



Tensor-I20 By Compulab



Owner's Manual

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For more information please visit: www.tensorpc.com

For technical support and product related questions, please email: support@fit-iot.com


For the latest version of this document:


www.fit-iot.com/files/tensor-pc/docs/tensor-pc-owners-manual.pdf

Safety instructions

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that the following conditions exist:

- You have read the safety information that shipped with your computer.
- A component can be replaced or, if purchased separately, installed by performing the removal procedure in reverse order.


 **WARNING:** Disconnect all power sources before opening the computer cover or panels. After you finish working inside the computer, replace all covers, panels, and screws before connecting to the power source.

 **CAUTION:** Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

Before servicing Tensor-PC


To avoid damaging Tensor-PC, perform the following steps before you begin working inside the computer.

1. Ensure that you follow the Safety instructions.
2. Turn off your computer, see Turning off Tensor-PC.
3. Open Tensor-PC's top cover.

 **CAUTION:** Before touching anything inside your computer, ground yourself by touching an unpainted metal surface of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

Turning off Tensor-PC

Ensure that the computer and all attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for about 6 seconds to turn them off. Unplug the device from power source.

 **CAUTION:** To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

Consignes de sécurité

Utilisez les consignes de sécurité suivantes pour protéger votre ordinateur contre les dommages potentiels et pour assurer votre sécurité personnelle. Sauf indication contraire, chaque procédure incluse dans ce document suppose que vous avez lu les informations de sécurité fournies avec votre ordinateur.



AVERTISSEMENT: débranchez toutes les sources d'alimentation avant d'ouvrir le capot ou les panneaux de l'ordinateur. Une fois que vous avez fini de travailler à l'intérieur de l'ordinateur, remettez en place tous les capots, panneaux et vis avant de vous connecter à la source d'alimentation.



ATTENTION: certaines réparations ne peuvent être effectuées que par un technicien de maintenance agréé. Vous devez effectuer le dépannage et les réparations simples uniquement comme autorisé dans la documentation de votre produit ou selon les instructions de l'équipe de service et d'assistance en ligne ou par téléphone. Les dommages dus à un entretien non autorisé par Compulab ne sont pas couverts par votre garantie. Lisez et suivez les consignes de sécurité fournies avec le produit.



PRÉCAUTION: pour éviter les décharges électrostatiques et éviter que les composants internes ne soient endommagés par les décharges électrostatiques lorsque vous touchez l'ordinateur ou ses composants, reliez-vous à la terre à l'aide d'un bracelet antistatique ou en touchant périodiquement une surface métallique non peinte, comme un connecteur à l'arrière de l'ordinateur.



ATTENTION: Manipulez les composants et les cartes avec soin. Ne touchez pas les composants ou les contacts d'une carte. Tenez une carte par ses bords ou par son support de montage métallique. Tenez un composant tel qu'un processeur par ses bords et non par ses broches.



ATTENTION: lorsque vous déconnectez un câble, tirez sur son connecteur ou sur sa languette, pas sur le câble lui-même. Certains câbles ont des connecteurs avec des languettes de verrouillage; si vous déconnectez ce type de câble, appuyez sur les languettes de verrouillage avant de déconnecter le câble. Lorsque vous séparez les connecteurs, maintenez-les uniformément alignés pour éviter de plier les broches du connecteur. De plus, avant de connecter un câble, assurez-vous que les deux connecteurs soient correctement orientés et alignés



ATTENTION: Seuls les émetteurs optiques laser certifiés IEC/EN 60825-1 et reconnus comme CDRH classe 1 devraient être utilisés avec la carte FACET FC-OPLN <https://fit-iot.com/web/product/fc-opln-facet-card-optical-lan/>

INTRODUCTION

Package contents

1. Built-to-order Tensor-PC computer
2. Power supply: input AC 100-240V 50/60Hz, 250W output DC 12V/56V
3. AC Cord

All other parts are supplied accordingly to the configuration chosen

To use Tensor-PC you will need:

- A monitor with DisplayPort or HDMI input + HDMI/DP cable adapter if needed
- USB based keyboard and mouse
- For Barebone models:
 - Compatible RAM modules and a storage device
 - Operating system


Quick Start Guide

By default Tensor-PC models are sold without a storage and RAM. To install storage/RAM please consult “Installation and Service” below.

Choosing placement for Tensor-PC

Please consider the following when placing Tensor-PC

- Do not place Tensor-PC in a small closed space having no airflow
- Allow at least 10 cm of clearance on left, right and top for effective airflow
- The main (best) position is horizontal. However the device can be positioned vertically too

 **NOTE:** Tensor-PC is designed to be positioned horizontally. Operating Tensor-PC in vertical position will reduce its cooling efficiency.

Connecting Tensor-PC

- Connect monitor to Tensor-PC DisplayPort or HDMI connector (use the HDMI to DVI adapter if needed)
- Connect the USB keyboard and mouse to USB2.0/3.0 connectors
- Plug the Ethernet cable into the Ethernet connector
- For models with WiFi/cellular: Mount WiFi antennas on the SMA connector by turning it clockwise repeatedly until the antenna holds firm
- Insert the DC plug into Tensor-PC main DC-in jack
- Connect the power supply to the AC cord and plug the cord into AC outlet

Tensor-PC with Windows pre-installed

Upon first power-up, you will be guided through the Windows Welcome procedure which is self-explanatory. The Windows serial number is printed on the Windows label.

Tensor-PC with Linux pre-installed

Linux loads automatically on power up. Upon boot you will be guided through the Linux Mint first-boot setup procedure.

Installing an operating system on Tensor-PC

Please consult www.fit-pc.com/wiki/index.php/Tensor-PC_Software

Tensor-PC features

I/O and internal devices



Tensor-PC hardware specifications

CPU	Intel Xeon E-2276ML Intel Core i7-9850HL Intel Core i5-9300H Intel Core i3-9100HL Intel Celeron C4932E	6 Cores, 12 Threads, 12 MB cache, ECC support 6 Cores, 12 Threads, 9 MB cache 12 Threads, 9 MB cache 4 Cores, 8 Threads, 8 MB cache 8 Threads, 8 MB cache 4 Cores, 4 Threads, 6 MB cache, ECC support 2 Cores, 2 Threads, 2 MB cache, ECC support
Chipset	Intel CM246 Chipset	
RAM	Up to 64 GB DDR4-2400 ECC non-ECC	2x SODIMM DDR4-2400 ECC Non-ECC (unbuffered) Note: Buffered / registered RAM is not supported
Storage	NVMe M.2 2280	Up to 8 NVMe devices can be installed, each with PCIe 3 x4 interface
	SATA M.2	Up to 2 SATA devices can be installed, (M.2 key-M 2280 2260 2242)
	mSATA	Up to 2 mSATA devices can be installed
	SATA 2.5"	Up to 2 2.5" SSD/HDD devices can be installed
Graphics & display	Integrated Intel UHD Graphics P630 / 630 / 610	Up to 3x 4K displays - DisplayPort 1.2 4096x2304 @ 60Hz - HDMI 1.4 4096x2160 @ 30Hz Specific types of ports depends on selected TELs.
Networking	Gbit Ethernet	Using Intel i210, each port is on an independent PCIe port. Using RJ45 ports. 20 ports can be installed.
	Gbit Ethernet with PoE source (PSE)	POE+ 802.3at 30W per port. Using Intel i210, each port is on an independent PCIe port. Using RJ45 ports. 10 ports can be installed
	4G/LTE modem	Universal LTE cat 12 (Sierra EM7455) by default. Other M.2 key-B or mini-PCIe modems can be installed. Each modem-TEL has a SIM card tray optionally accessible from the outside. Number of antennas as required by modems can be installed. Antennas can be positioned anywhere on the computer's perimeter. Up to 9 LTE modems can be installed.
	Wi-Fi	Wi-Fi 6 (Intel AX200) by default. Buyer can install another Wi-Fi adapter. Number of Wi-Fi antennas as required by Wi-Fi module. Antennas can be positioned anywhere on the computer's perimeter. Up to 9 Wi-Fi adapters can be installed.
	Bluetooth	Bluetooth 5.1 (Intel AX200) by default. Bluetooth is normally an added feature in a Wi-Fi adapter. Buyer can install another adapter. Up to 9 adapters can be installed.
I/O	USB	Up to 4x USB 3.1 gen 1 Over 40 ports of USB 2 can be installed USB power in S5 can be configured per port
	Audio	3.5mm jacks. Headphones out + mic. in using TI PCM2912A Codec. Multiple audio ports can be installed.
	Serial ports	Using DB9 connector. Each port supports RS232, RS485 half/full duplex and can be configured independently. Over 20 ports can be installed.
	CANbus	Using DB9 connector Supports CAN 2.0A Specifications and ISO 11898-2 Bit rate of up to 1Mbit/s DIP switch for enabling/disabling on-board 120 Ohm termination Isolation per UL 1577, transient immunity: 30kV/uS, isolated DC 5V power CANbus is driven by a dedicated 32bit microcontroller (ARM Cortex M0 - STM32F042C6) running open source firmware that can be upgraded Driverless operation in Windows USB native device in Linux Over 10 ports can be installed
	GPIOs	Unidirectional Isolation block, isolation per UL 1577 GPIOs are driven by a dedicated 32bit microcontroller (ARM Cortex M0 - STM32F072CB) running open source firmware that can be upgraded Each GPIO can be configured as input/output in software Terminal block connector 3.3V / 5V level can be selected by a DIP switch Over 100 GPIO ports can be installed

Extensions	M.2 key E	Up to 9 M.2 key-E devices can be installed
	M.2 key B	Up to 9 M.2 key-B devices can be installed. Each has a SIM card tray optionally accessible from the outside.
	M.2 key M	M.2 key-M devices up to M.2 2280 devices, PCIe x4 Each device has Integrated cooling Up to 8 M.2 key-M devices can be installed
	Mini PCI Express	Up to 9 mini PCI express devices can be installed. Each has a SIM card tray optionally accessible from the outside.
	PCI Express	-- Under development --
Security, reliability & manageability features	Optional Trusted Platform Module 2.0 (TPM 2.0)	Infineon SLM 9670AQ2.0 Features: TPM 2.0, RSA-2048, ECC-256, SHA-256, EAL4+
	Auto-detection of connected TELs and auto re-configuration	<ul style="list-style-type: none"> • TELs are identified during power-up • TRIP mode is adjusted to comply with specific TEL requirements (e.g. 4x PCIe x1 / 1x PCIe x4 / SATA / USB3) • If TEL is incompatible to TRIP capabilities, TEL is automatically disabled
	Configuration control and reporting	<ul style="list-style-type: none"> • In BIOS, TRIPs and connected TELs can be listed • For each TEL, revision, serial number and specific information (e.g. MAC address) can be displayed • TEL connected to each TRIP can be enabled on detection, disabled, or unconditionally enabled
	Configurable CPU TDP	Maximum power of the CPU can be adjusted in BIOS to match: <ul style="list-style-type: none"> • Environmental conditions • Cooling capacity of the enclosure • Target operating temperature
	Optional out-of-band management	Optional supervisor micro-controller featuring <ul style="list-style-type: none"> • Safe remote-BIOS-update • Powering up / powering down the system • Advanced watchdog • System recovery
	Auto-on	On power resume, system powers on and boots.
BIOS & OS	BIOS AMI Aptio V	
	Operating systems: Windows 10 Professional Linux Mint	Compatible with other Windows 10 variants. Compatible with other Linux variants. Compatible with other hypervisors and operating systems (e.g. ESXi, FreeBSD)

Tensor elements (TELS)

