Operating Instructions
Touch-Panel

Touch-it XPC

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1. Pointers

1.1. Used symbols

Symbols

The following symbols are used in this instruction manual:

DANGER!
Denotes a direct threat of danger. Not observing this pointer may be life threatening or lead to serious injuries.

CAUTION!
Denotes a possibly dangerous situation. Not observing this pointer can cause minor injuries or lead to material damages.

INFORMATION!
Denotes application pointers and other useful information.

1.2. General pointers

INFORMATION!
This device was manufactured according to DIN EN ISO 9001 and left the factory in a perfect state.
In order to maintain this state and to assure the safe operation, the user must consider the pointers and warning remarks, which are contained in this instruction manual.

1.3. Safety pointers

DANGER!
In the case of damage of the box, the line or any other part of the device, disconnect it immediately from the supply voltage and shut it down.

Disconnect every connection line before opening the device.

DANGER!
Only the qualified staffs are allowed to carry out the repairs. The incorrect repair may lead to serious danger for the user.

Avoid any penetration of liquid or dust.
Do not expose the device to humidity for a long time!

Intended Use
These products are **not** designed, developed and produced for use, which pose fatal risks and dangers that may cause death, injuries, serious physical impairments or other loss, if no exceptional security measures are ensured. Thus there are limitations for use in the monitoring of nuclear reactions in nuclear power plants, flight control systems, air traffic control, in the control of mass transportation, medical life support systems and control of weapon systems.

CAUTION!
If the device is used for other purposes or incorrectly operated, Christ Elektronik GmbH will not hold damages liable.

Do not operate the touch-sensitive surface of the screen with any abrasive or sharp-edged objects.
Do not clean it with detergents containing solvent or acid.

Protect the **Touch-Panel** against caustic chemicals and long solar radiation.

INFORMATION!
Please check immediately:
Is the device damaged or is any equipment missing (see chapter 4.1.)?
In the case of defect please inform us immediately.

2. General

This instruction manual concerns the following **Touch-Panel** version:

1. Series	**Type**	
	Touch-it XPC	

2. Housing	**Type**	**Installation**
	Vesa	desk stand, surface mounting
	Front Panel	fastening clamp
	In Wall	in the wall
	Open Frame	for dashboard

3. Display	**Screen size**	**Native resolution**
	10,4“ (26,4 cm)	800 x 600, 1024 x 768
	15,0” (38,1 cm)	1024 x 768
	Technology	**Colours**
	TFT	262.000

4. Backlight		
	1	CCFL switched
	2	CCFL controlled
	3	LED

5. Processor	**Type**	**Frequency**
	Intel Atom N270	1,6 GHz, FSB 533 MHz

6. Chipset	
	Intel® 945GSE + ICH7M

7. Memory		
	RAM	2 GB, DDRII

8. Storage		
	Compact Flash	8 GB, 133x
	Hard Disk Drive	250 GB, 2,5”, SATA

9. Operation		
	F	Foil touch

Table 1: overview **Touch-it XPC**

Please refer to the order number for further information.

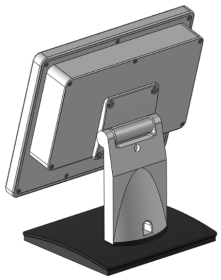
3. Housing Types

In order to mount the touch panel, the following variants are available:

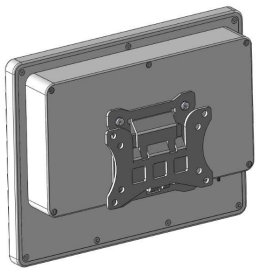
3.1. VESA

Picture 1: VESA mounting variants

front view



desk stand



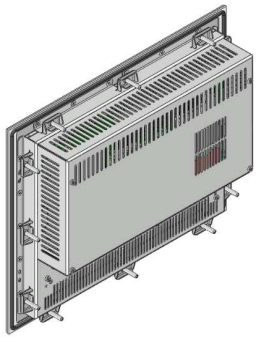
surface mounting

individual holder-system

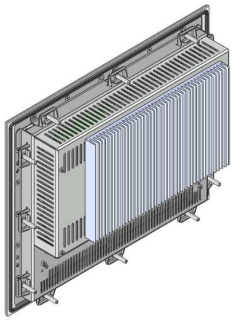
3.2. Front Panel

Picture 2: Front Panel mounting

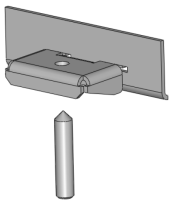
front view



with fan



fanless

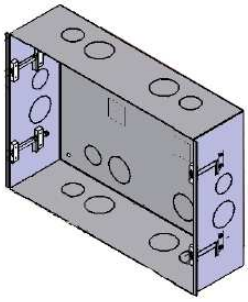


fasting clamp

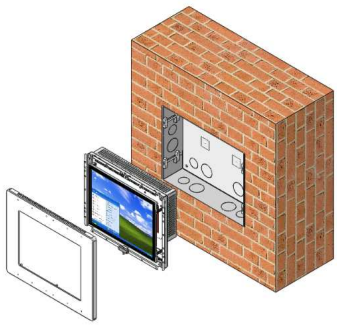
3.3. In Wall

Picture 3: wall mounting housing

front view



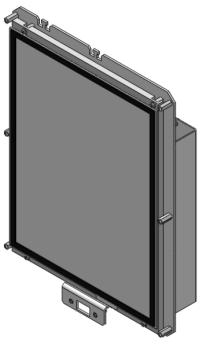
box



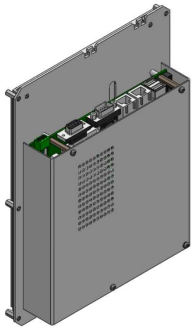
in the wall

3.4. Open Frame

Picture 4: open frame (with front USB)



front view



reverse view

4. Commissioning

4.1. Equipment

The Touch-Panel contains the following equipment:

4.1.1. Power Supply for VESA Housing

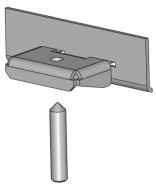
Picture 5: power supply

The Touch-it XPC VESA housing needs a power supply with Hirose connector (see chapter 4.3).

A 24VDC power supply is included in the delivery.

4.1.2. Fasting Clamp for Front Panel Housing

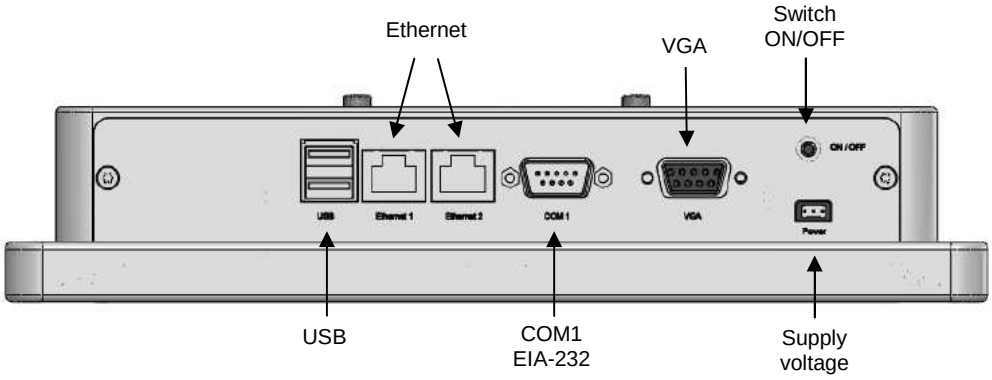
Picture 6: fasting clamp



Before you begin installing the Touch-Panel, into front panel please make sure that the 10 clamps with setscrews have been shipped.

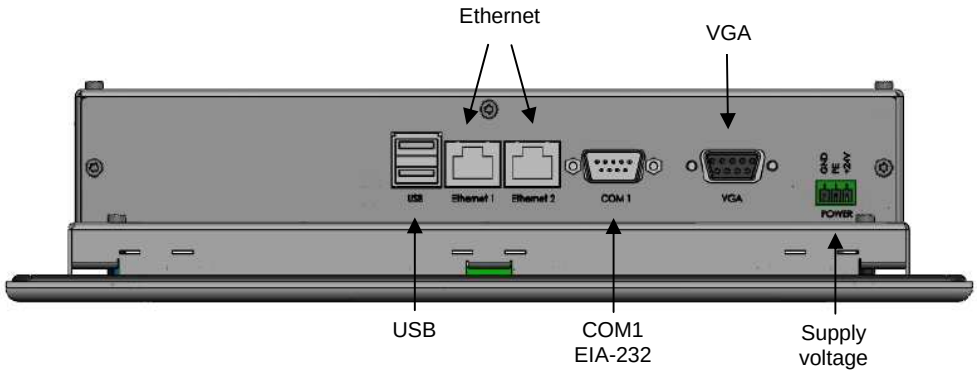
4.2. Connector Side

Picture 7: connector side **Touch-it XPC** VESA housing



The interfaces are described in the chapter 7.

