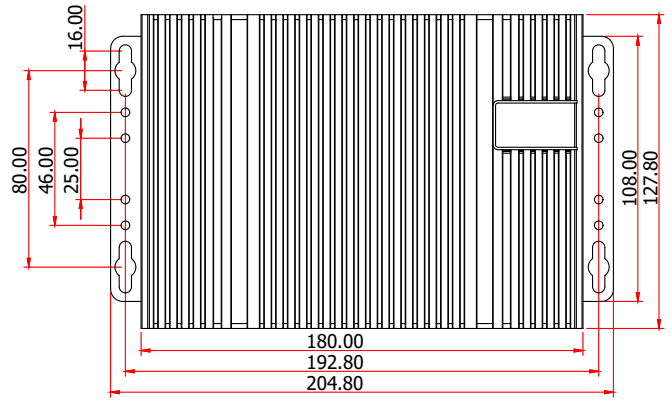
## PACKING LIST

• 1 System unit

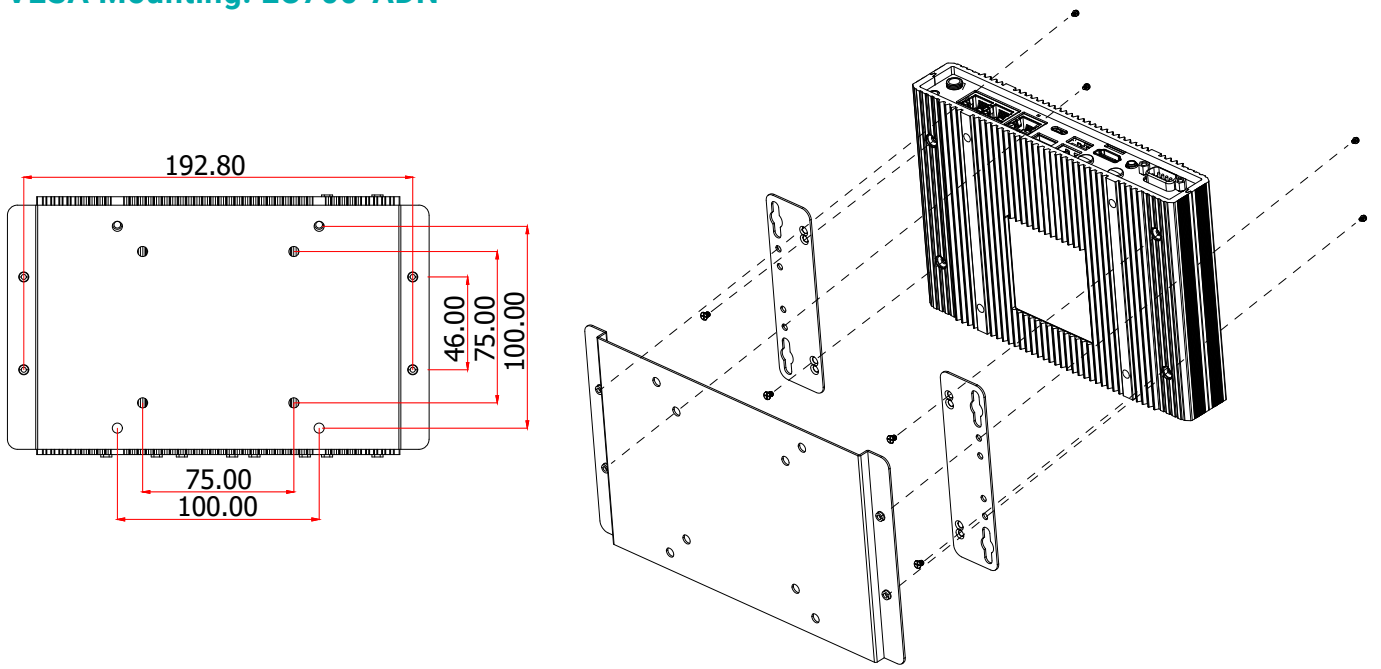
### Wall Mounting: EC700-ADN



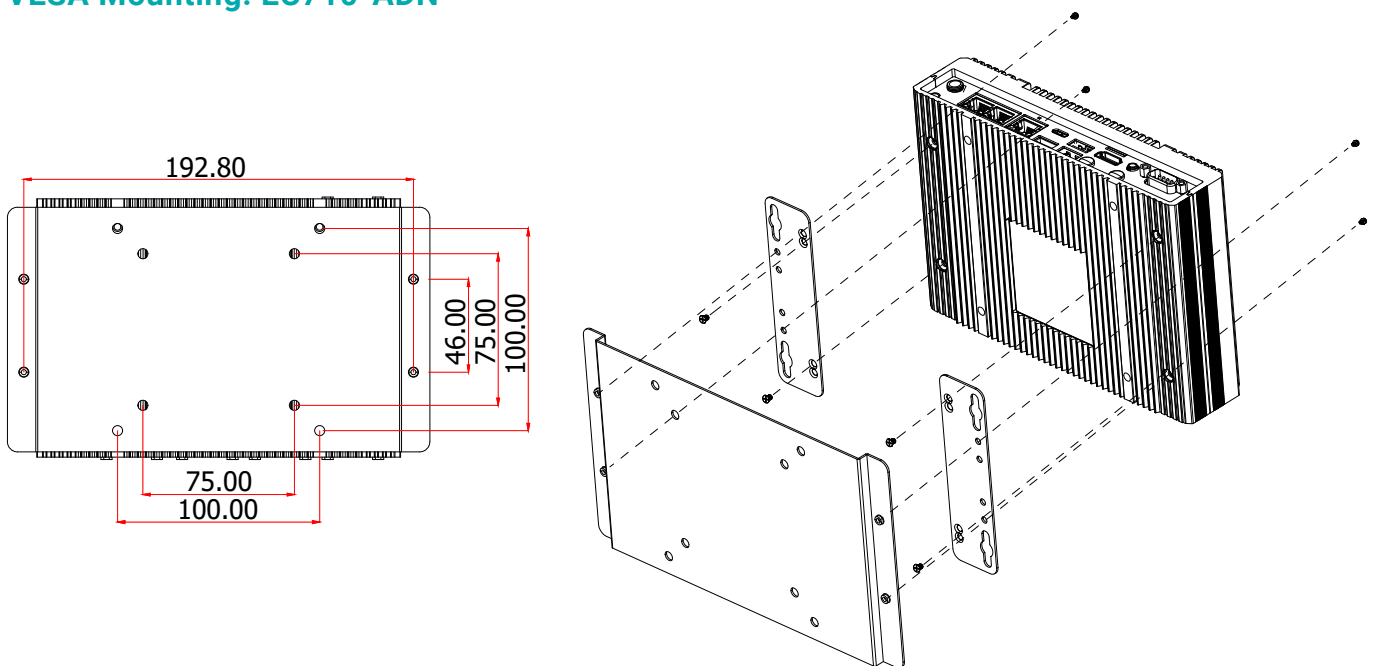