	Name	Description	Max units	Stacking
Storage TELS	TEL-NVME	M.2 2280 NVMe card or M.2 SATA	8	A,C
	TEL-MSATA	mSATA card	2	A,C
	TEL-SATAx1	2x 2.5" SSD / HDD	2	A,C
Power Modules	PM-12V	A miniature 12V power module with polarity, overvoltage protection and twist-lock jack	2	A,C
	PM-WIDE	A regulating wide-input voltage, high current power	2	C
	PM-BALANCER	A power load-balancer between two inputs for power	1	A,C
Display TELS	TEL-HDMIMINIDP	HDMI + mini Display Port, designed for TRIP-M	1	A,C
	TEL-DPHDMI	Display Port + HDMI, designed for TRIP-M	1	A,C
	TEL-STD	Display Port + Gbit Ethernet on a single compact TEL, designed for TRIP-S	1	A,C
USB TELS	TEL-USB3X4V	4x USB3 type A vertical connectors, designed for TRIP-U	1	A,C
	TEL-USB2X4V	4x USB2 type A vertical connectors	12	A,C
	TEL-USB3PCIV4	4x USB3.0 PCI		
Other I/O TELS	TEL-AUDIO	Headphones / line-out + microphone using 2x 3.5mm	10	A,C
	TEL-SERX4	4x RS232 / RS485 with DB9 connectors	10	A,C
	TEL-CANBUS	CANbus interface using DB9 connector	10	A,C
	TEL-GPIO	Up to 20 isolated general purpose I/Os using terminal	10	A,C
	TEL-GPIOEXT	4x GPIO by a terminal block (to be used with TEL-GPIO)	-	-
Networking TELS	TEL-LANX2	2x Gbit Ethernet ports using RJ45 connectors	6	A,C
	TEL-LANX4	4x Gbit Ethernet ports using RJ45 connectors	2	A,C
	TEL-POEX2	2x Gbit Ethernet with PSE PoE (802.3at Type 1, 13W per port) using RJ45 connectors	5	C, A (W30)
	TEL-OPLNX2 --under development--	2x fiber optics Gbit Ethernet using SFP+ sockets	6	C, A (W30)
Extension TELS	TEL-M2E	An M.2 key-E socket + 2x Wi-Fi antennas (each with a panel and MHF cable)	9	A,C
	TEL-M2B	an M.2 key-B socket with SIM card tray + 2x Pentaband antennas (each with a panel and MHF cable)	9	A,C
	TEL-MINIPICIE	a mini PCIe socket with SIM card tray + 2x Pentaband antennas (each with a panel and U.FL cable)	9	A,C

Operating conditions

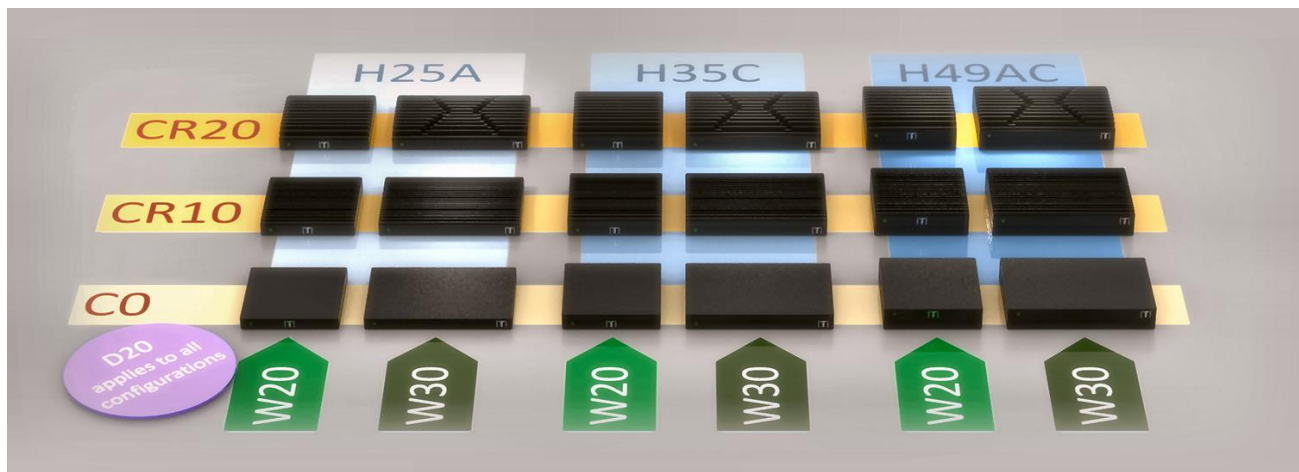
Power	Input voltage range 12V - 56V* Power consumption 20W - 60W	Power consumption depends on <ul style="list-style-type: none"> - CPU and graphics card - System load - Installed devices - Connected peripherals <p><i>* Input voltage range depends on the power module used.</i></p>
Temperature & humidity	Operating temperature range Up to -40°C to 70°C* Relative humidity 5% - 95% non-condensing	<p><i>* When ordered in industrial temperature range. Commercial and extended temperature range are also available.</i></p>

Mechanical specifications

Enclosure variants	Tensor-PC I20A is offered in 18 different enclosure variants:	Width	Compartment height	Cooling ribs
	<ul style="list-style-type: none"> • 2 widths • 3 compartment heights • 3 types of cooling ribs 	<ul style="list-style-type: none"> • 20 cm (option W20) • 30 cm (option W30) 	<ul style="list-style-type: none"> • 2.5 cm - stacking A (option H25A) • 3.5 cm - stacking C (option H35C) • 4.9 cm - stacking A+C (option H49AC) 	<ul style="list-style-type: none"> • Flat with no ribs (option C0) • 1 cm ribs (option CR10) • 2 cm ribs (option CR20)
Dimensions & weight	Dimensions			
	From: 20 cm (W) x 20 cm (D) x 2.5 cm (H) - 1.0 liter To: 30 cm (W) x 20 cm (D) x 6.9 cm (H) - 4.1 liter	Dimensions depend on enclosure variant		
	Weight			
	From: 1 Kg to 4 Kg	Weight depends on enclosure variant and on configuration		
Housing & cooling	All aluminum housing Natural airflow cooling (fanless)			
Mounting	VESA mounting bracket* Wall mounting bracket* DIN-rail mounting bracket*	* Sold separately		

Dimensions

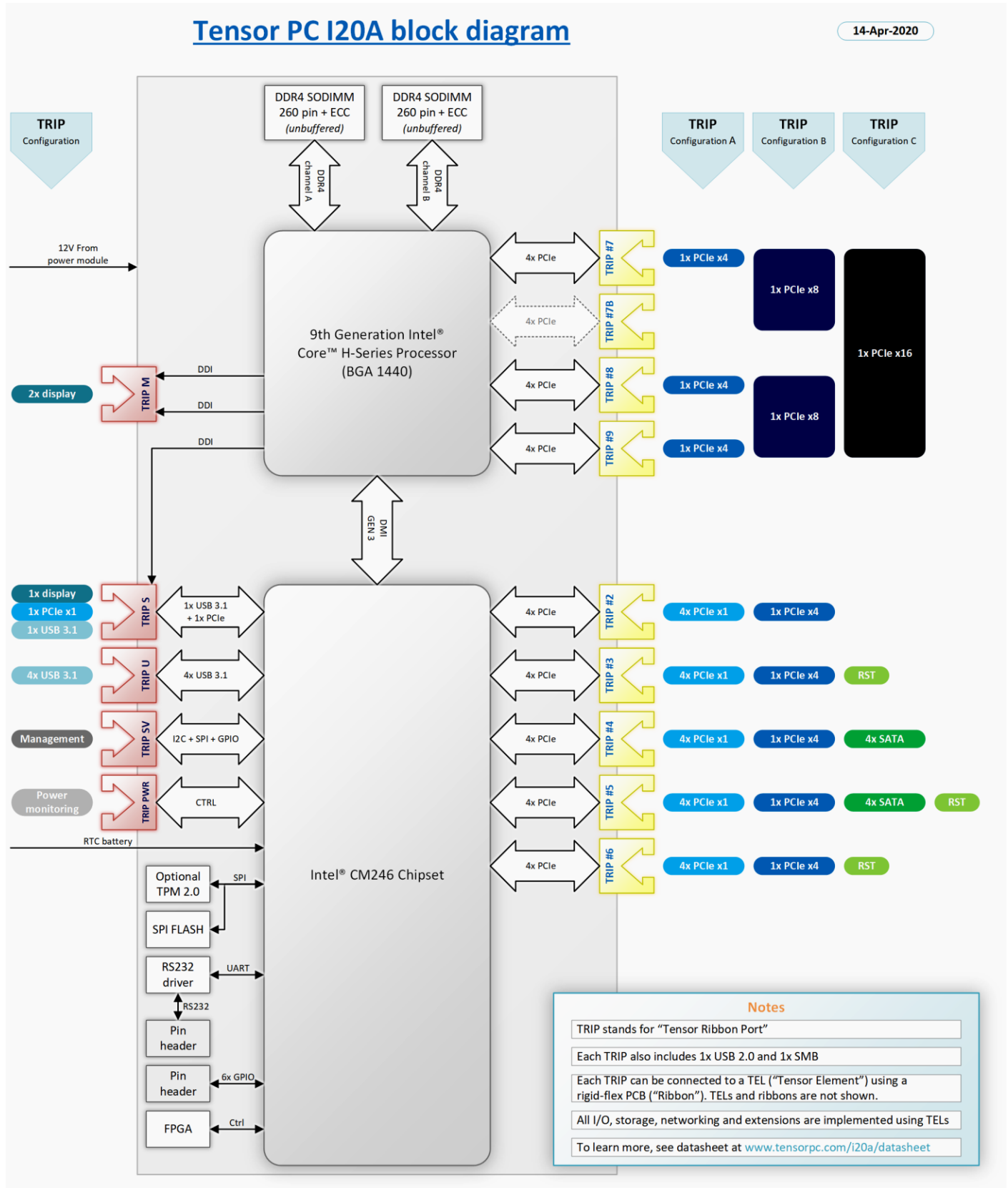
Width	Compartment height
<ul style="list-style-type: none"> • 20 cm (option W20) • 30 cm (option W30) 	<ul style="list-style-type: none"> • 2.5 cm - stacking A (option H25A) • 3.5 cm - stacking C (option H35C) • 4.9 cm - stacking A+C (option H49AC)



TEL to TRIP list

TEL	Kind	TEL name	Description	Interface	TRIP	Stacking
[FH]	COM	TEL-SERX4	4x RS232 / RS485 with DB9 connectors	USB 2.0	2,3,4,5,6,7,7B,8,9	A, C
[FHA]	COM	TEL-SERX1	1x RS232 by DB9	USB 2.0	2,3,4,5,6,7,7B,8,9	A, C
[FHB]	COM	TEL-SERDB9	1x RS232/RS485 by DB9 (to be used with TEL-SERX4)	No TRIP		
[FS]	COM	TEL-GPIO	20x GPIO - terminal block of 4x GPIO + 4 headers of 4 GPIO each	USB 2.0	2,3,4,5,6,7,7B,8,9	A, C
[FV]	COM	TEL-GPIOEXT	4x GPIO by a terminal block (to be used with TEL-GPIO)	No TRIP		
[FD]	I/O	TEL-AUDIO	Headphones / line-out + microphone using 2x 3.5mm	USB 2.0	No TRIP, int. USB	A, C
[FEA]	I/O	TEL-USB3X4V	4x USB3.1 type A	4x USB 3.1	U	A, C
[FEC]	I/O	TEL-USB2X4V	4x USB2.0 type A	USB 2.0	2,3,4,5,6,7,7B,8,9	A, C
[FEC]	I/O	TEL-USB3PCIV4	4x USB3.0 type PCI	USB 3.0	2,3,4,5,6,7,7B,8,9	A, C
[FC]	Network	TEL-LANX2	2x Gbit Ethernet ports using RJ45	2x PCIe	2,3,4,5,6	A, C
[FCA]	Network	TEL-LANX4	4x Gbit Ethernet ports using RJ45	4x PCIe	2,3,4,5,6	A, C
[FI]	Network	TEL-M2B	an M.2 key-B socket with SIM card tray + 2x Pentaband antennas (each with a panel and MHF cable)	PCIe + USB 2.0	2,3,4,5,6	A, C
[FJ]	Network	TEL-M2E	an M.2 key-E socket + 2x Wi-Fi antennas (each with a panel and MHF cable)	PCIe + USB 2.0	2,3,4,5,6	A, C
[FL]	Network	TEL-MINIPCIIE	a mini PCIe socket with SIM card tray + 2x Pentaband antennas (each with a panel and U.FL cable)	PCIe + USB 2.0	2,3,4,5,6	
[FU]	Network	TEL-POEX2	2x Gbit Ethernet with PoE PSE by RJ45	2x PCIe	2,3,4,5,6	C, A (W30)
[FA]	Output	TEL-DPHDMI	Display Port + HDMI, designed for TRIP-M	2x DDI	M	A, C
[FK]	Output	TEL-DPmHDMI	mini Display Port + HDMI	2x DDI	M	A, C
[FG]	Output	TEL-STD	Display Port + Gbit Ethernet	DDI + PCIe	S	A, C
[FO]	Power	FO	A power module for 12VDC PSU with twist lock, Incl. 60W PSU and AC cord.	No TRIP		
[FP]	Power	FP	A power module for 12V - 56V DC, ATX connector with locking, Incl. 120W PSU and AC cord.	No TRIP		
[FF]	Storage	TEL-NVME	M.2 2280 NVMe card or M.2 SATA	PCIe x4	2,3,4,5,6,7,8,9	A, C
[FT]	Storage	TEL-SATA1	2x 2.5" SSD / HDD	SATA	4, 5	A, C

Block diagram

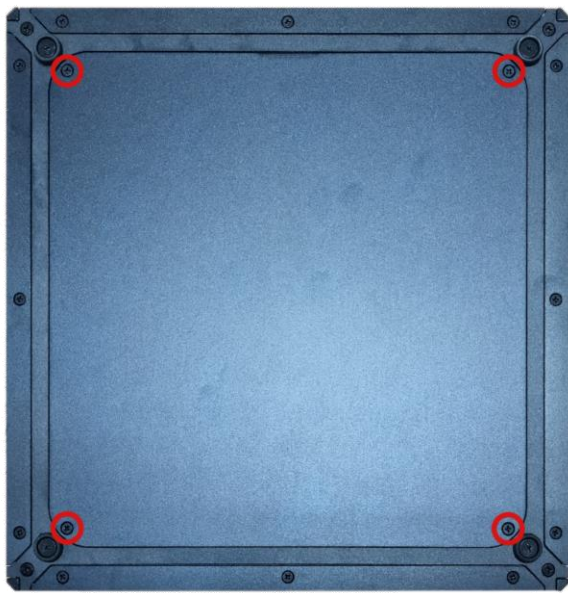


Tensor-PC devices and installation

Open Tensor-PC for service

To access Tensor-PC internal devices follow the steps below:

1. Shut down the computer and disconnect PSU
2. Unscrew four Phillips screws holding the bottom cover
3. Remove the bottom cover



⚠ WARNING: Only technically skilled person should open and service the Tensor-PC!