Picture 8: connector side **Touch-it XPC** In Wall/ Front Panel housing



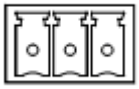
The interfaces are described in the chapter 7.

4.3. Supply voltage application

Picture 9: connection supply voltage VESA housing

Pin 1: 24 $V_{DC\ nominal}$
Pin 2: PE
Pin 3: GND

Mating with power supply plugs:
Hirose connectors RP34L-5PA-3SC or RP34L-5LP-3SC



1 2 3

Picture 10: connection supply voltage for all housing types but VESA

Pin 1: GND
Pin 2: PE
Pin 3: 24 $V_{DC\ nominal}$

Mating with power supply plugs:
phoenix connector MC 1,5/ 3-ST-3,5 BK

5. Software

5.1. System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

Press “F1” to RESUME

Write down the message and press the “F1” key to continue the boot up sequence.

5.2. System Configuration Verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The CMOS memory has lost power and the configuration information has been erased.

The XPC Device CMOS memory has an integral lithium battery backup for data retention.

5.3. Award BIOS Setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup
Power on the computer and press “Del” immediately. This will allow you to enter Setup.

Standard CMOS Features
Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features
Use this menu to set the advanced features available on your system.

Advanced Chipset Features
Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals
Use this menu to specify your settings for integrated peripherals.
(Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup
Use this menu to specify your settings for power management.
(HDD power down, power on by ring, KB wake up, etc.)

5.3.1. Changing Display Resolution

Once in the Setup mode choose the [Advanced Chipset Features] Menu and set the Internal LVDS as follows:

10.4” Display	-> 800x600, 1024x768
15.0” Display	-> 1024x768

Save this configuration by pressing the “F10” and afterwards “Y”.

5.3.2. Changing Boot Priority

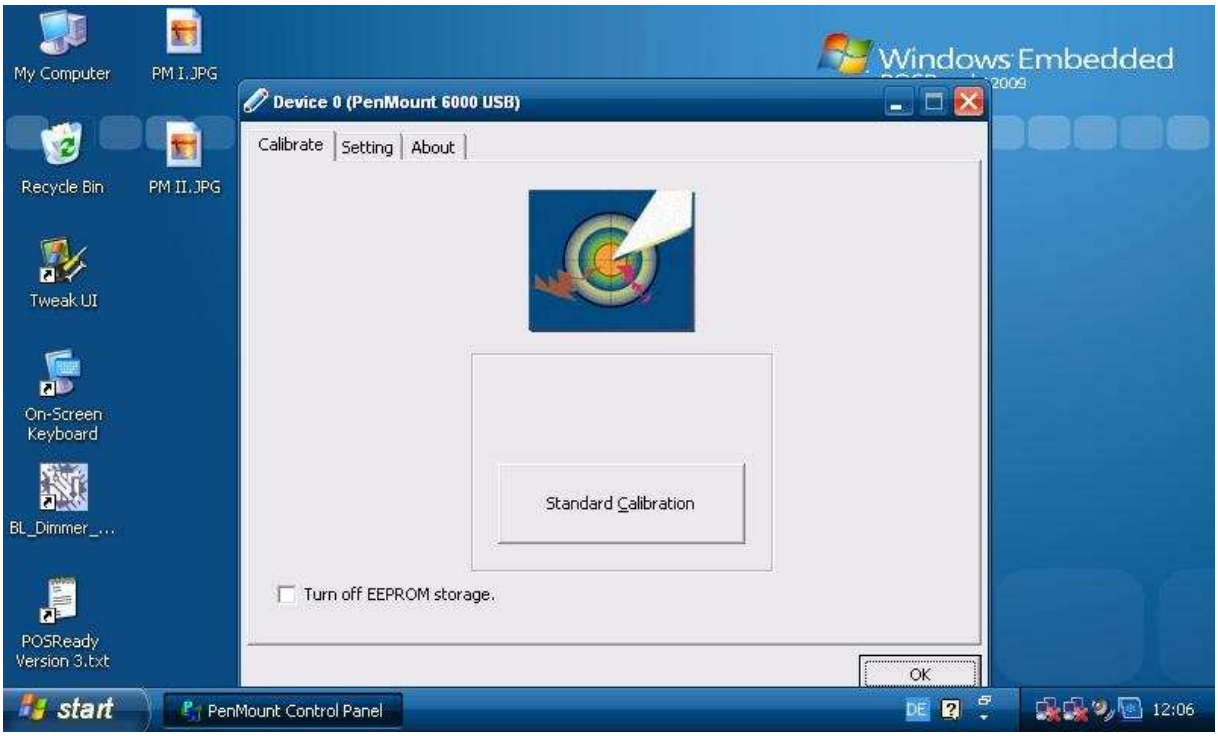
In order to boot from a USB Drive the following settings must be done.
Once in the Setup mode choose the [Advanced BIOS Features] Menu and set the Hard Disk Boot Priority in such a way that the USB-HDD0 Device is first in the boot list.
This can be done using the Page-Up/Down Keys.
Save this configuration by pressing the “F10” and afterwards “Y”.

6. Touch Panel Driver

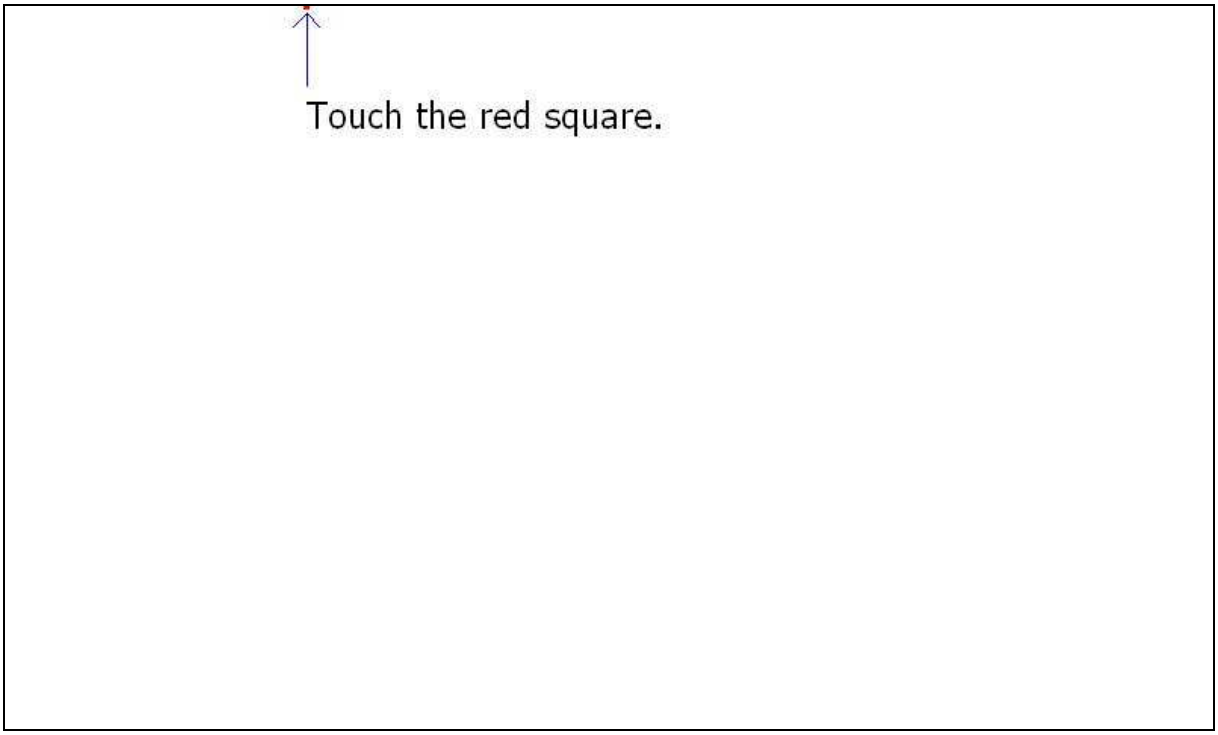
1. Click on [Start] [All Programs] [Pen Mount Universal Driver] [Pen Mount Control Panel]

2. Click on [Pen Mount 6000 USB]

3. Click on [Standard Calibration]



4. Pressing the [Standard Calibration] button on the main window activates the calibration screen to carry out calibration of the Touch Panel.
   Briefly touch the centre of the red square splayed on the screen in order as they appear. Once calibration is carried out, the calibrated value is saved. Since the calibrated value is read from the setting file at the time of the next start up, there is no need to carry out calibration again.

