

Datasheet

Touchberry 7" & Tinkertouch 7"

Family



Industrial Shields®

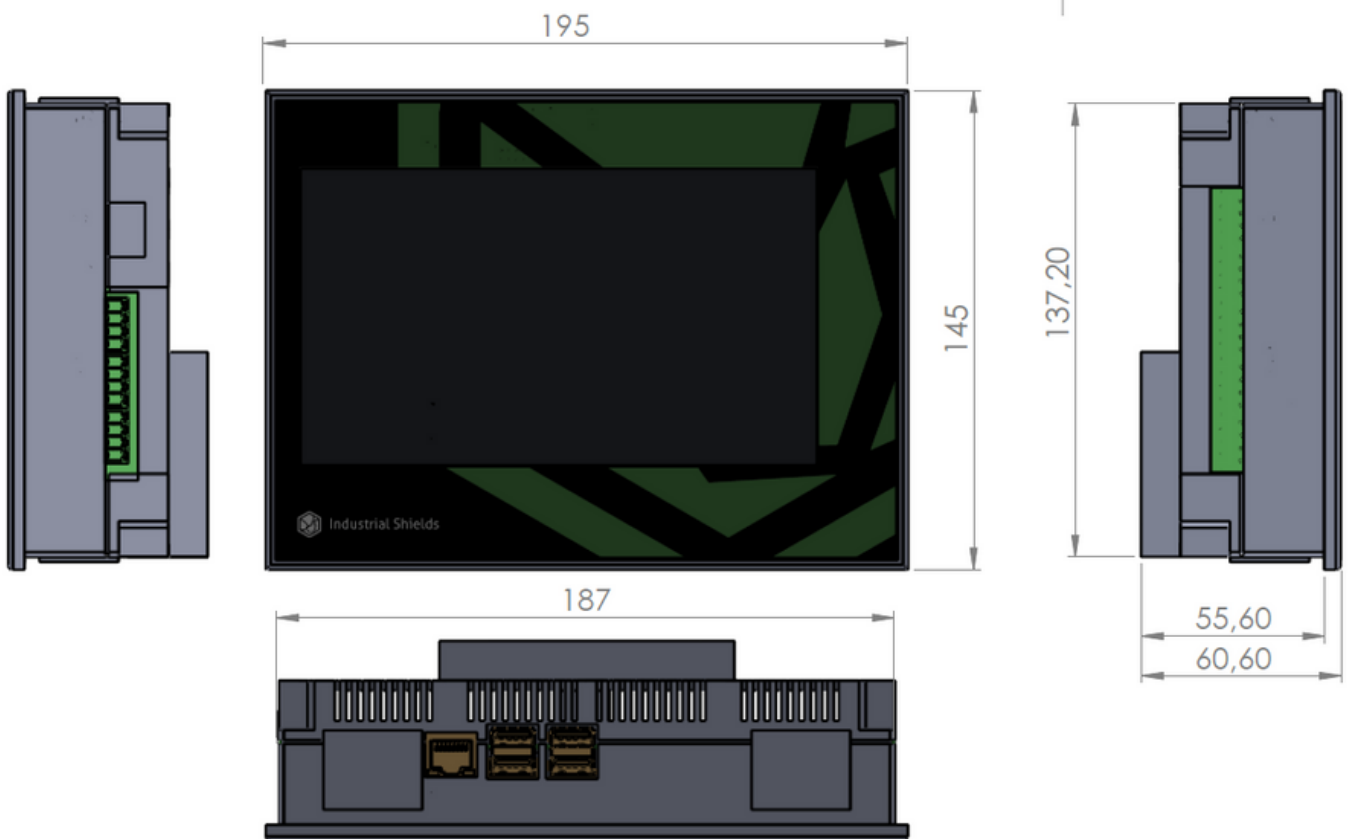
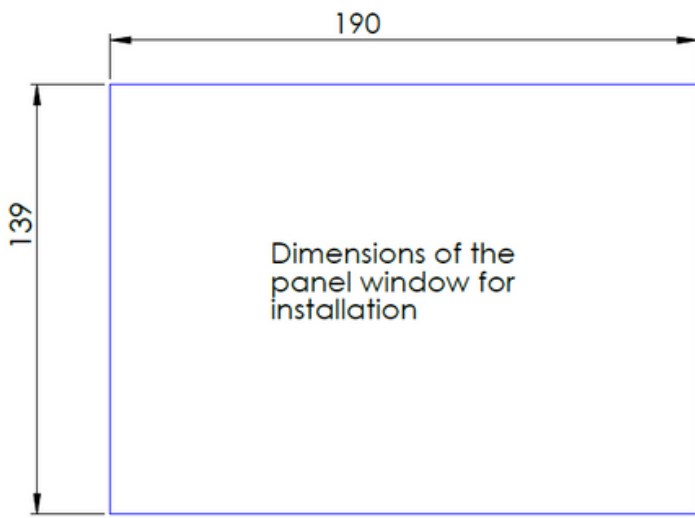
Technical Features TOUCHBERRY 7" & TINKERTOUC 7"