RTC Battery (3, 4)

The RTC battery of Tensor-PC is intended to maintain power to the internal Real Time Clock circuitry.

Tensor-PC can work without a battery, or when the battery is dead. At these situations, the internal clock won't be kept on main power loss, and the boot after power loss may take a few second longer.

In order to replace a depleted RTC battery (4), while the bottom cover is removed and power from PSU is disconnected, remove the battery wire from the RTC BAT socket on SBC (3) and replace with the new one.

⚠ WARNING: Risk of explosion if the battery is replaced by incorrect type.

RAM (1, 2)

Tensor-PC motherboard features two SODIMM DDR4 slots supporting DDR4-2400.

Tensor-PC supports up to 64 GB in 2x 32 GB configuration.

Both ECC and Non-ECC RAM is supported

Important note: Buffered (registered) RAM is **not** supported in Tensor-PC.



Storage

NVMe

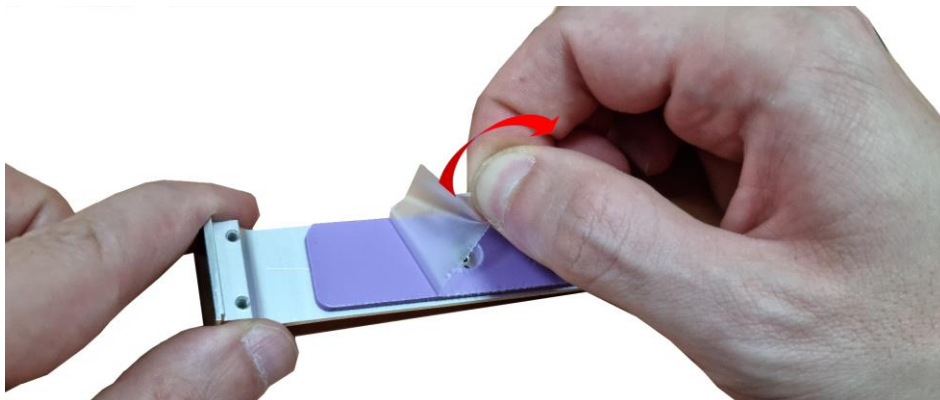


Tensor-PC supports up to 8 NVMe M.2 2280 devices, each with PCIe 3 x4 interface
 The NVMe cards are installed by fastening each to the TEL-NVME element as described below.

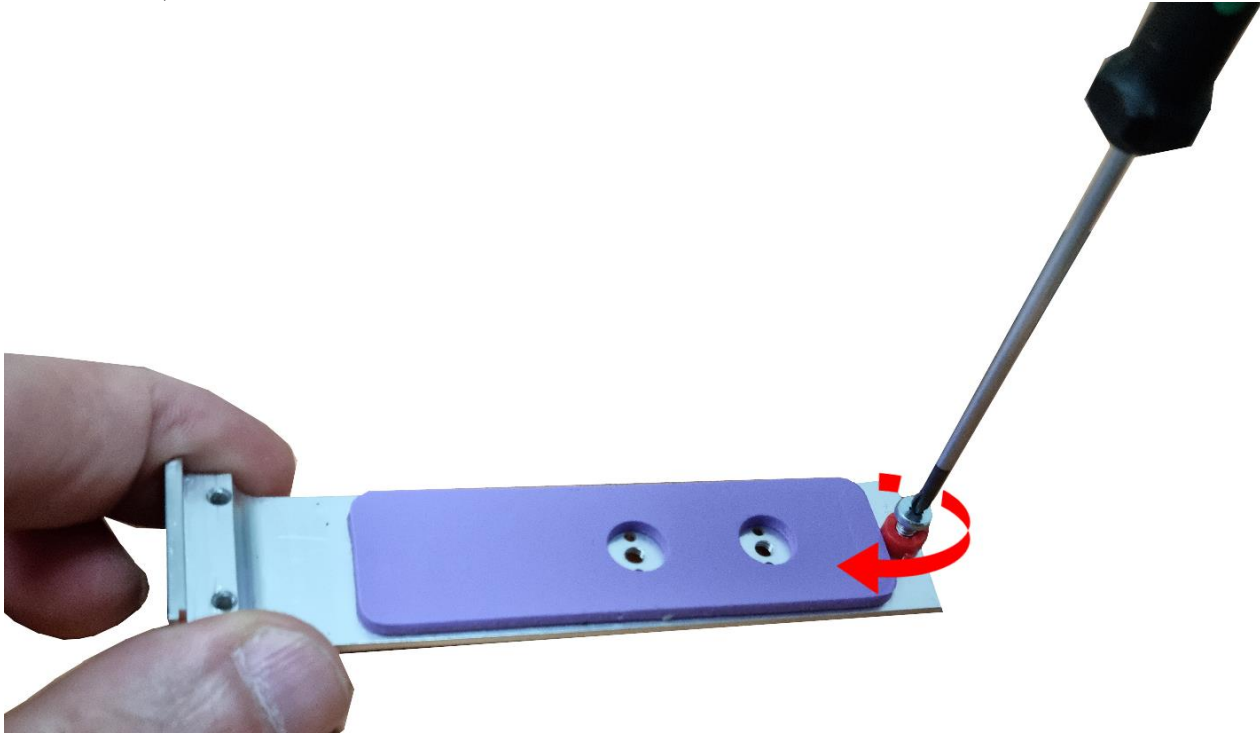
Note: In case you have received an assembled flat cable on an aluminum TEL element (without NVMe module), you must firstly de-touch the flat cable from the plate by unscrewing two fillips screws as shown below:



1. Remove protective film from the pink heatsink



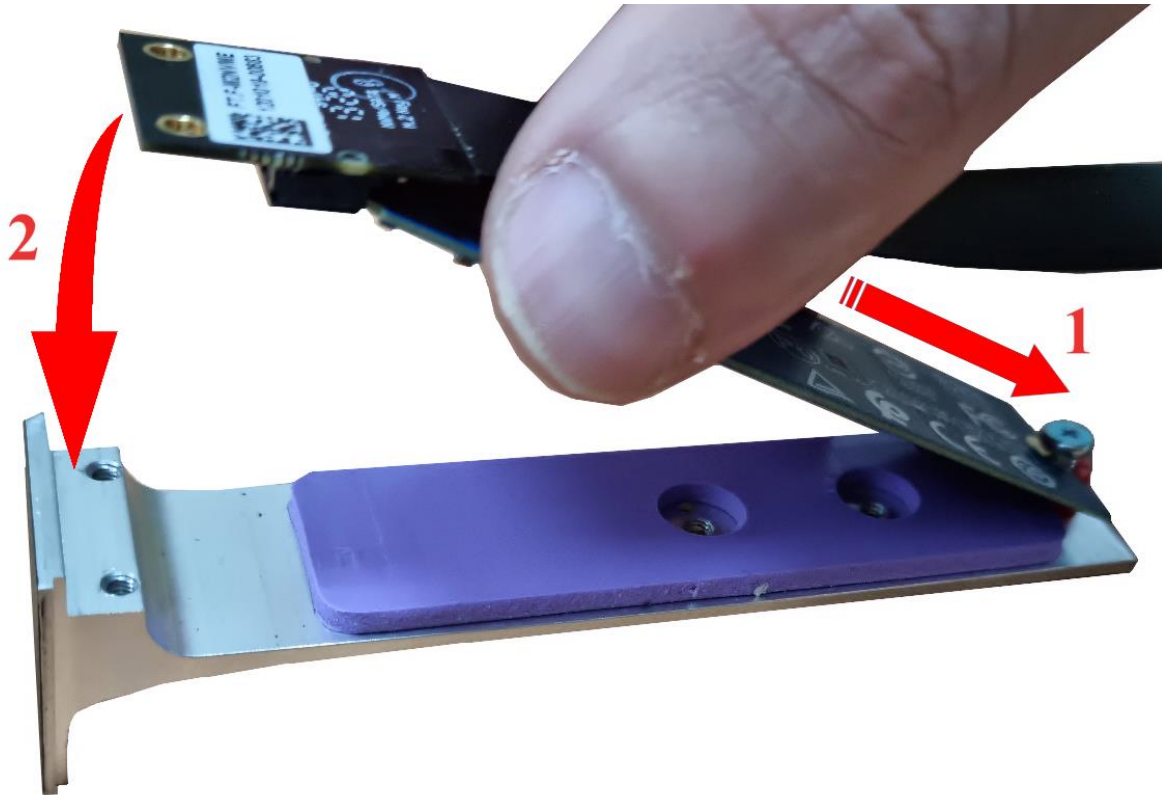
2. Tighten the red spacer with a Phillips screw (left about 2mm gap between spacer and a screw head)



3. Insert the NVMe card at an angle into the appropriate socket on the flat cable.



4. Position the flat cable on the aluminum TEL element as shown on the picture below:



5. Secure the NVME card by tightening the screw on the red spacer



6. Finish the securing of the card by tightening 2 screws as shown below:



SATA M.2



Tensor-PC supports up to 2 SATA M.2 devices (M.2 key-M 2280 | 2260 | 2242)
 The SSDs are installed by fastening each to the TEL-MSATA element. Instruction of assembling the MSATA to the TEL element exactly the same as for NVMe storage above.