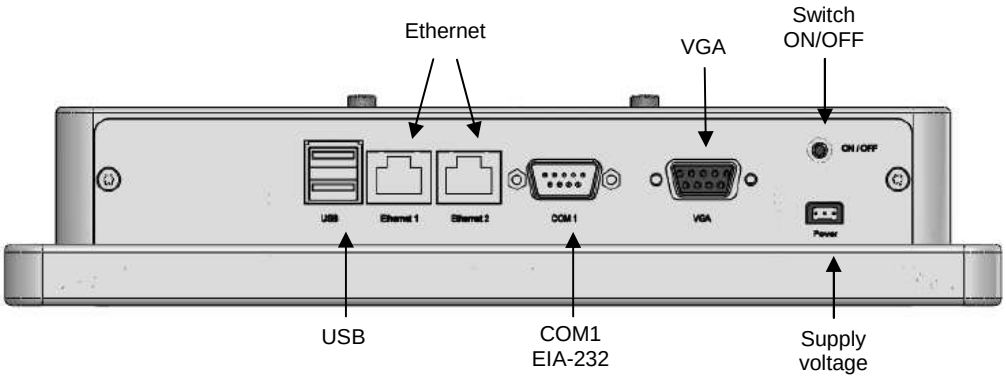


7. Interfaces

The following interfaces are available:

- USB2.0
- Ethernet (LAN, 2x)
- COM (EIA-232)
- VGA

Picture 11: connector side **Touch-it XPC**

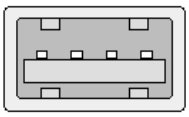


Connection of the supply voltage, see chapter 4.3.

7.1. USB connection

The Touch-it XPC offers two USB ports. The USB connections are provided for the connection of storage media as well as peripheral equipment (USB Mouse or Keyboard).

4 3 2 1

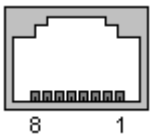


Picture 12: USB Port 1, 2 Connector

Port1:	Port2:
pin 1: +5V	pin 1: +5V
pin 2: Data0 –	pin 2: Data1 –
pin 3: Data0 +	pin 3: Data1 +
pin 4: GND	pin 4: GND

7.2. Ethernet (LAN)

The connection to an Ethernet network (10/100/1000BASE-TX) is carried out with a RJ45 socket. It is recommended to use a CAT. 5 cable or higher for the connection to the network.

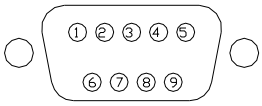


Picture 13: pin assignment Ethernet (RJ45 socket)

pin 1: D1+	pin 5: D3-
pin 2: D1-	pin 6: D2-
pin 3: D2+	pin 7: D4+
pin 4: D3+	pin 8: D4-

The Touch-it XPC offers two Ethernet network interfaces.

7.3. COM1 (EIA-232 interface)

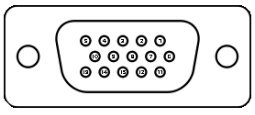


Picture 14: pin assignment EIA-232 interface (DB9 male socket)

COM1

pin 1: DCD	pin 6: DSR
pin 2: RX	pin 7: RTS
pin 3: TX	pin 8: CTS
pin 4: DTR	pin 9: RI
pin 5: GND	

7.4. VGA



Picture 15: pin assignment monitor interface

VGA

pin 1: red	pin 6: GND	pin 11: ID0
pin 2: green	pin 7: GND	pin 12: DDC DATA
pin 3: blue	pin 8: GND	pin 13: H_SYNC
pin 4: n. c.	pin 9: +5V	pin 14: V_SYNC
pin 5: GND	pin 10: GND	pin 15: DDC CLK

8. Maintenance and servicing

8.1. Maintenance plan

INFORMATION!
Only the manufacturer (Christ-Elektronik GmbH) is allowed to replace the internal lithium battery.

The calibration of the touch may be required from time to time.

8.2. Repairs

DANGER!
Only the qualified staffs are allowed to carry out the repairs. The incorrect repair may lead to serious danger for the user.

8.3. Cleaning

DANGER!
Disconnect the **Touch-Panel** from the supply voltage before cleaning.

CAUTION!
Do not clean the touch-sensitive surface of the monitor with detergents containing solvent or acid.

INFORMATION!
Use a humid and soft cloth with gentle soapsuds to clean.

9. Error treatment and Disturbance removal

Error	Cause	Remedy
Touch-Panel does not function	Wrong voltage supply	Use adequate power supply unit 24 V DC
Application download not possible anymore	Voltage failure during a download. This could damage the bootloader.	Send the Touch-Panel for check to Christ-Elektronik
Touch surface damaged		Send the **Touch-Panel** for repair to Christ-Elektronik GmbH
Touch point displaced, which means the pressure point and the indication field are not one above the other	Wrong calibration	Calibrate the **Touch-Panel**
Clock does not work	Battery empty	Only the manufacturer (Christ-Elektronik GmbH) is allowed to replace the internal lithium battery
Operating system does not boot up	CF card damaged or the file system is corrupt	Contact Christ-Elektronik GmbH or your supplier

If any disturbance occurs in the **Touch-Panel**, please contact your supplier or our customer service department:

Telephone +49 (0)8331 8371 – 490
Fax +49 (0)8331 8371 – 99
E-Mail info@christ-elektronik.de

10. Technical Specifications

Touch-it XPC	104	150
Display		
Screen Size	10,4“ (26,4 cm)	15” (38,1 cm)
Display Dimensions [mm]	215 x 162	304 x 228
Native Resolution (Pixel)	800 x 600, 1024 x 768	1024 x 768
Technology	TFT	
Colours	262.144	
Backlight	LED	CCFL
Luminance [cd/m²]	350	
Operation		
Operation	Touch	
Touch Technology	analogue, resistive foil touch	
System		
Processor	Intel® Atom™ N270 1,6 GHz	
Memory	2 GB DDRII RAM	
Storage	Compact Flash (8GB, 133x), Hard Disk Drive (250GB, 2,5” SATA)	
Operating System	Microsoft® Windows® XP Embedded Standard, Linux on request	
Supplied Software	IIS Components, Page File Support, Enhanced Write Filter - RAM / API, EWF Manager Console, EWF NTLDR, System Restore, On-Screen Keyboard, German / English Language Support, Media Player 11, …	
Interfaces		
USB	2 x USB2.0 Typ A	
LAN	10/100/1000 MBit Ethernet (RJ45 x 2)	
Serial Port	EIA-232	
VGA	monitor port (DB15)	
Audio (optional)	Line In, Line Out, Mic-In	
Power Supply		
Supply Voltage (nominal)	24 V DC	
Voltage domain	12 – 36 V DC	
Power (nominal) [W]	24	30
Dimensions		
VESA Housing		
- Front (B x H) [mm]	264 x 209	361 x 288
- Box [mm]	237 x 137	283 x 210
- Depth [mm]	55	60
WALL / Front Panel Housing		
- Front (B x H) [mm]	300 x 246	385 x 309
- Box [mm]	261 x 213	346 x 276
- Installation Depth with fan [mm]	59	59
- Installation Depth fanless [mm]	67	67
- Installation Aperture [mm]	265 x 217	350 x 280

Touch-it XPC	104	150

Material

Front	anodised aluminium	
Chassis (wall, front panel)	galvanised metal	
Chassis VESA	anodised aluminium	
Weight [kg]	2,5	4,6