MODEL TYPE	Touchberry 7" / Tinkertouch 7"
Input Voltage	12 to 24Vdc (Fuse protection (2.5A) Polarity protection)
Input rated voltage	24Vdc
Rated Power	30 W
I max.	1.5A
Size (mm)	145,00x60,60x195,00
SRAM	2 - 4 - 8 GB / 2GB
Communications	I2C, Ethernet (x1), USB (x4), RS485, RS232, WiFi, Bluetooth 5.0, Serial TTL, microSD, RTC,

General Features

Power supply voltage	DC power supply	12 to 24Vdc
Operating voltage range	DC power supply	11.4 to 25.4Vdc
Power consumption	DC power supply	30 W MAX.
External power supply	Power supply voltage	24Vdc
	Power supply voltage	700 mA
Insulation resistance	20mΩ min.at 500Vdc between the AC terminals and the protective earth terminal.	
Dielectric strength	2.300 VAC at 50/60 Hz for one minute with a leakage current of 10mA max. Between all the external AC terminals and the protective ground terminal.	
Shock resistance	80m/s ² in the X, Y and Z direction 2 times each.	
Ambient temperature (operating)	0° to 50°C with Raspberry OS Lite / 0° to 40°C with Raspberry OS Desktop	
Ambient humidity (operating)	10% to 90% (no condensation)	
Ambient environment (operating)	With no corrosive gas	
Ambient temperature (storage)	-20° to 60°C	
Power supply holding time	2ms min.	
Weight	675 g, max.	

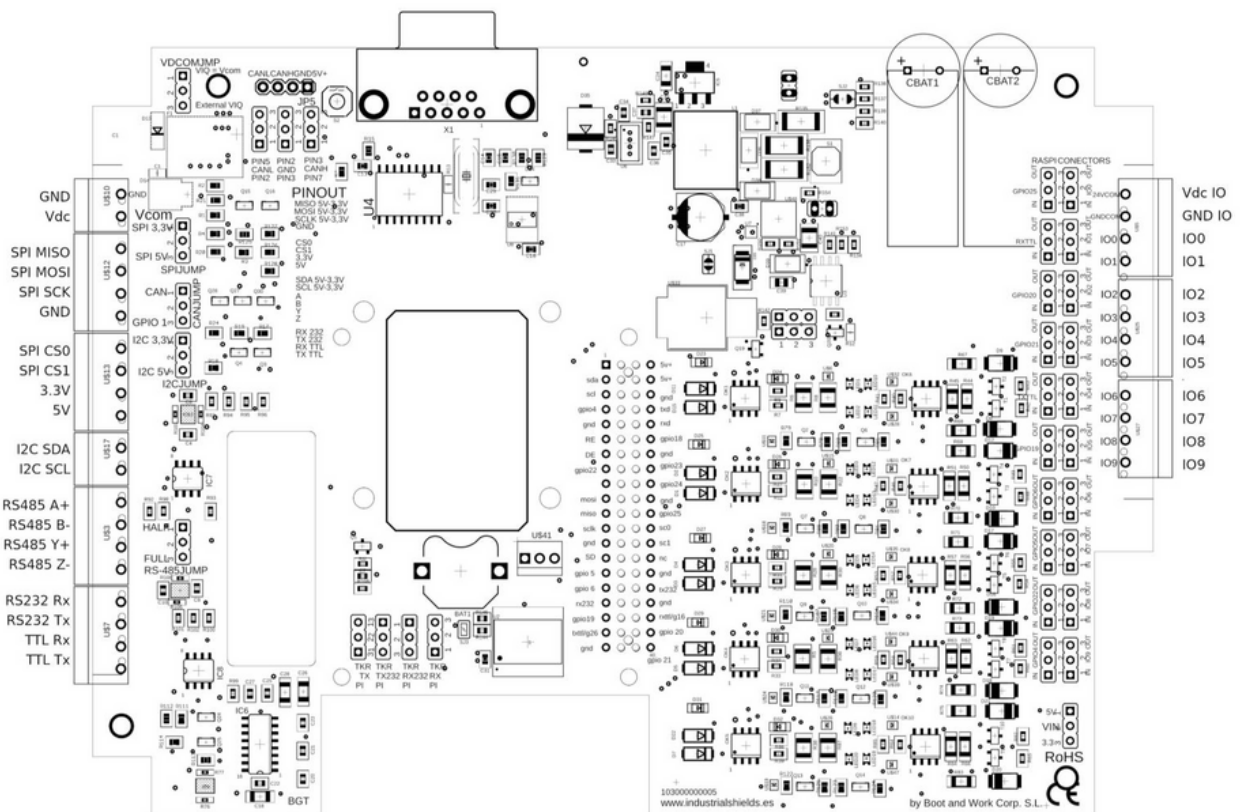
Mechanical dimensions:



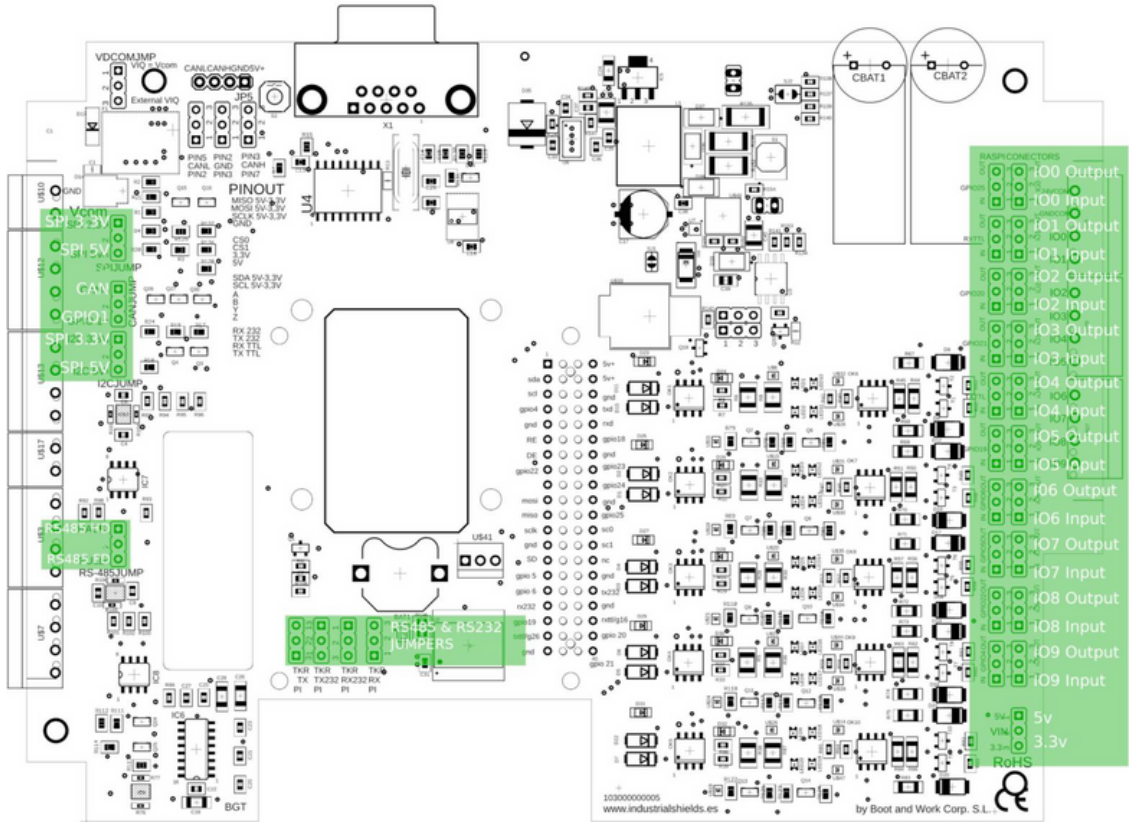
Pinout equivalence:

TinkerTouch 7"/ Touchberry 7" Pinout	Raspberry PI 4B GPIO	Tinker board GPIO
11	GPIO17	164
12	GPIO18	184
13	GPIO27	166
16	GPIO23	162
18	GPIO24	163
22	GPIO25	171
24	GPIO8	255
26	GPIO7	251
29	GPIO5	165
31	GPIO6	168
32	GPIO12	239
33	GPIO13	238
35	GPIO19	185
36	GPIO16	223
37	GPIO26	224
38	GPIO20	187
40	GPIO21	188

Internal Scheme:



Touchberry 7" & Tinkertouch 7" Jumper Configurations:



Left Zone:

Left Jumper 1	
SPI 3.3v	Enable 3
SPI 5v	

Left Jumper 2	
I2C 3.3v	Enable 2
I2C 5v	

Left Jumper 3	
RS-485 Half Duplex	Enable 5
RS-485 Full Duplex	

NOTE 1: To enable the pin with the desired function, Connect the jumpers as shown with **OR**

NOTE 2: By default, IO0 to IO4 are configured as Inputs, while IO5 through IO9 are configured as Outputs



WARNING: Touchberry 7" & Tinkertouch 7" ONLY HANDLES 3.3Vdc Vin, 5Vdc is only meant for prototyping, don't connect Vin at 5Vdc!