SATA 2.5" SSD/HDD

Up to 2 2.5" SSD / HDD device can be installed
 Should be connected to TRIP 4 or 5
 EW25 and EH35 and higher must be used

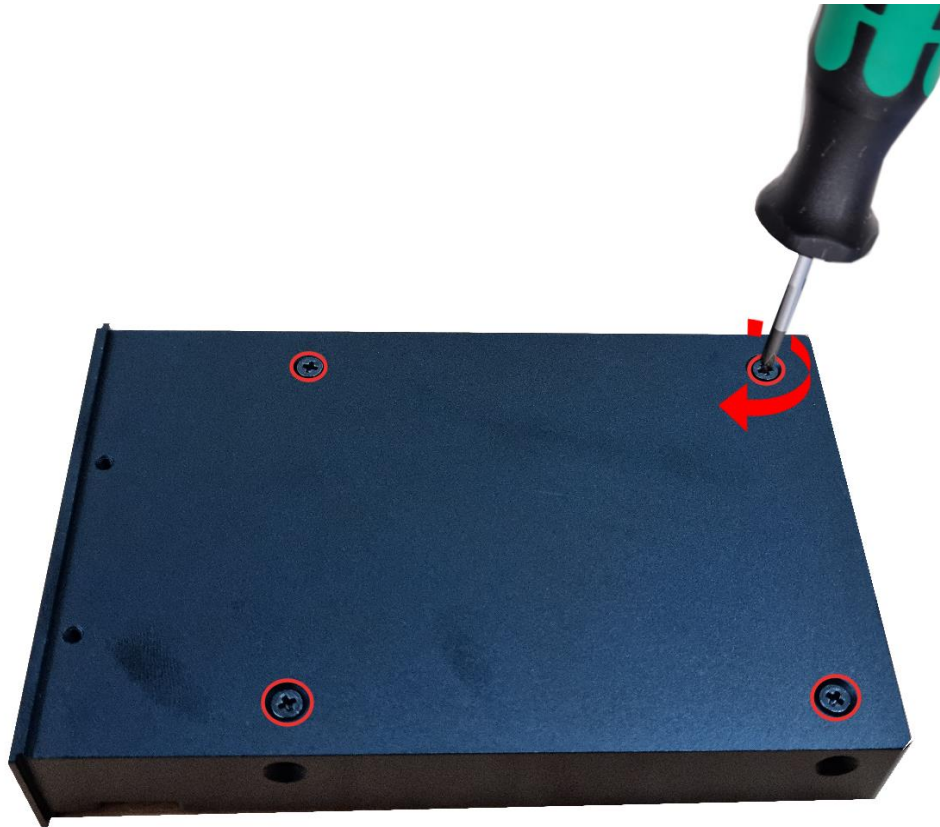


For assembling the SATA drive follow the instruction below:

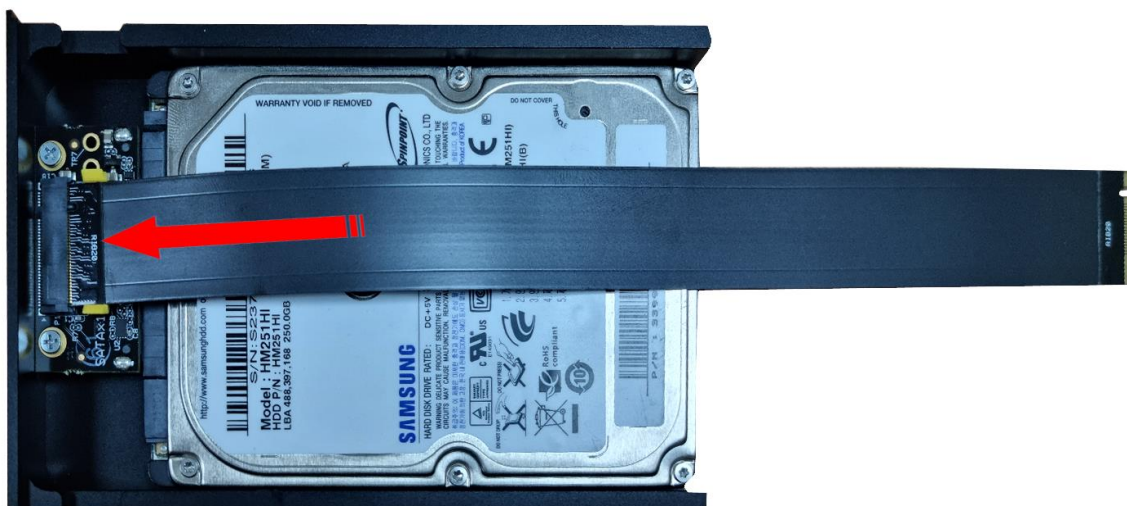
1. Insert SATA SSD/HDD disk into the connector inside of TEL-SATA1 compartment as shown below



- Tighten four Phillips screws as shown on the picture below for securing the disk inside of the compartment



- Insert the flat ribbon cable into the socket as shown below
- Pass the flat cable through side of Tensor-PC device and connect it into the TRIP 4/5 on the SBC.



- Insert the TEL-SATA1 compartment all the way.
- Assembly the side panel plates.

BIOS

For BIOS documentation see [www.fit-pc.com/wiki/index.php/Tensor-PC Software](http://www.fit-pc.com/wiki/index.php/Tensor-PC_Software)

Entering BIOS Setup Utility

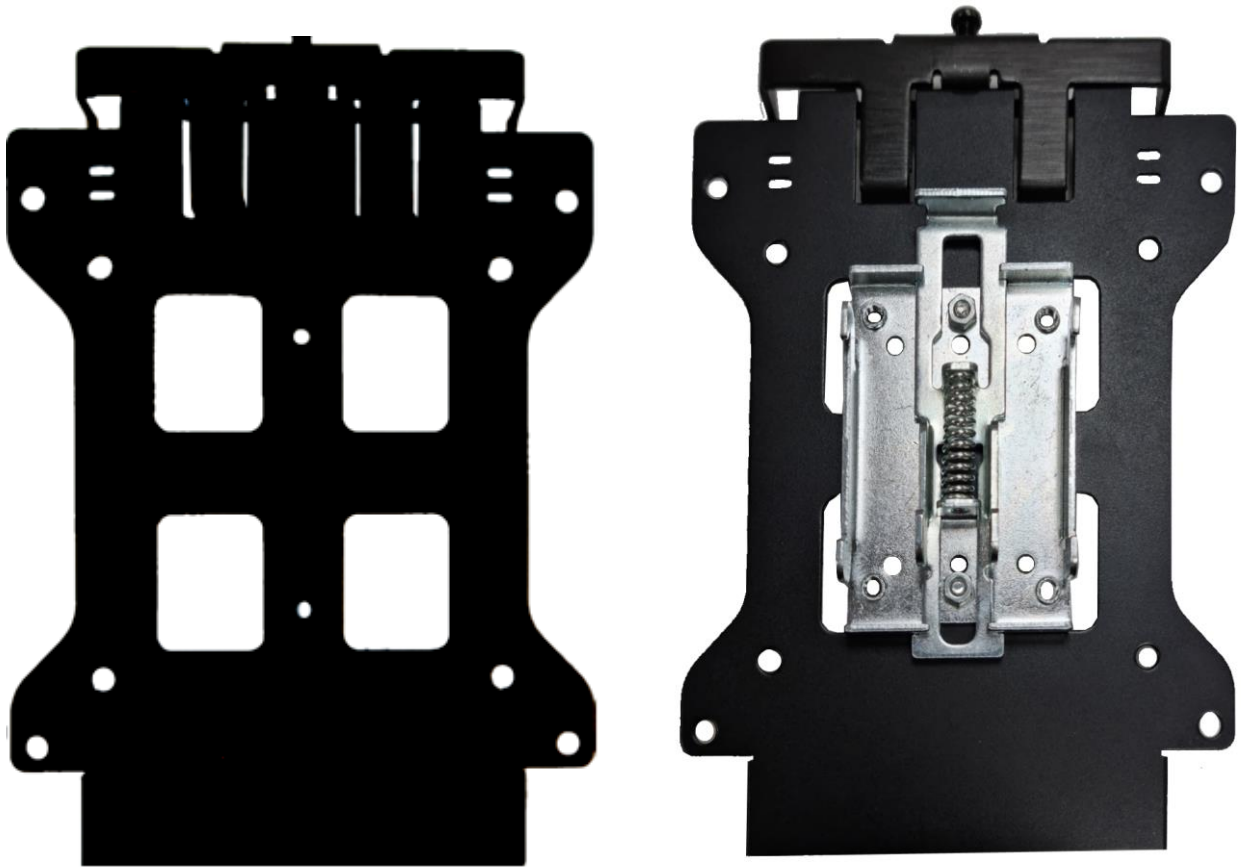
Turn off Tensor-PC.

Turn on while holding down the DEL key.

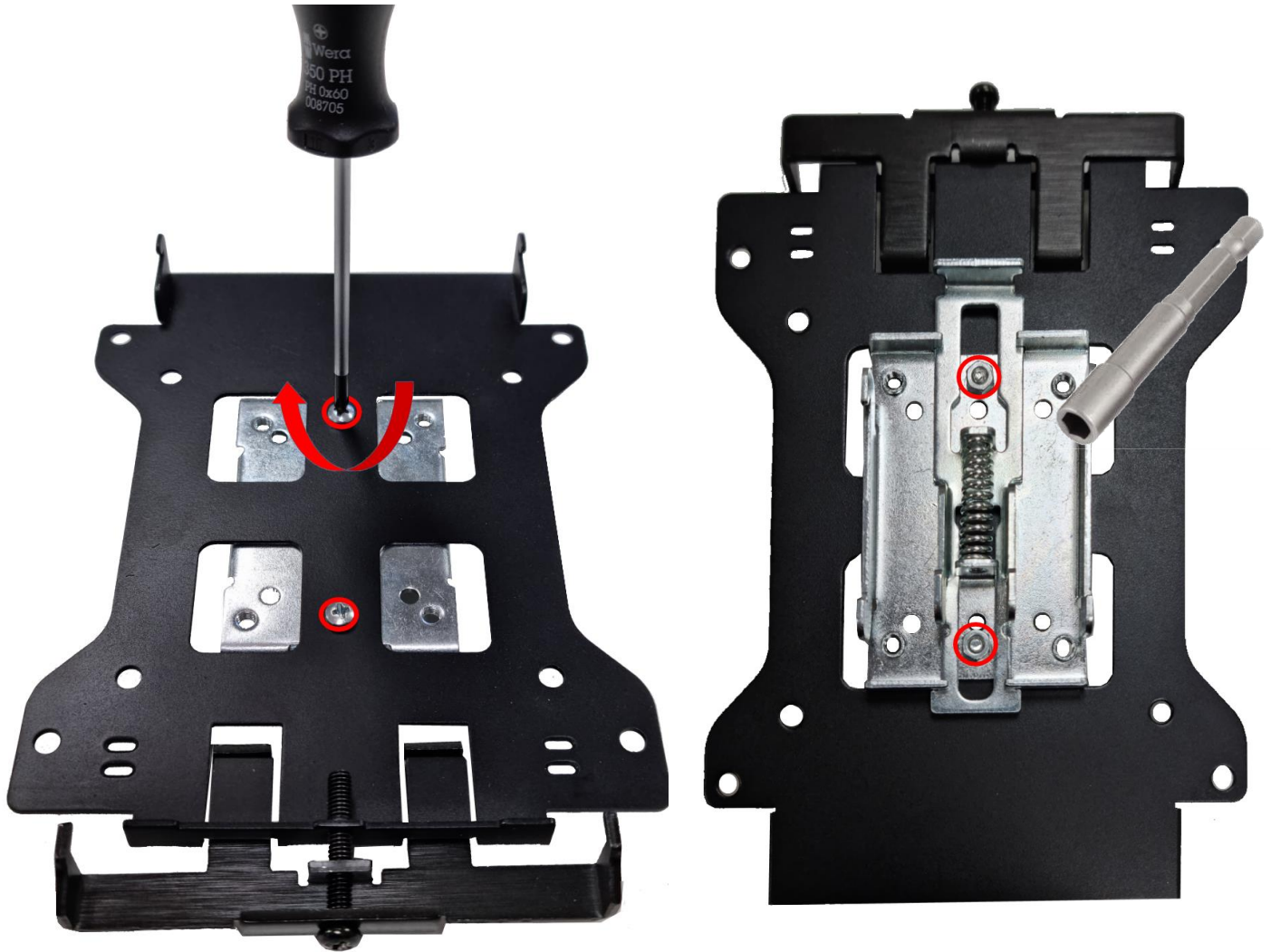
VESA/DIN mounting

DIN – case when the Tensor-PC should be placed on DIN rail by its bottom part.