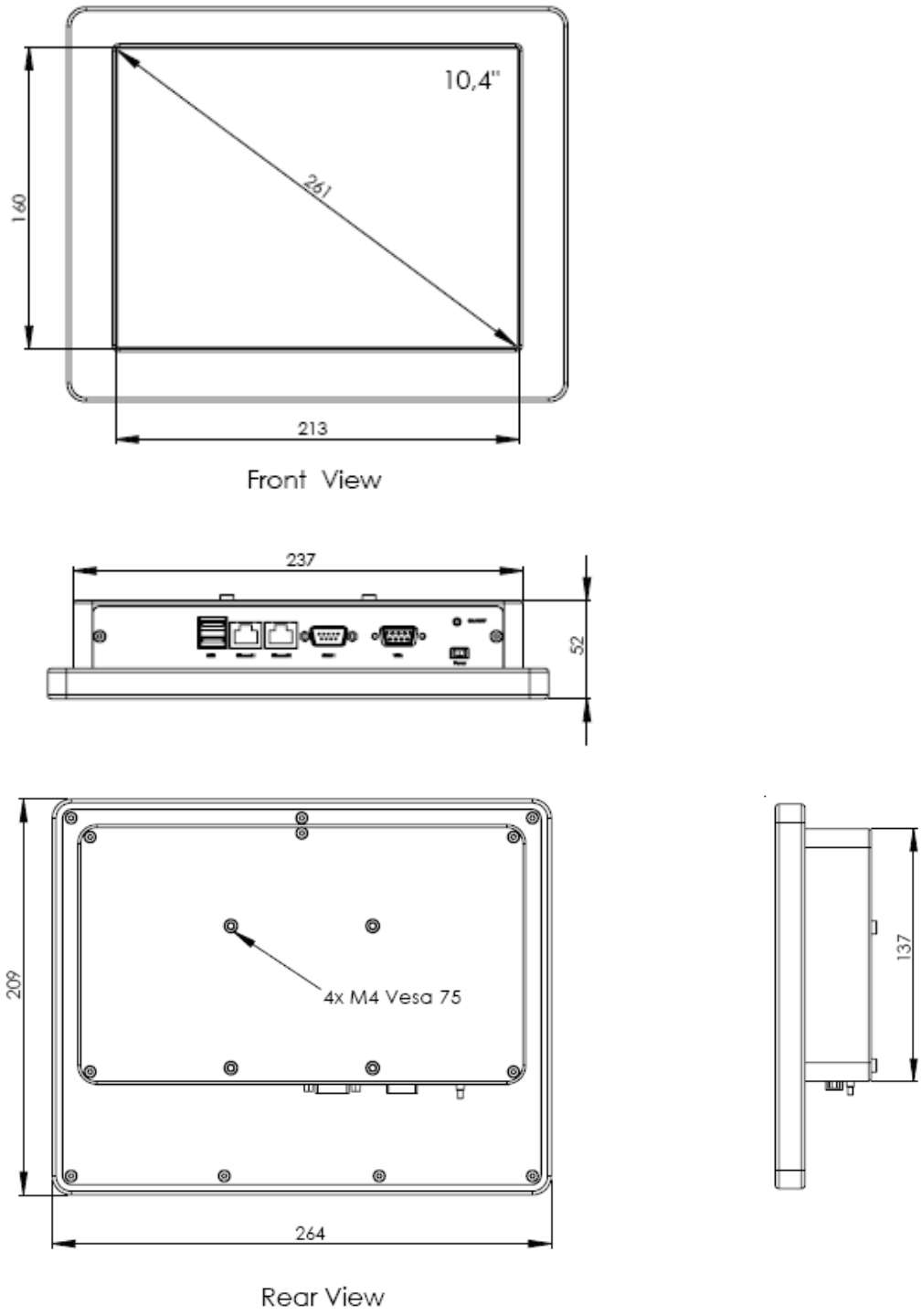
User Environment

Operating Temperature	0 to +50 ℃
Storage Temperature	-10 to +70 ℃
Humidity	5% to 80% (non condensing)
Degree of Protection (Front)	IP 65
Degree of Protection (Chassis)	IP 20
Certification	CE, EN55022, EN55024, EN60950-1, DIN EN ISO 9001 This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