Right Jumper 11	
Vin 5v	⚠
Vin	
Vin 3.3v	

Right Zone:

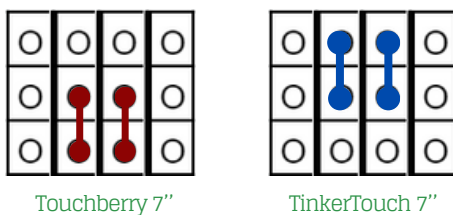
Right Jumper 1	
OUT	OUT
GPIO25	IO0
IN	IN

Right Jumper 2	
OUT	OUT
GPIO12	IO1
IN	IN

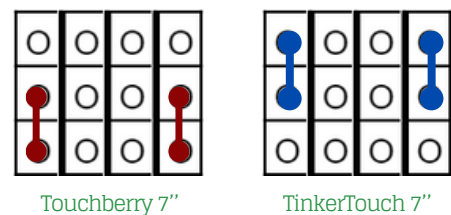
Right Jumper 3	
OUT	OUT
GPIO16	IO2
IN	IN

Repeat the steps for Right Jumper 4 to 10 as needed.

For RS-232



For RS-485:



Performance Specifications:

Panel PC Board	Raspberry Pi 4 /Tinker board
RAM	2-4-8GB / 2GB
Operating Systems	Raspbian / Andriod or Other Debian based Distros
CPU	Quad-Core ARM Cortex - A72 / Rockchip Quad-Core RK3288
GPU	Broadcom VideoCore VI / ARM-based Mali™-T764
Website	https://www.industrialshields.com/

Touchberry 7" / Tinkertouch 7" Panel PC access:

How to start with the Touchberry 7" / Tinkertouch 7":

- 1) Plug the USB wire to one of the x4 free USB ports on the Panel PC to allow the Touch Screen power.
- 2) Connect the Panel PC to a 12/24Vdc PSU
- 3) Start using the Touchberry 7" / Tinkertouch 7"

UPS Shield

This Panel PC has integrated an UPS Shield, a device which provides an anti-voltage drop protection system designed to avoid data corruption when the current is suddenly cut off.

RTC

This Panel PC has integrated the DS3231 Real Time Clock model attached on the UPS which is powered by a button battery (CR1216 or CR1220).

Fan

This Panel PC has the option to include a fan to refrigerate the CPU and the other components if the working environment requires it. Check the user manual to see how to proceed with the FAN option.

Warnings



Unused pins should not be connected. Ignoring the directive may damage the controller.

Before using this product, it is the responsibility of the user to read the product's User Guide and all accompanying documentation.

Industrial Shields Panel PCs must be powered between 12Vdc and 24Vdc. If a higher voltage is supplied to the equipment can suffer irreversible damage.

Maintenance must be performed by qualified personnel familiarized with the construction, operation, and hazards involved with the control.

Maintenance should be performed with the control out of operation and disconnected from all sources of power.

The Industrial Shields Family Panel PCs are Open Type HMI products. It is required that you install the Industrial Shields Panel PC in a housing, cabinet, or electric control room. Entry to the housing, cabinet, or electric control room should be limited to authorized personnel.

Inside the housing, cabinet or electric control room, the Industrial Shields Panel PC must be at a minimum distance from the rest of the components of a minimum of 15 cm, it can be severely damaged.









Failure to follow these installation requirements could result in severe personal injury and/or property damage. Always follow these requirements when installing Raspberry family Panel PCs. In case of installation or maintenance of the Panel PC please follow the instructions marked in the Installation and Maintenance section on the User Guide.

Do not disconnect equipment when a flammable or combustible atmosphere is present.

Disconnection of equipment when a flammable or combustible atmosphere is present may cause a fire or explosion which could result in death, serious injury and/or property damage.

Inside the encapsulated, there are supercapacitors if 25F which can be dangerous.

Symbology

	Indicates that the equipment is suitable for direct current only; to identify relevant terminals
	Indicates that the equipment is suitable for alternating current only; to identify relevant terminals
	To identify the control by which a pulse is started.
	To identify an earth (ground) terminal in cases where neither the symbol 5018 nor 5019 is explicitly required.
	To identify the switch by means of which the signal lamp(s) is (are) switched on or off.
	CE marking indicates that a product complies with applicable European Union regulations
	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
	To indicate hazards arising from dangerous voltages

Technical Support

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