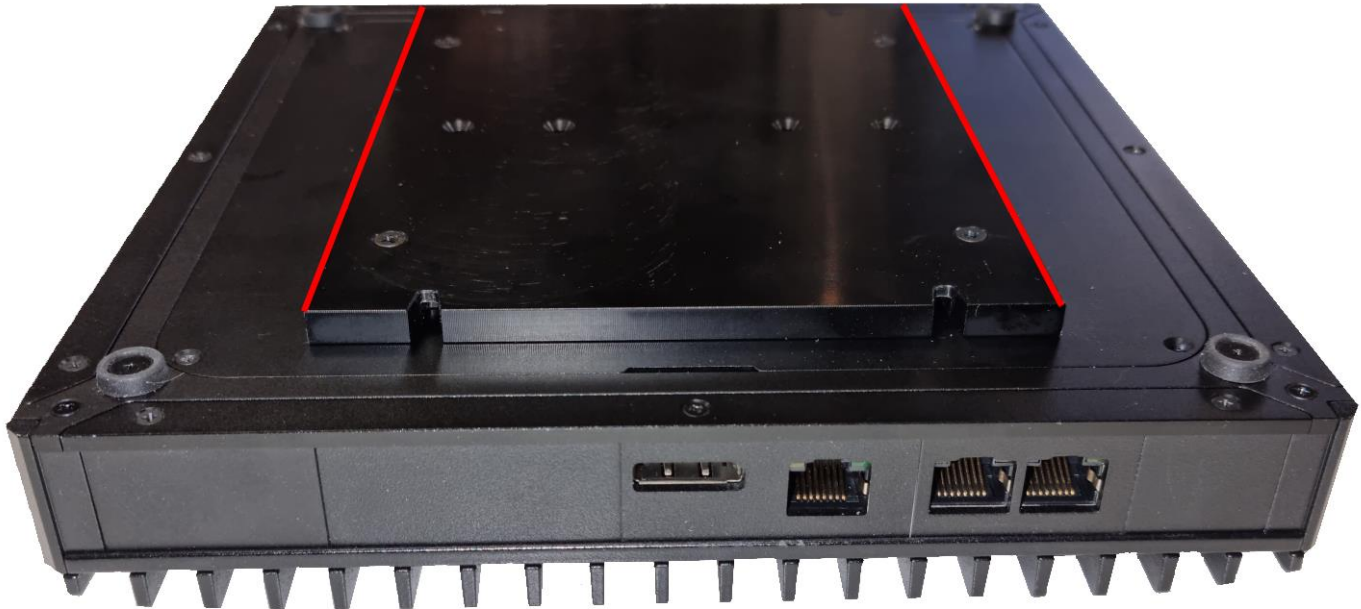
1. Assembly the DIN clips on the VESA bracket as shown below



2. Tighten the Phillips screw as shown below while holding the matching nut by 5.5mm hex driver bit underneath.

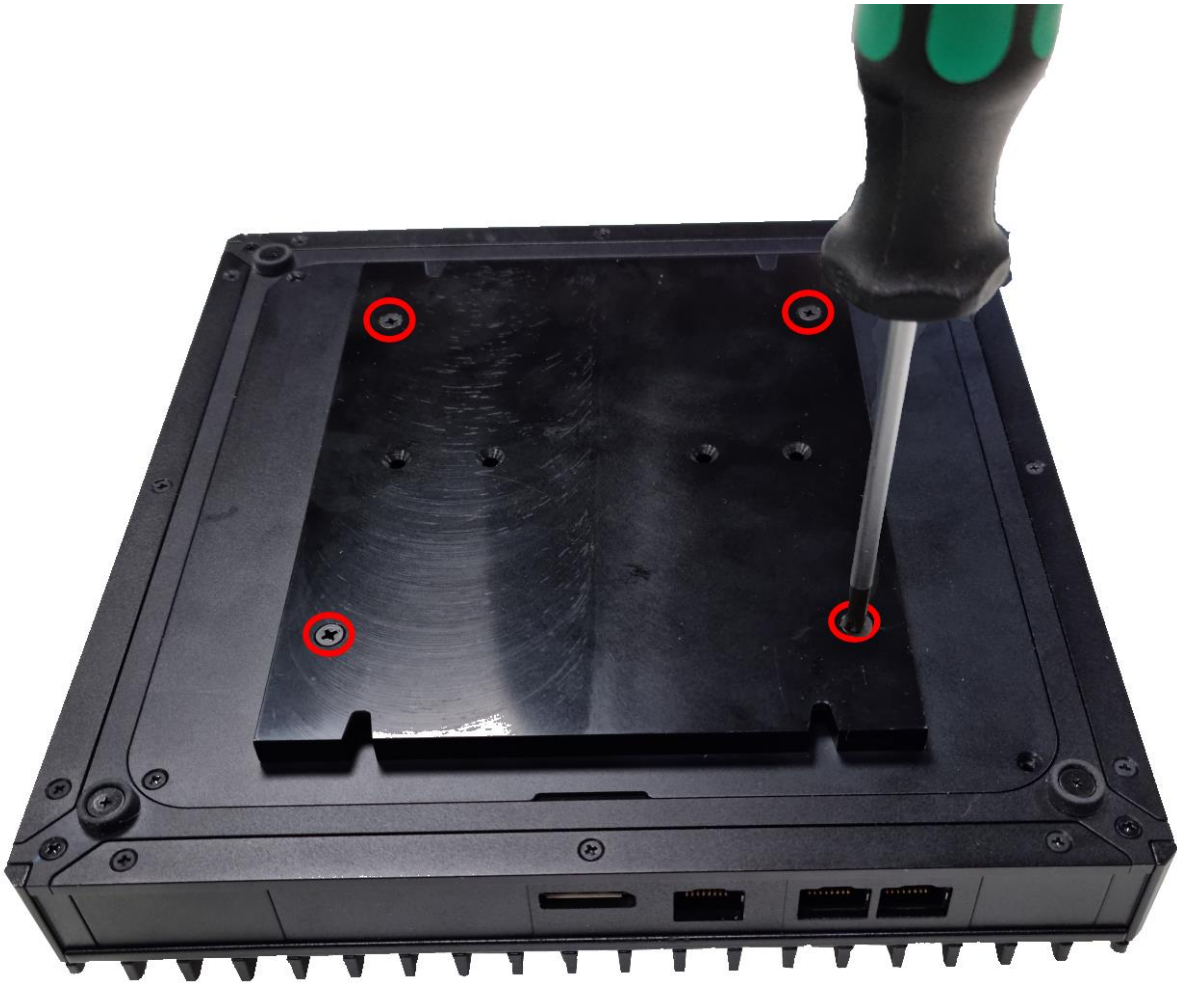


3. Put the mounting adapter on the bottom part of Tensor-PC device

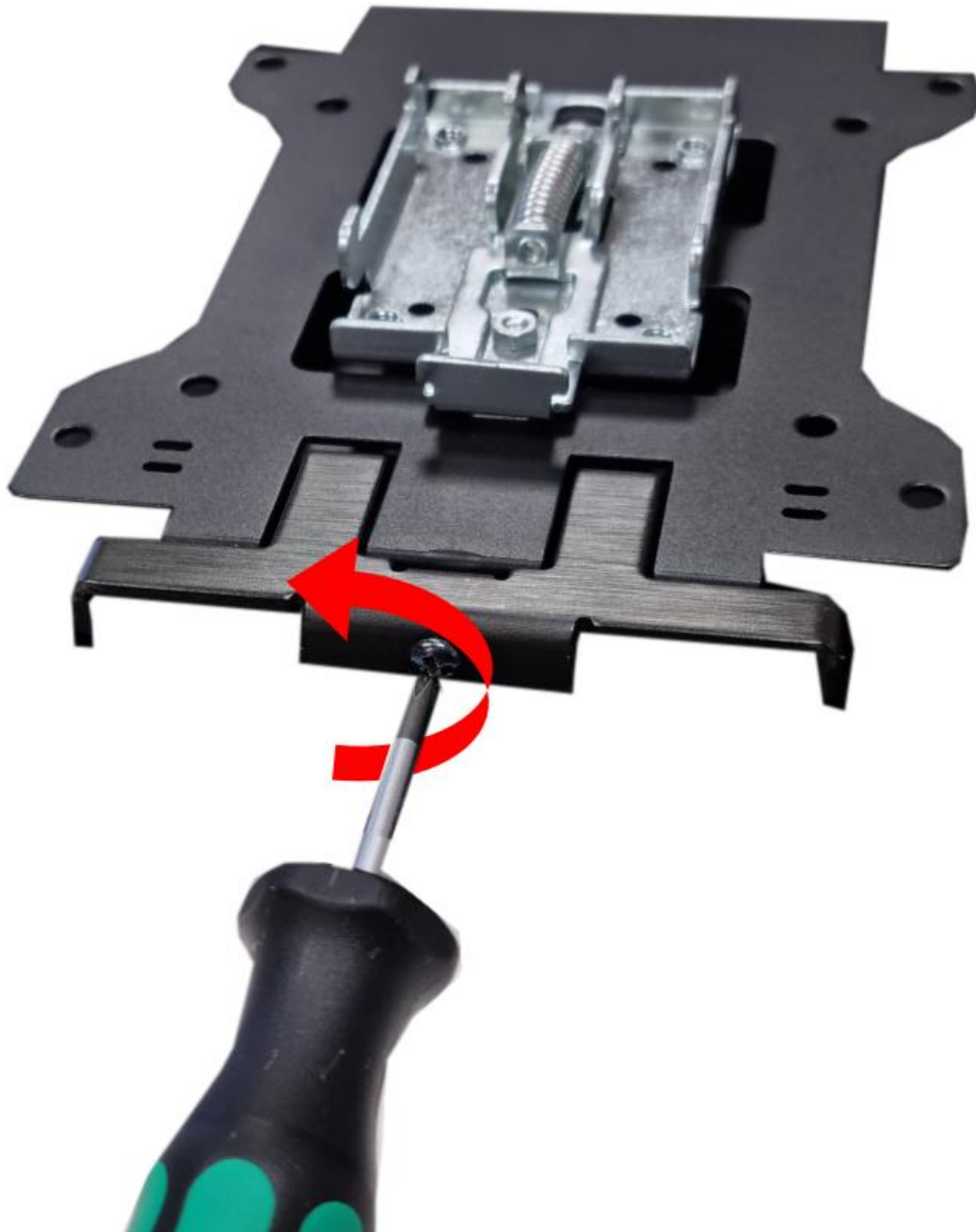


NOTE: Make sure that sides (without the anchor slots) on the adapter are directed in parallel with ribs on the top cover. When connected to any surface the Tensor-PC ribs must be perpendicular to the ground.

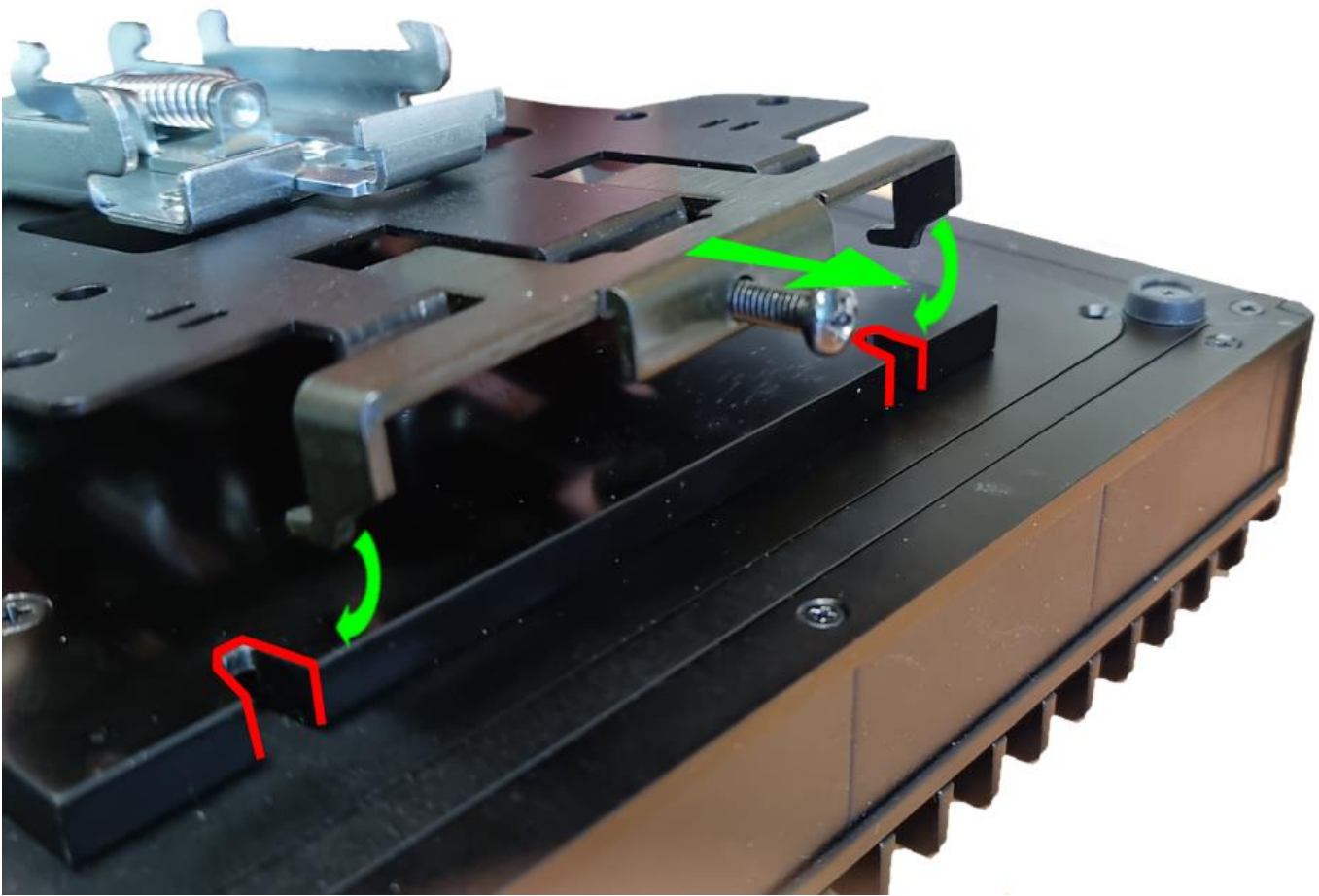
4. Assembly the adapter by tightening the Phillips screws as shown below:



5. Loosen the long black Phillips screw on the VESA bracket and attach the Tensor-PC device to it by entering hooks into the anchor slots.