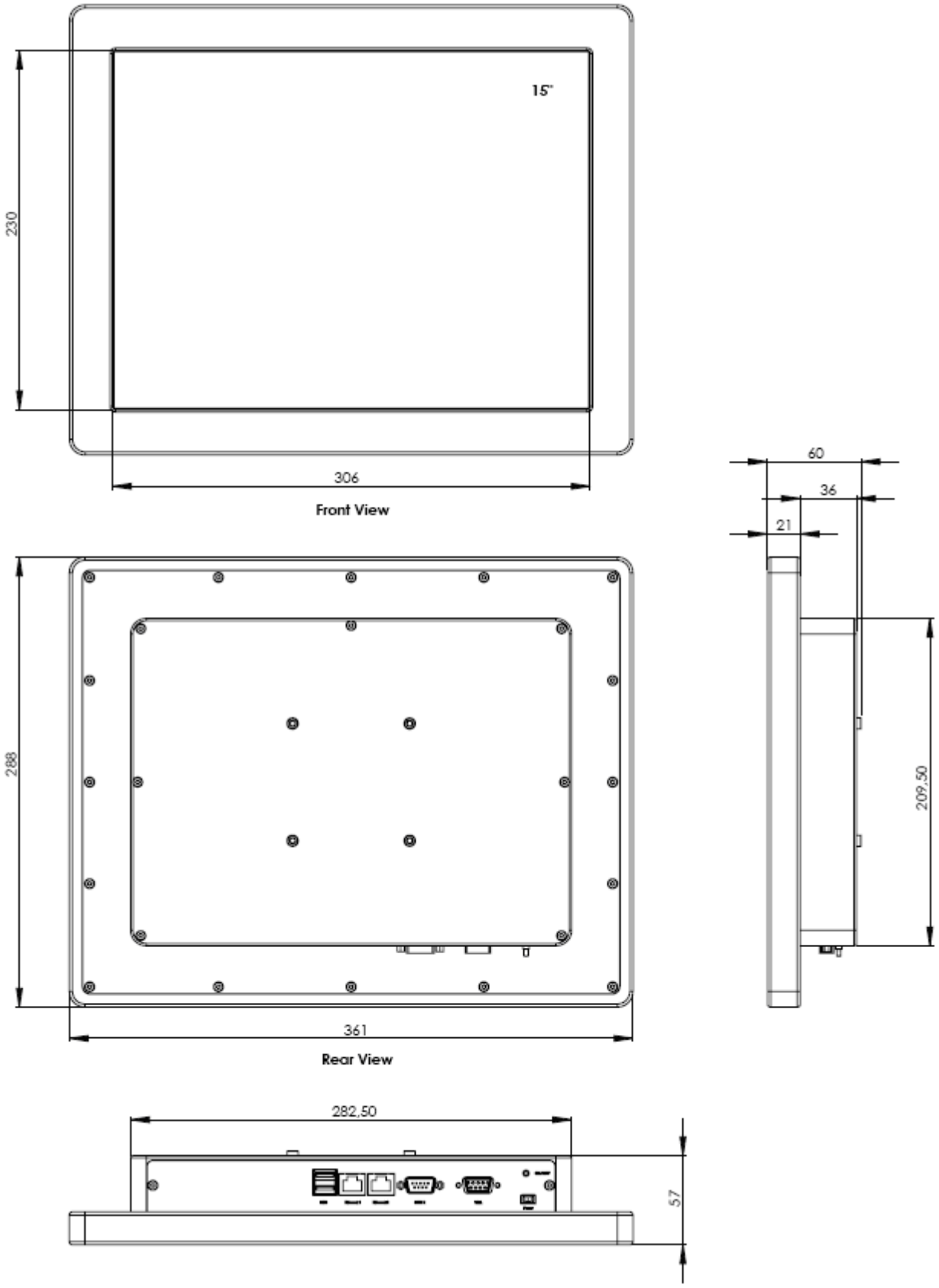
11. Scale Drawing

11.1. VESA Housing

Picture 16: dimensions **Touch-it XPC 10,4”**

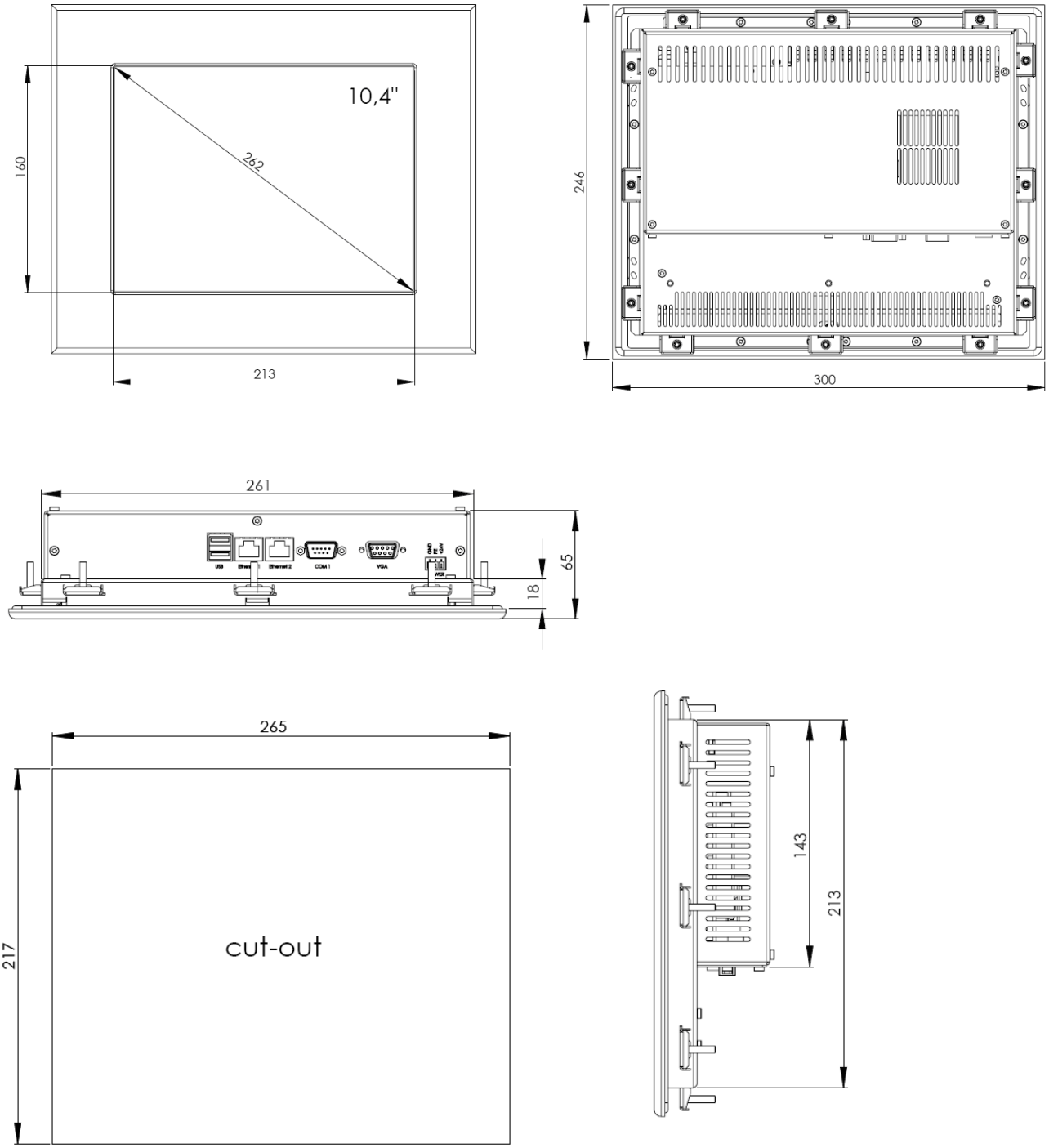


Picture 17: dimensions **Touch-it XPC 15**”

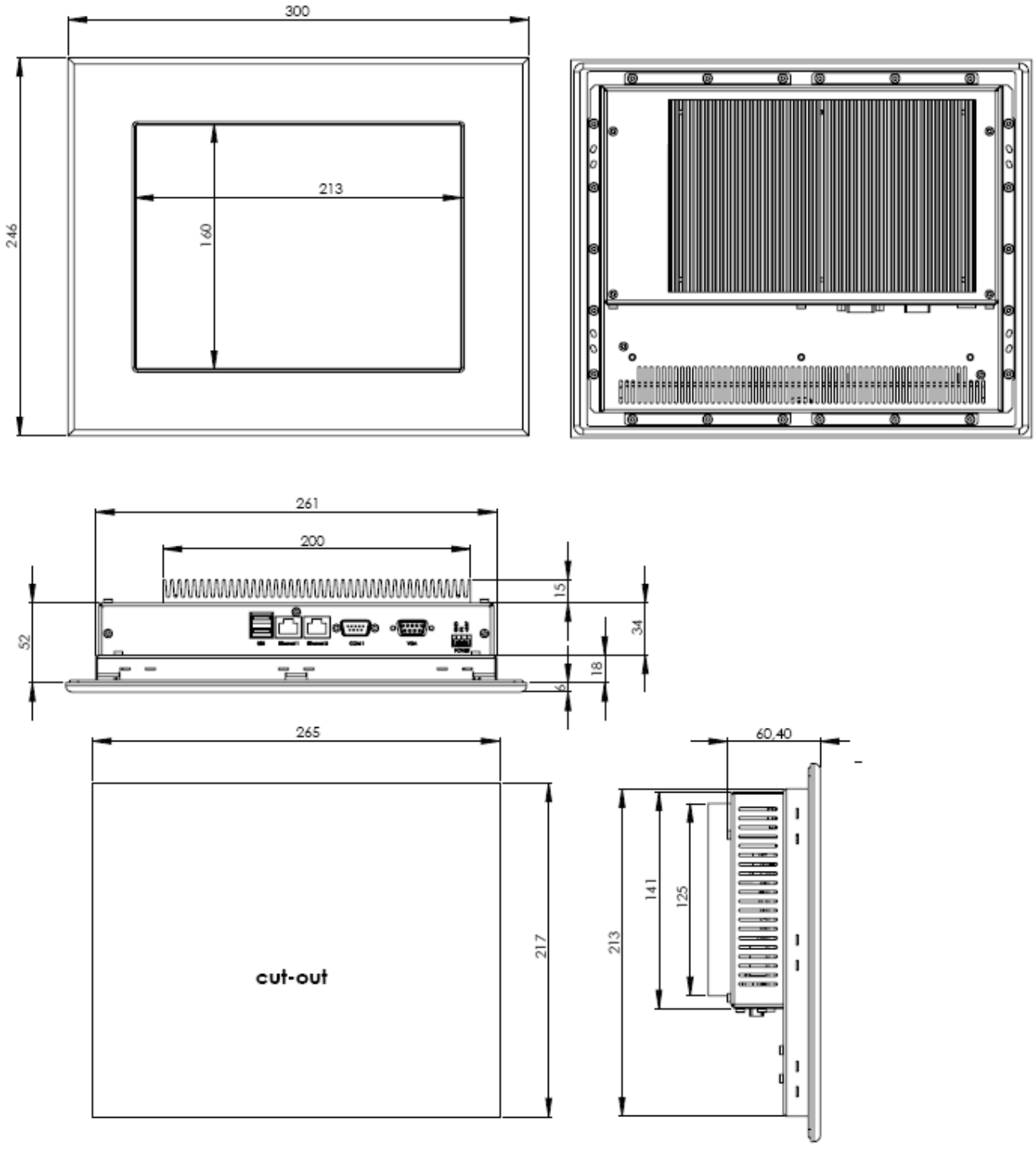


11.2. Front Panel Housing

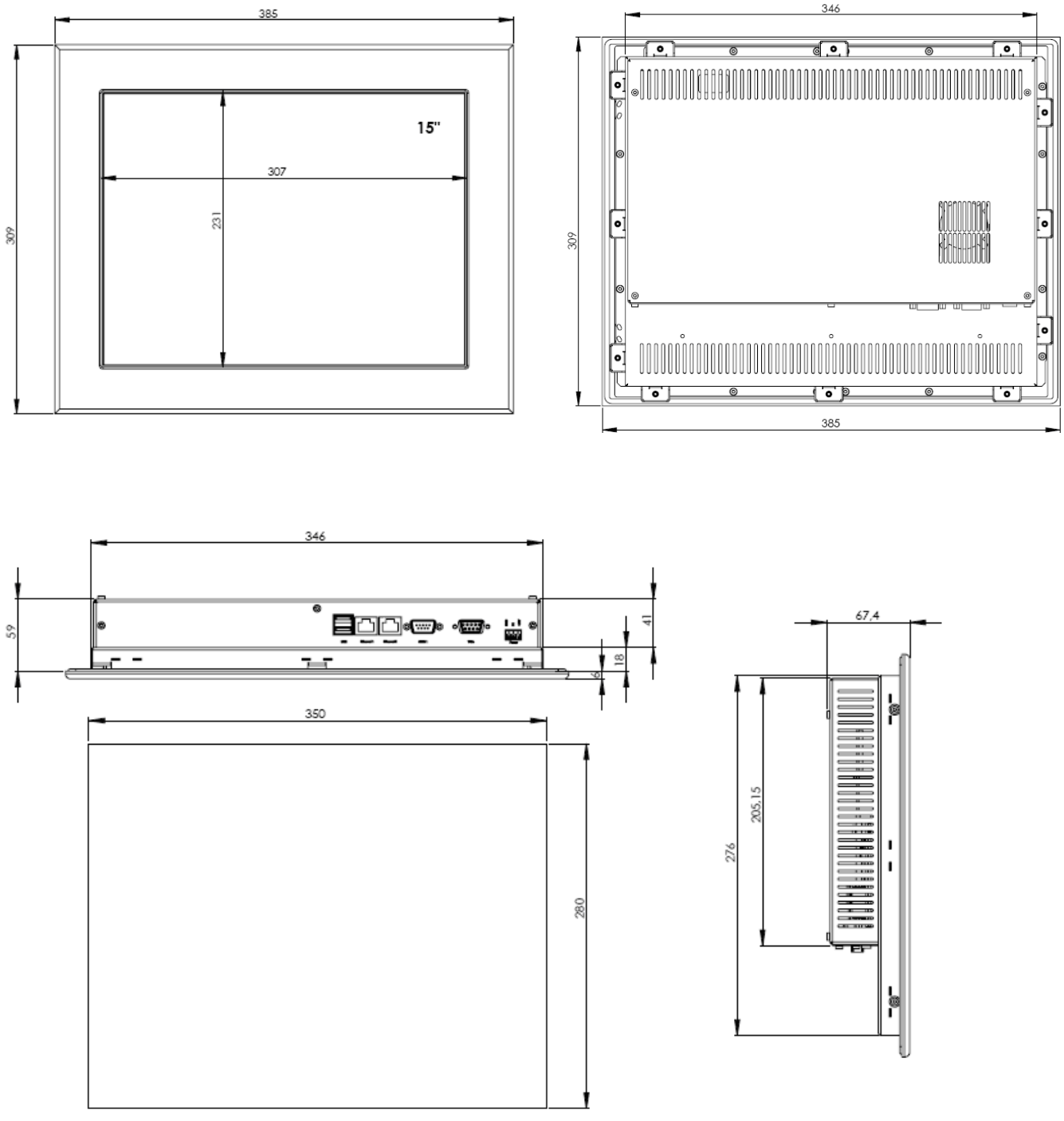
Picture 18: dimensions **Touch-it XPC 10,4”** with fan