### Wall Mounting: EC710-ADN



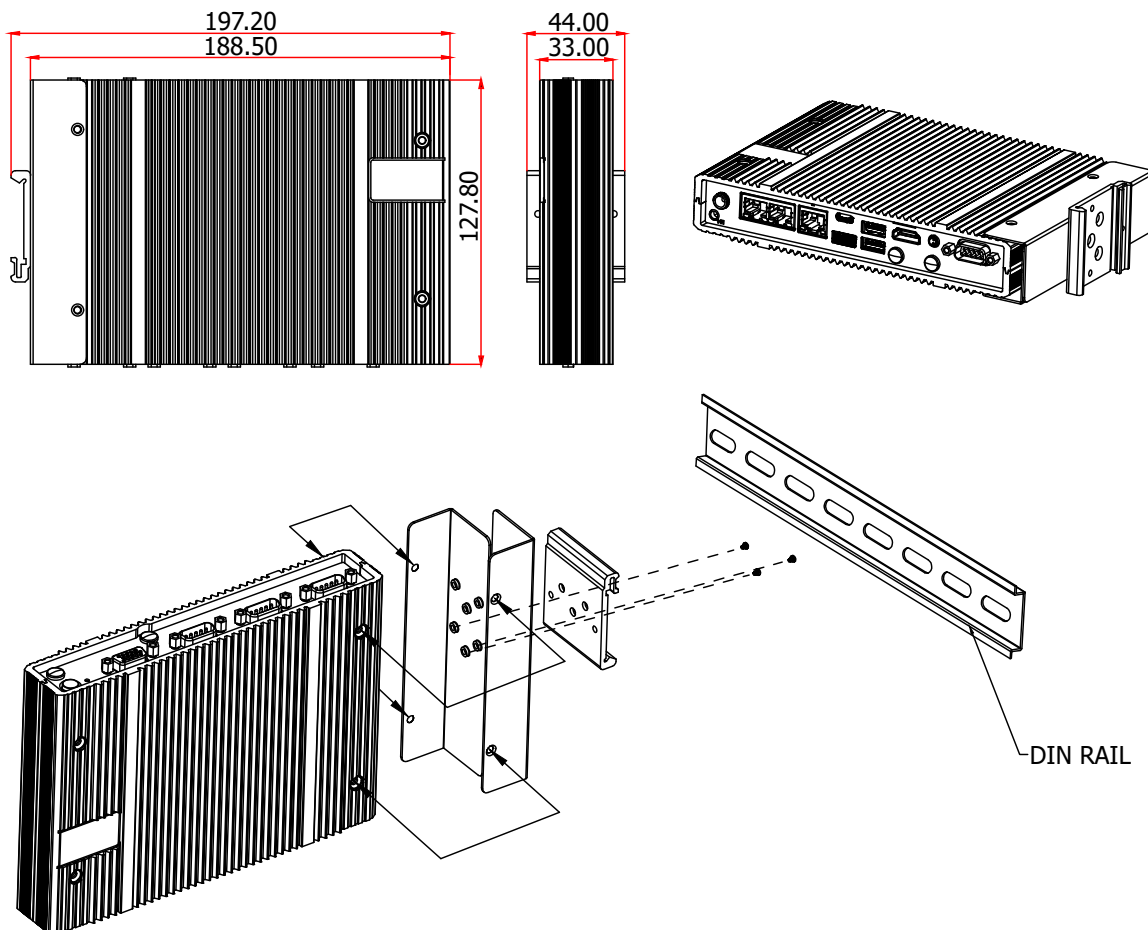
### VESA Mounting: EC700-ADN



### VESA Mounting: EC710-ADN



## DIN Rail Mounting: EC700-ADN



## DIN Rail Mounting: EC710-ADN (Opt. chassis support)