6. Tighten the Phillips screw in order to fix the bracket on the adapter.



7. Connect the assembled device to the DIN rail.

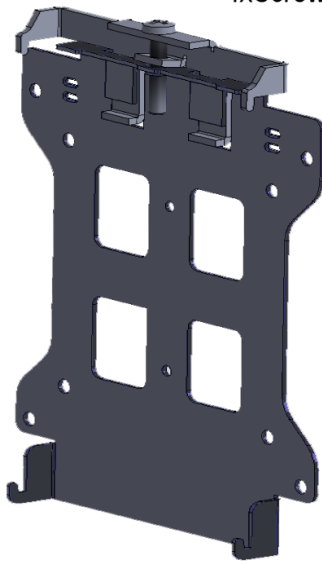
VESA - case when the Tensor-PC should be placed on VESA adapter



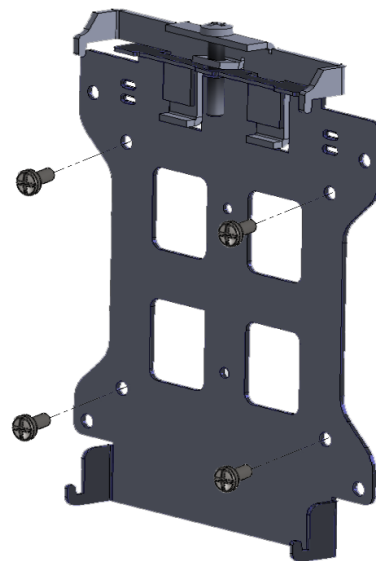
1. Assembly the VESA adapter on the chosen surface

Matrix 75mm x 75mm

4xScrew, M4, Pan head, Phillips, L=10mm, Steel



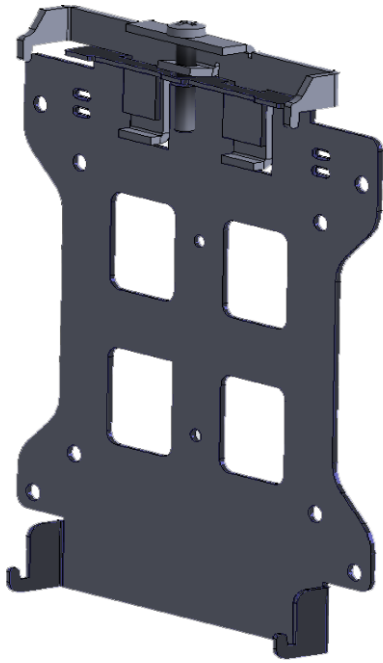
STEP 1:
PLACE VESA MOUNT UPON
INSTALLATION SURFACE



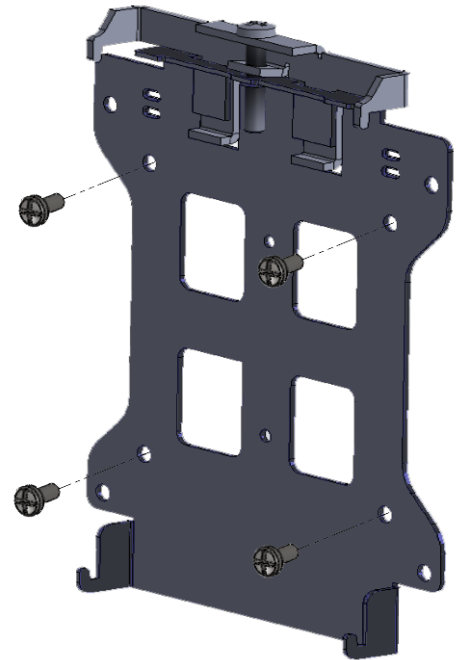
STEP 2:
SECURE MOUNT TO SURFACE USING
SUPPLIED BOLTS

Matrix 100mm x 100mm

4xScrew, M4, Pan head, Phillips, L=10mm, Steel



STEP 1:
PLACE VESA MOUNT UPON
INSTALLATION SURFACE



STEP 2:
SECURE MOUNT TO SURFACE USING
SUPPLIED BOLTS

2. Loosen the long black Phillips screw on the VESA bracket in order to allow fitting the bracket hooks to the sockets on the mounting adapter.

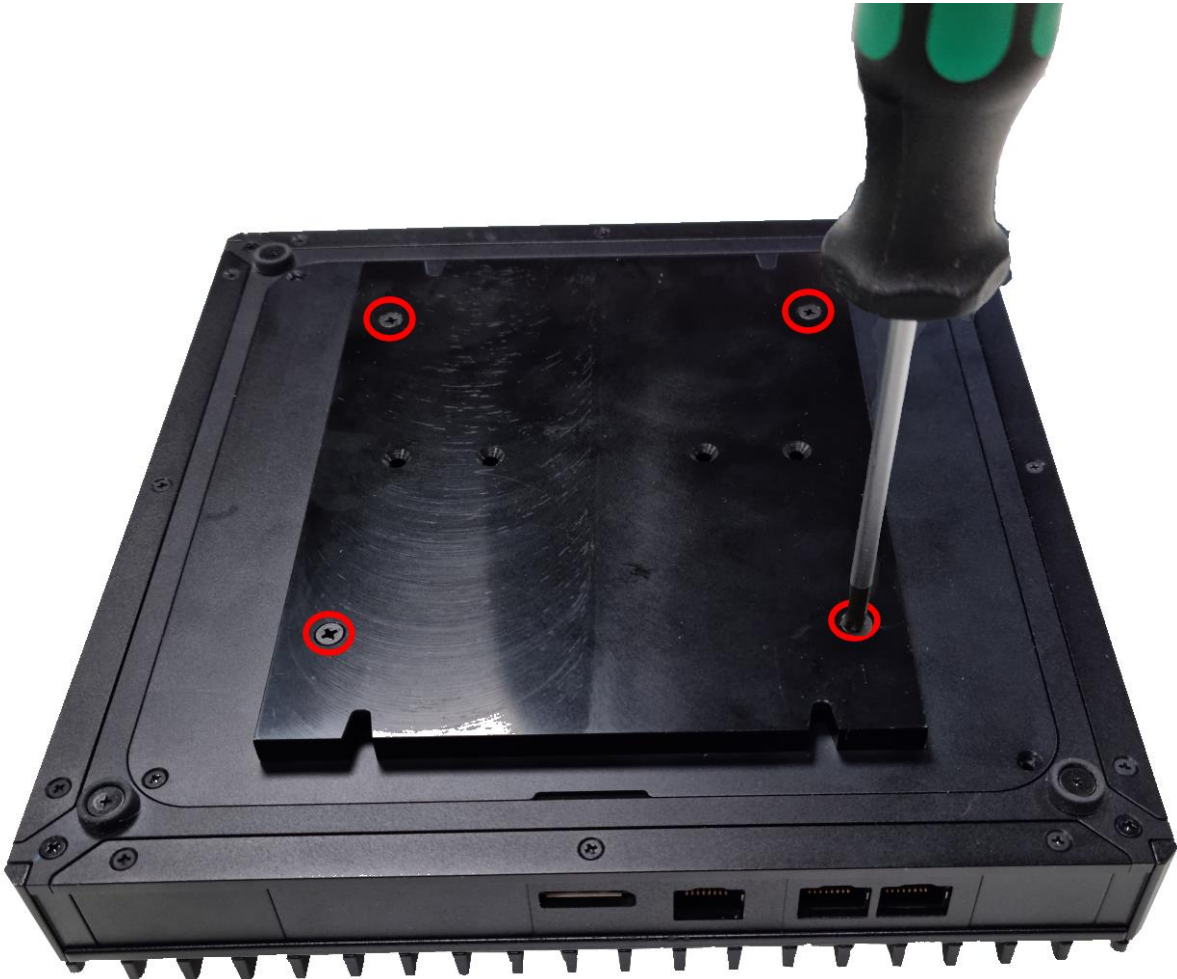


3. Place the mounting adapter bracket on the bottom part of Tensor-PC device



NOTE: Make sure that sides without the slots on the adapter are directed in parallel with ribs on the top cover. When connected to any surface the Tensor-PC ribs must be perpendicular to the ground.