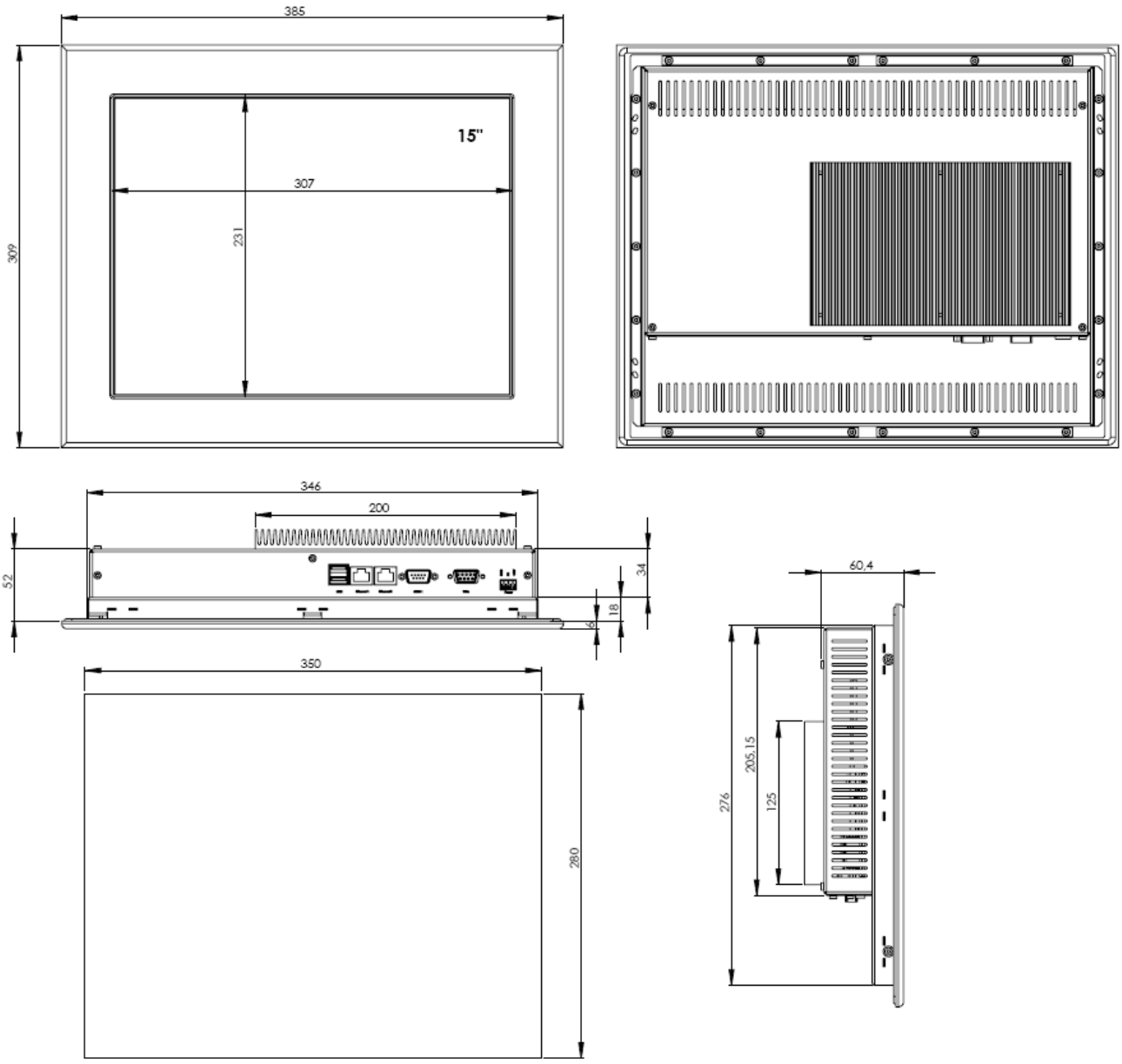
Picture 19: dimensions **Touch-it XPC 10,4”** fanless