4. Assembly the adapter by tightening the Phillips screws as shown below:

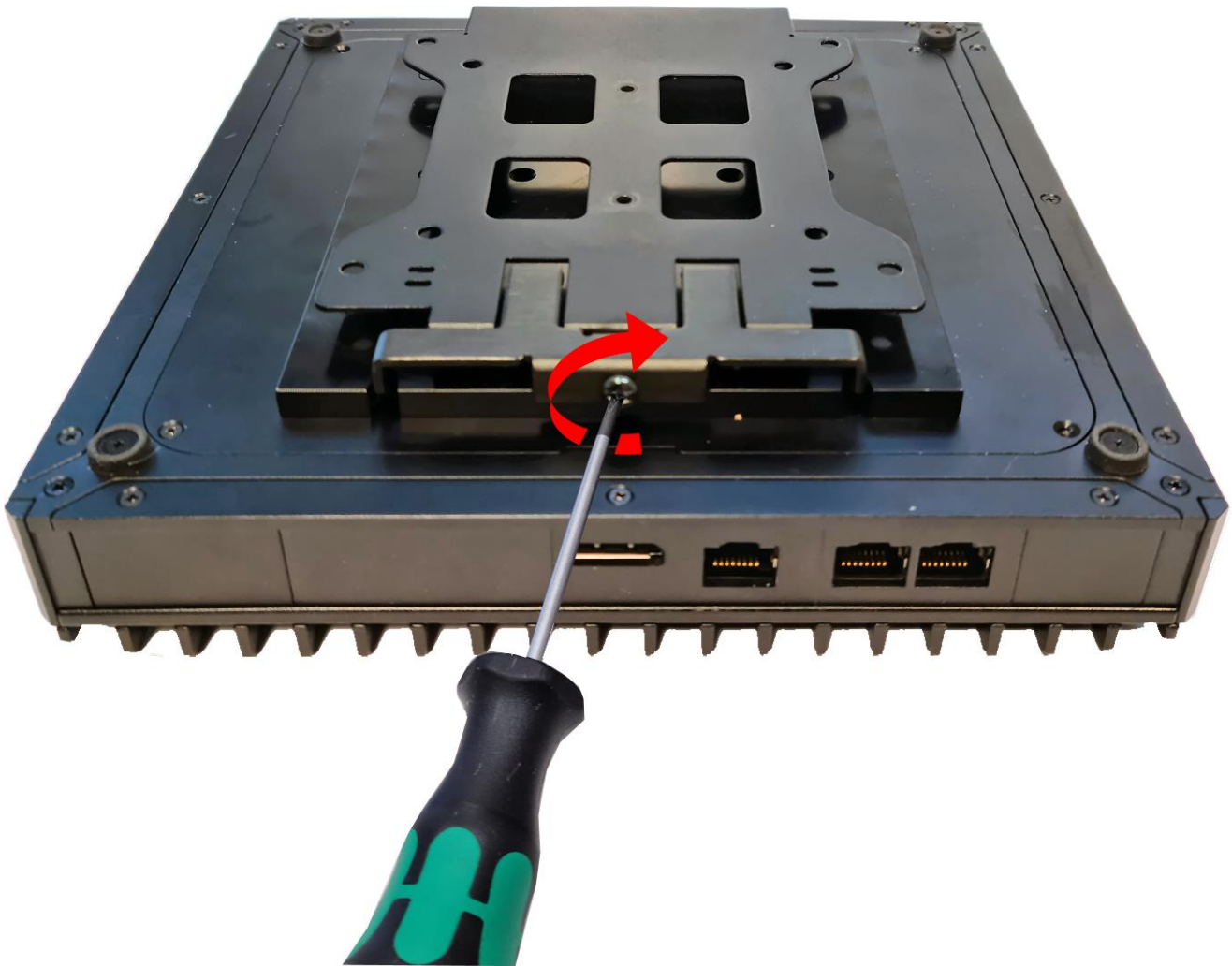


5. Install TENSOR-PC onto VESA mount, starting with the lower hooks



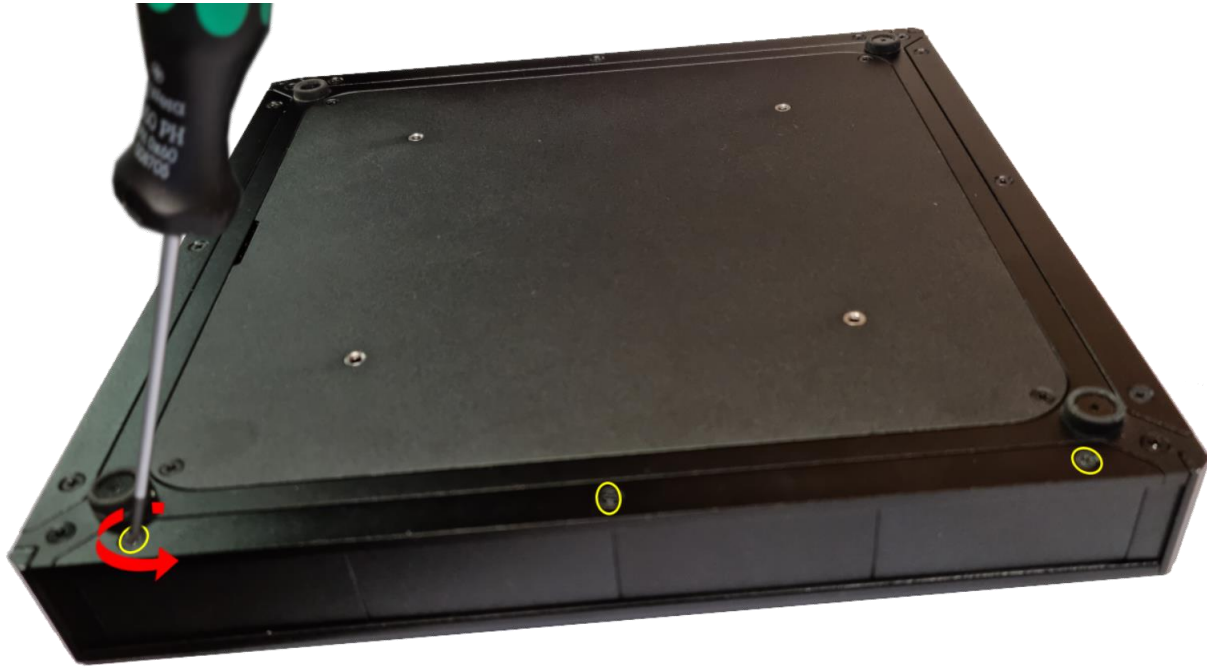


6. Tighten the Phillips screw on the VESA bracket in order to fix it on the adapter.



DIN - case when the Tensor-PC should be placed on DIN rail by its side part.