Picture 20: dimensions **Touch-it XPC 15”** with fan

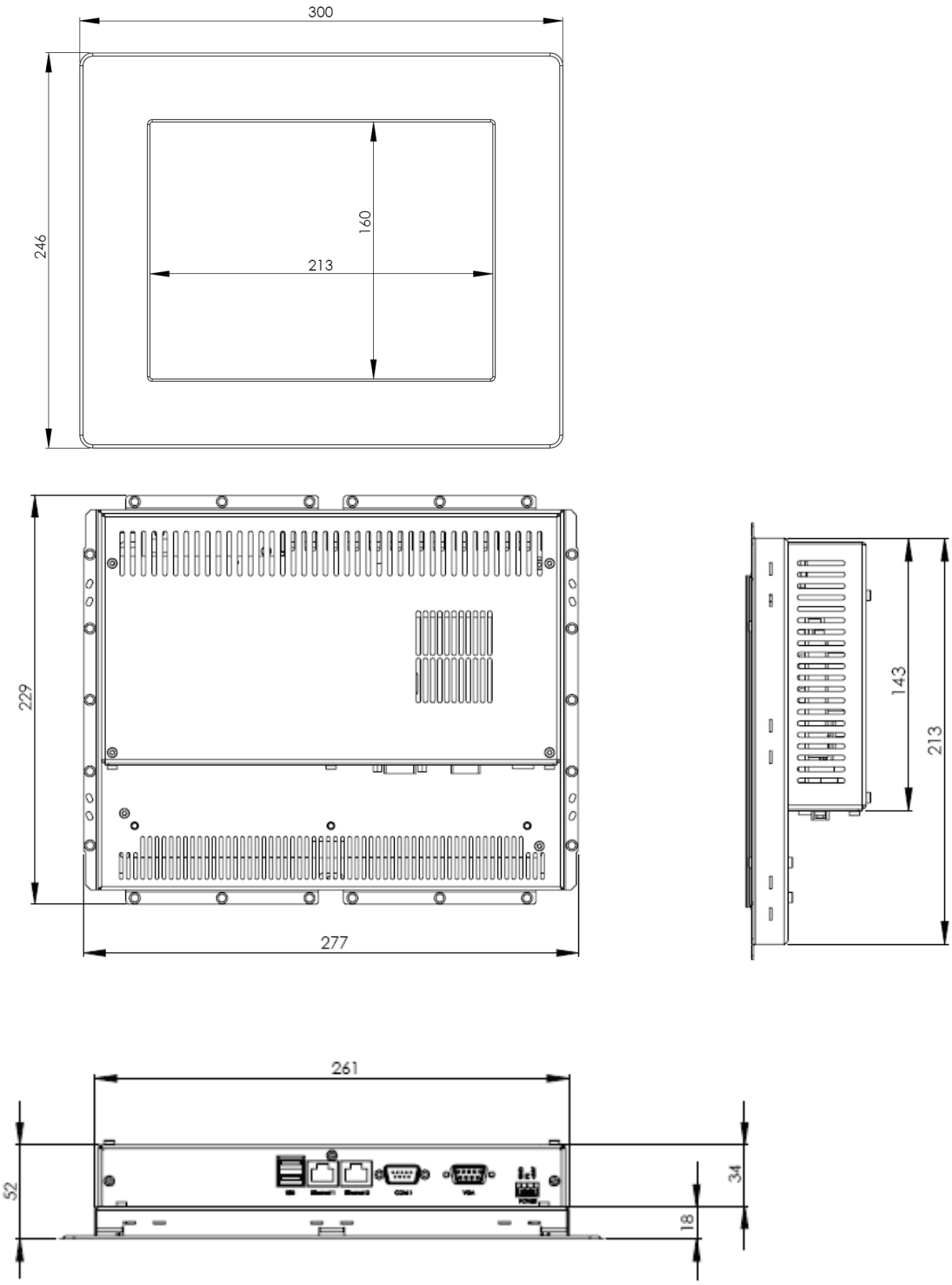


Picture 21: dimensions **Touch-it XPC 15”** fanless

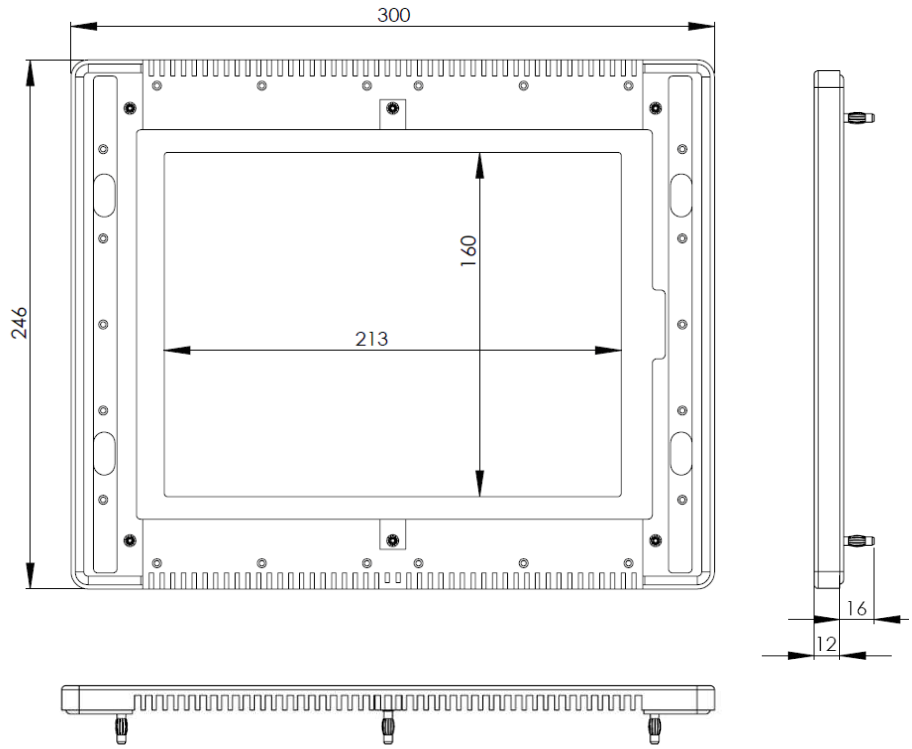


11.3. In Wall Housing

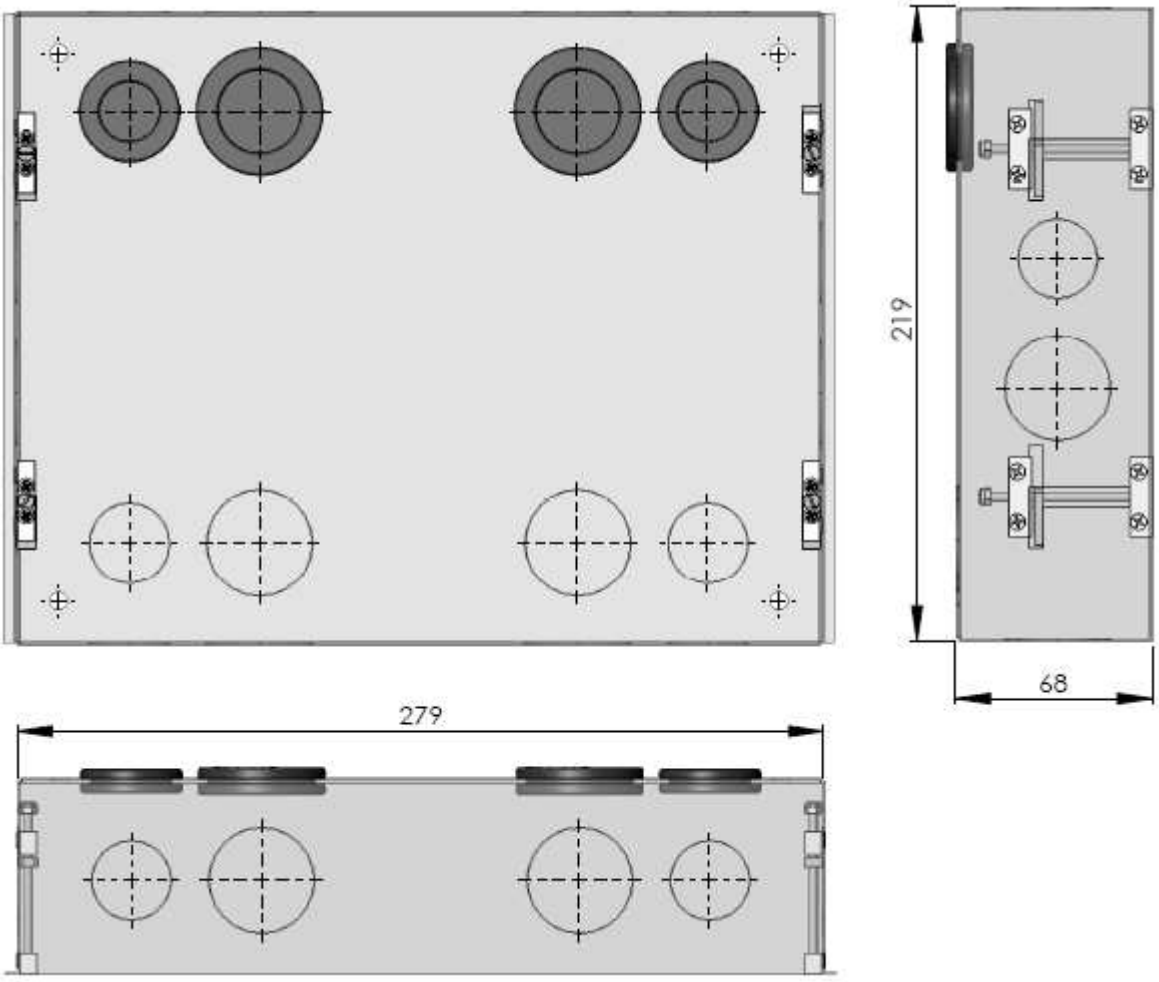
Picture 22: dimensions **Touch-it XPC 10,4”**