1. Disassembly the the side panels as shown below:

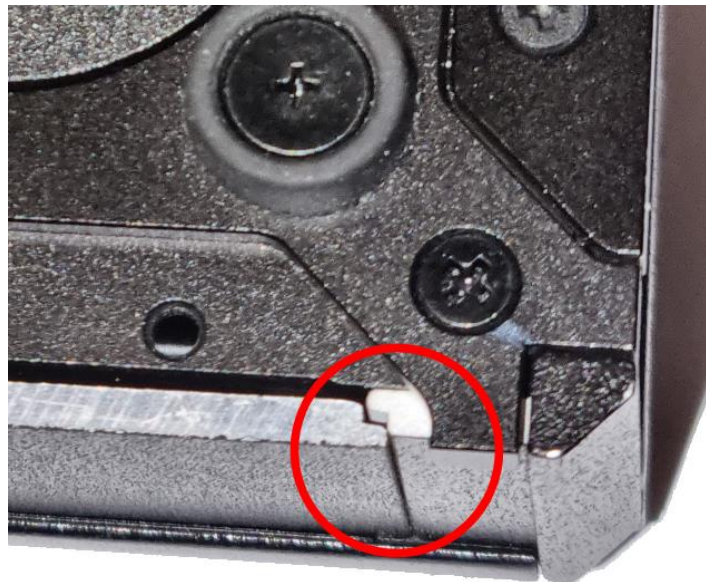


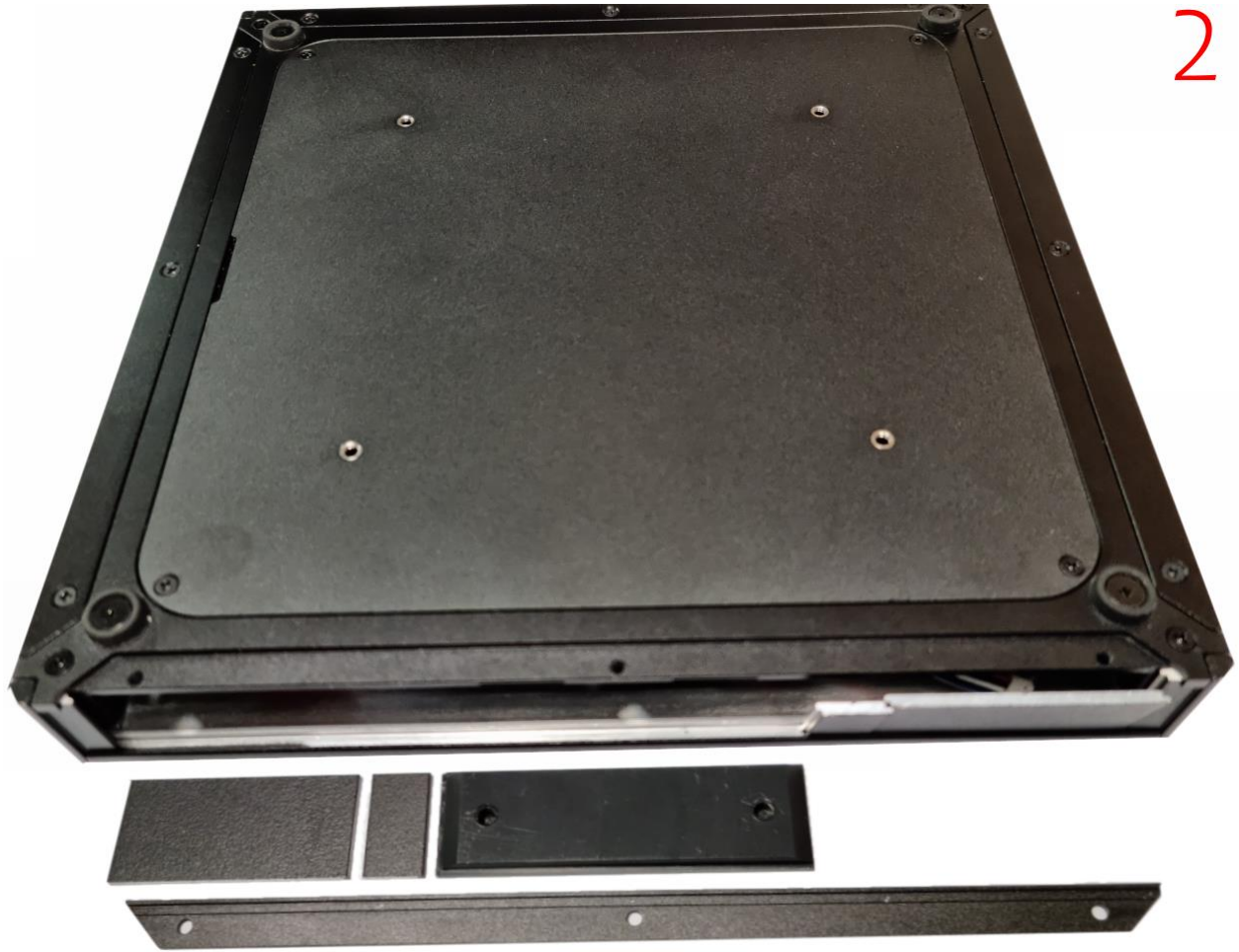


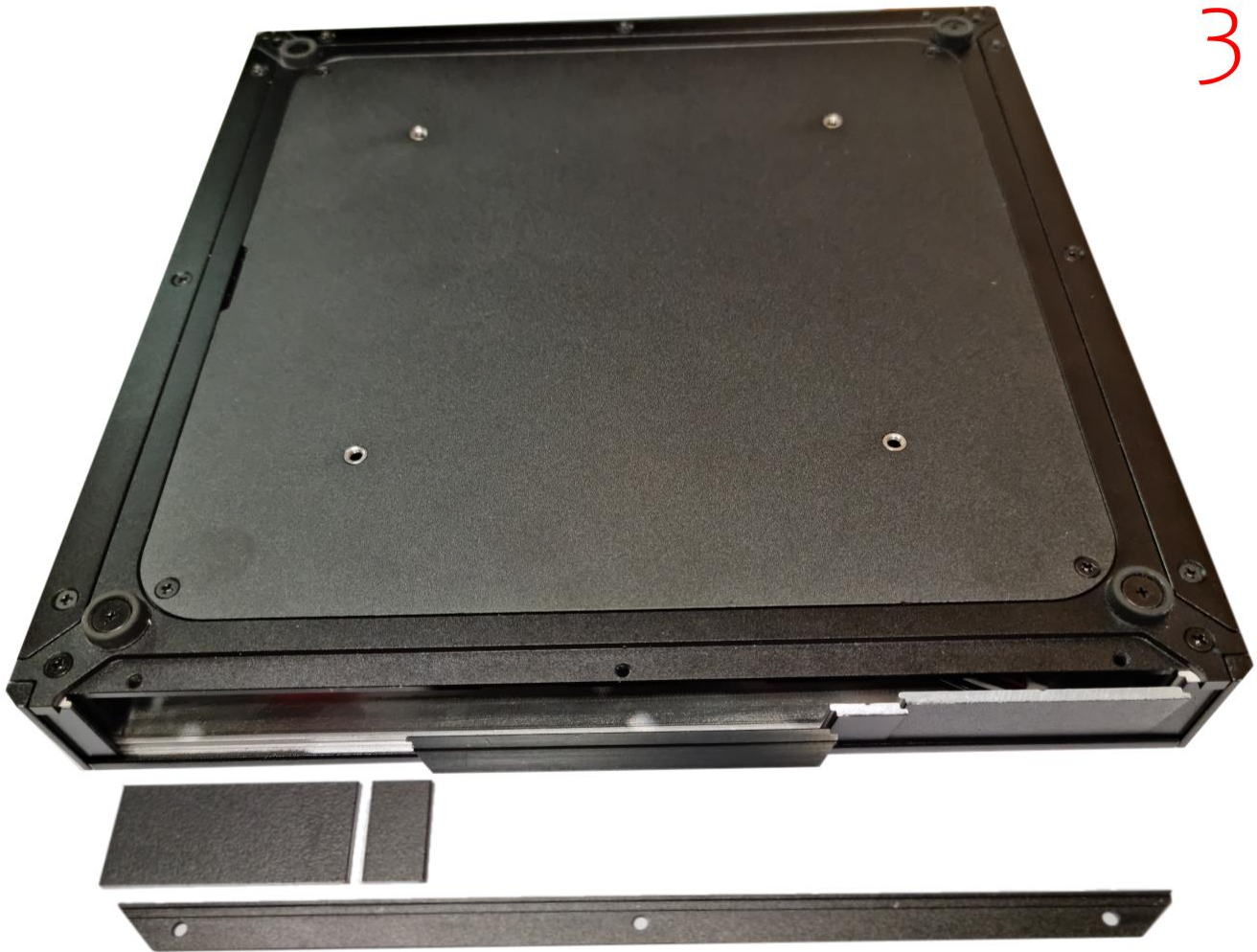


2. Assembly the side DIN adapter with the side panels as shown below:





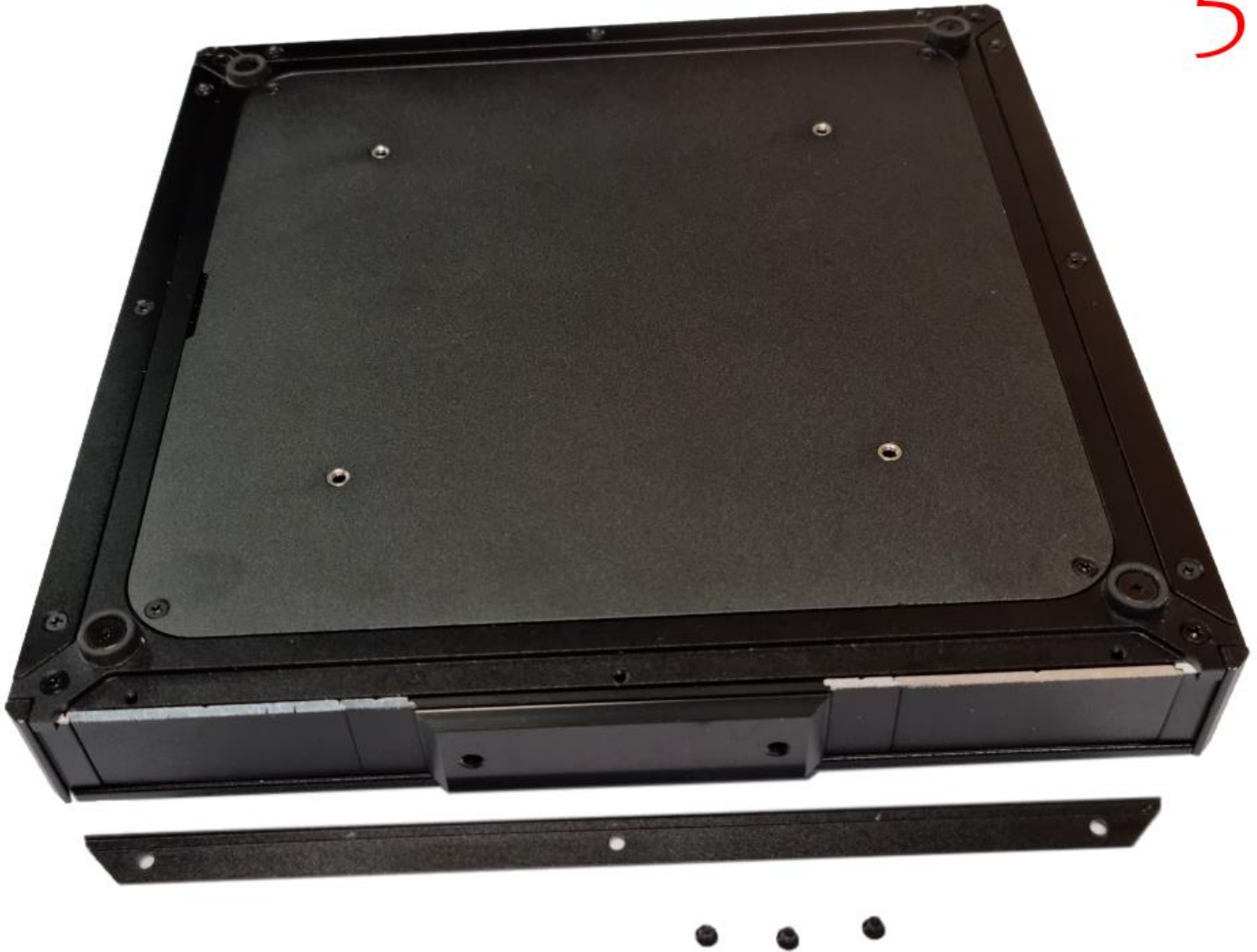


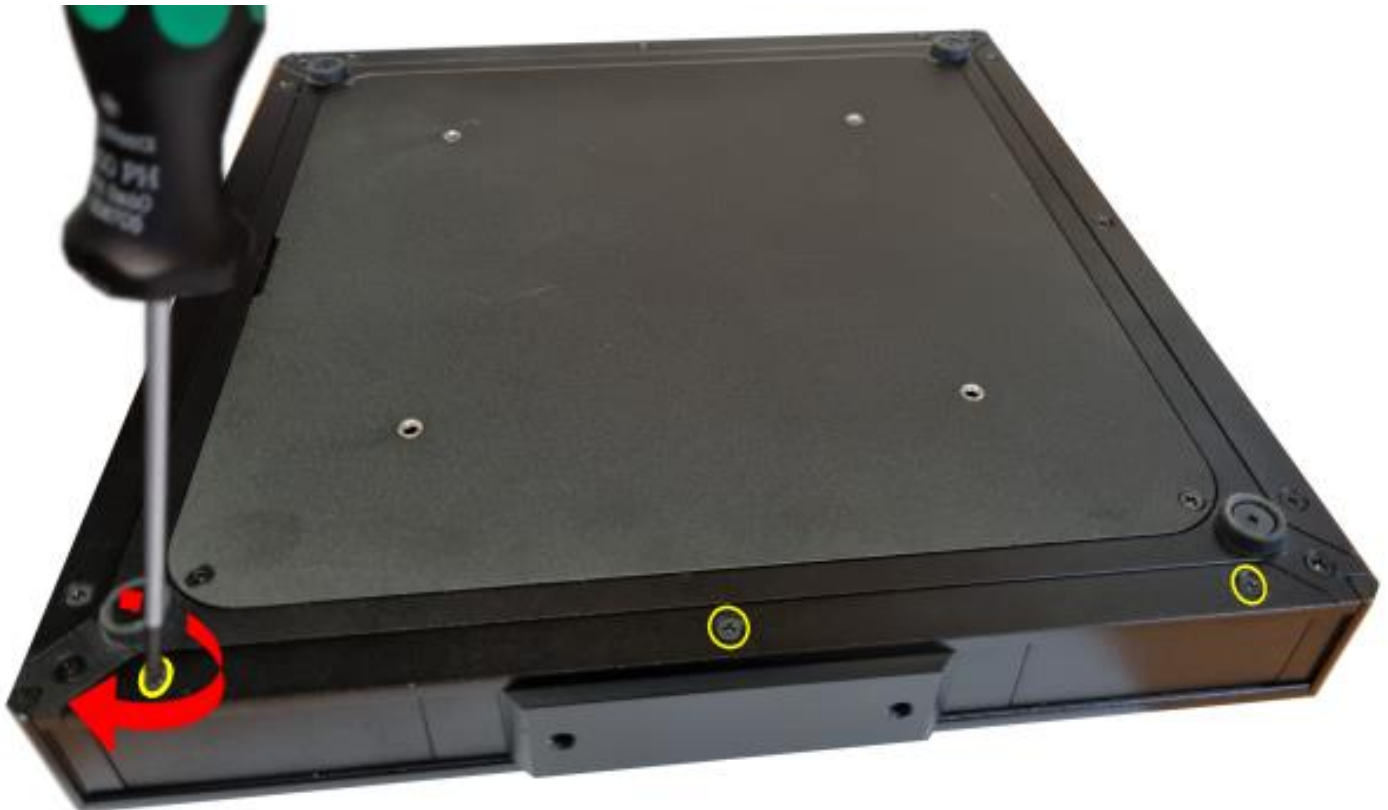


4



5





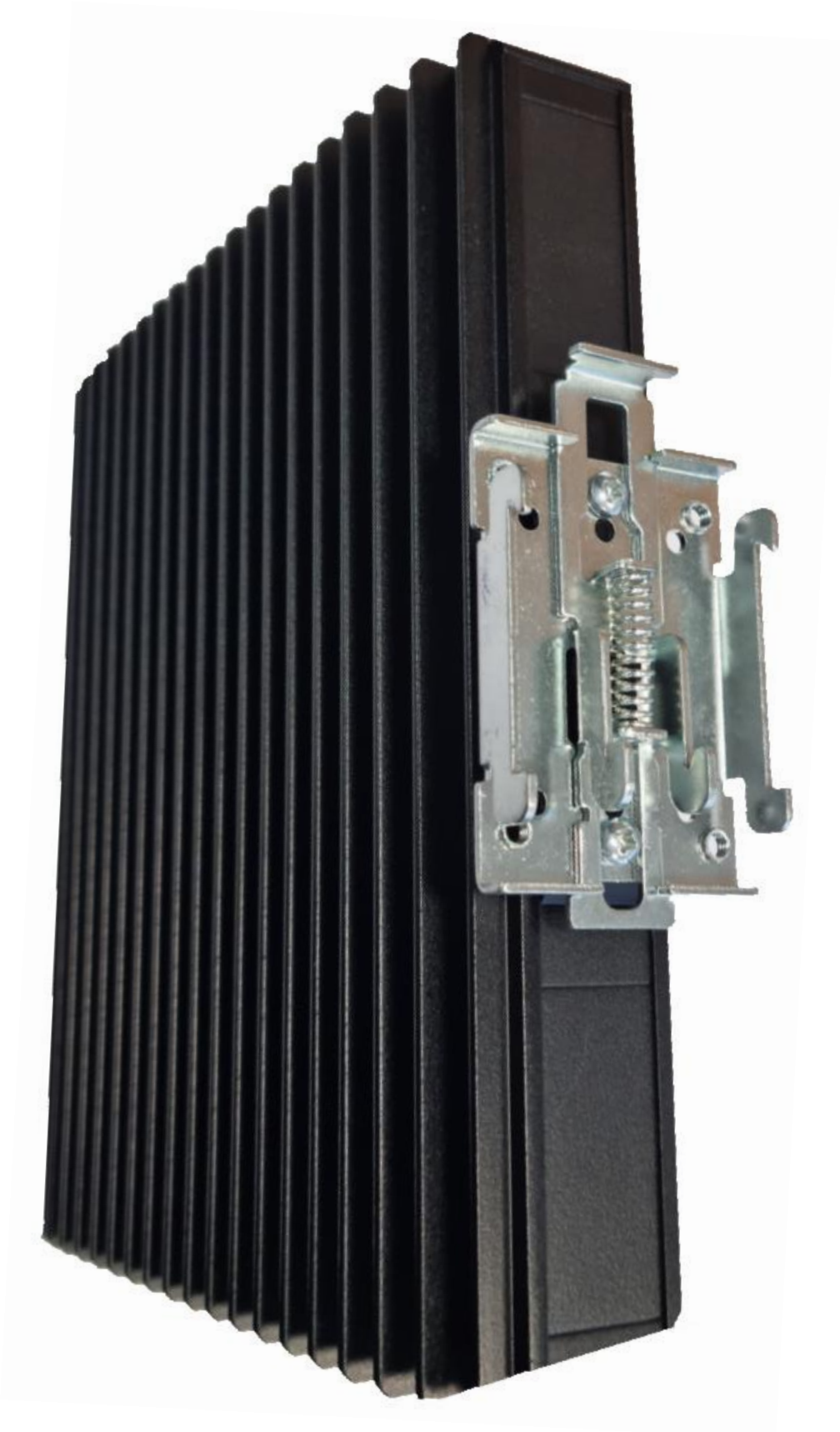


3. Assembly the DIN bracket on the adapter, as shown in the picture below:



4. Tighten the 2 Phillips screws in order to fix the bracket on the adapter











Troubleshooting

Tensor-PC does not boot

Power problem

Check that the LED on the PSU is lit green. If not, check that it is connected to a functional AC outlet.

Check that the power button on the front panel is lit. If not, check that the DC plug is inserted correctly into the jack at the rear panel of Tensor-PC.

RAM problem

The most common reason is RAM that is not installed or incompatible. Tensor-PC supports DDR4 DIMM. Note that registered (buffered) DIMM is not supported.

Check that RAM is compatible and installed correctly.

If you have multiple DIMM modules you may leave only one and change its slot.

Try powering up again until RAM is detected properly.

Storage or missing operating system

Ensure a storage device is installed and detected in BIOS settings.

Check boot order in BIOS settings.

Ensure that an operating system is installed on the selected storage device.

Technical support

For any issue please email support@fit-iot.com or call +972-4-8290134

Warranty and RMA

Warranty

- Compulab guarantees products against defects in workmanship and material for a period of 60 months from the date of shipment
- Warranty on the storage device is 24 months only
- Warranty on the replaceable battery is 24 months only
- Your sole remedy and Compulab's sole liability shall be for Compulab, at its sole discretion, to either repair or replace the defective product at no charge
- This warranty is void if the product has been altered or damaged by accident, misuse or abuse

RMA

Keep the original package for shipping in case of hardware failure.
In case of HW failure of a Tensor-PC under warranty, please consult:
www.fit-iot.com/web/technical-support/rma/

Regulatory Information



Tensor-PC

Manufacturer: Compulab Ltd.

This device complies with Part 15 of the FCC Rules.

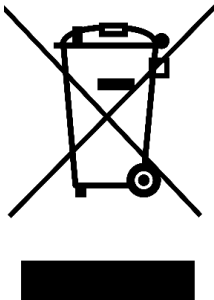
Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Statement

Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Compulab Ltd.) could void the user's authority to operate the equipment.

WEEE



Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You must dispose this electrical item separately from general household waste when it reaches the end of its useful life. Take your PC to your local waste collection point or center. This applies to all countries of the European Union, and to other European countries with a separate waste collection system.