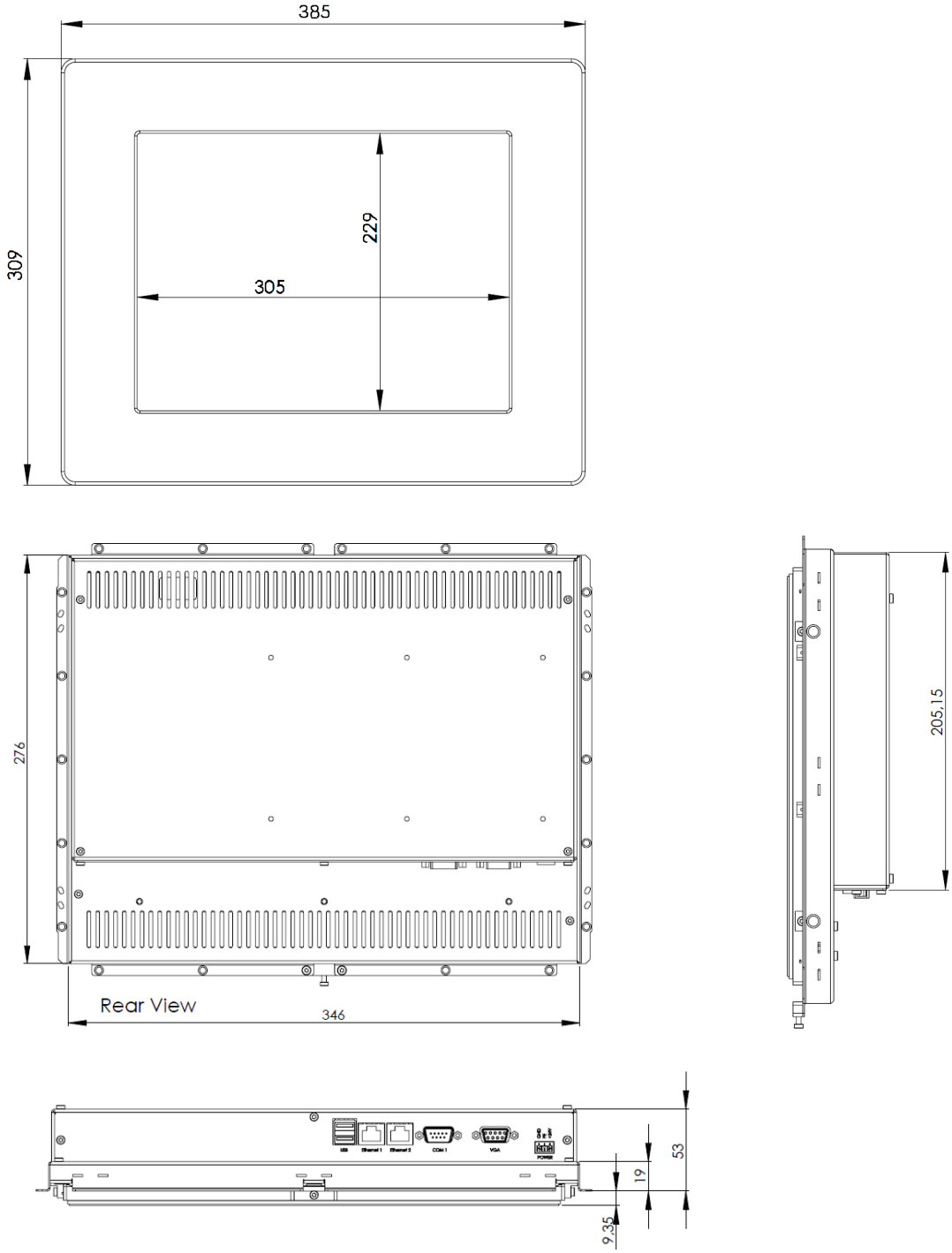
Picture 23: dimensions front frame for **Touch-it XPC 10,4”**



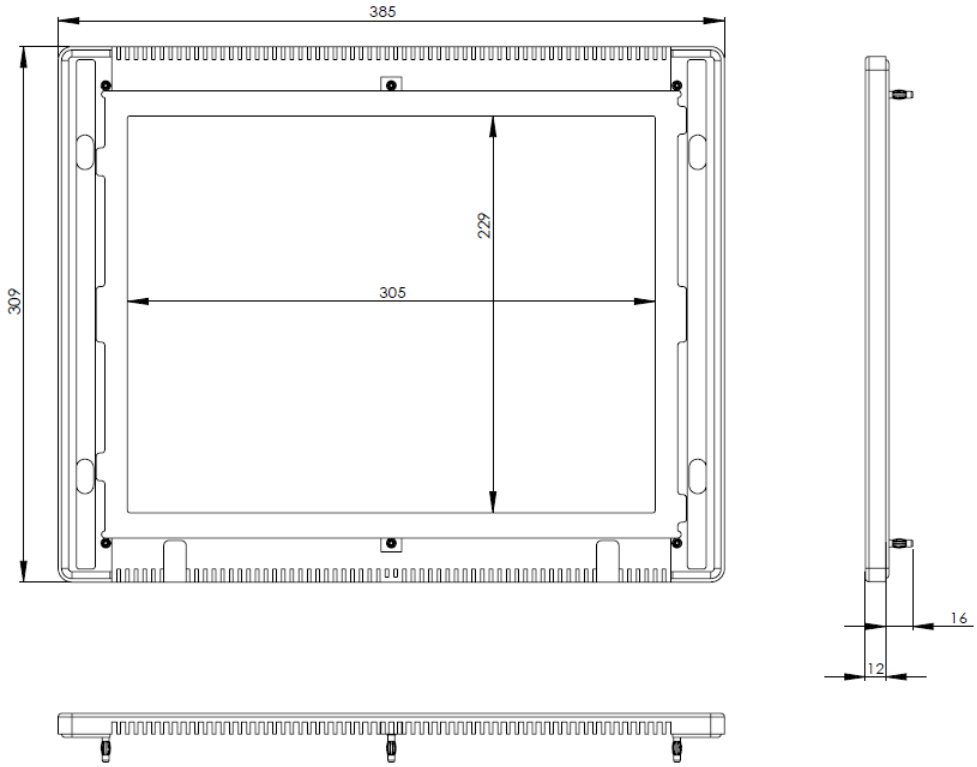
Picture 24: dimensions In Wall Box for **Touch-it XPC 10,4”**



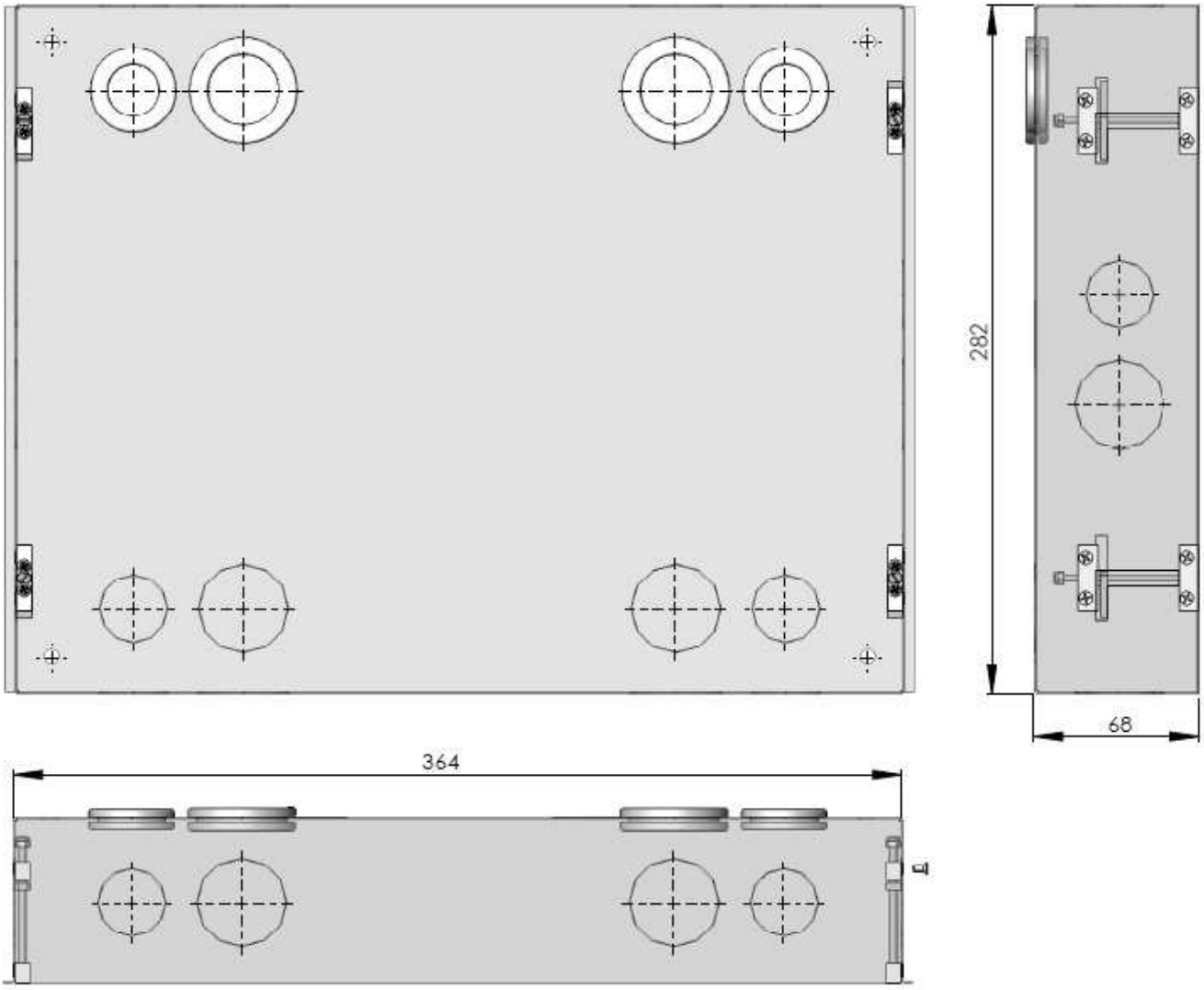
Picture 25: dimensions **Touch-it XPC 15”**



Picture 26: dimensions front frame for **Touch-it XPC 15”**



Picture 27: dimensions In Wall Box for **Touch-it XPC 15”**



11.4. Open Frame with Front-USB

Picture 28: dimensions **Touch-it XPC 10,4”**