

Core

TapHome Core – smart home control unit. 3 bus ports, 6 UI inputs, 6 OC outputs. Linux, LAN, Modbus RTU/TCP. 4M DIN rail.



Quick Facts

Dimensions	72 x 59 x 58 mm
Operating temperature	0 ... 45 °C
IP rating	IP20
Power consumption	7 W

Core is the control unit, the brain of the system. The three bus terminals on the Core are configurable for the TapHome bus or for Modbus without the need for additional separate gateways.

Product Variants

Order Code	Revízia	EAN
TH-CORE-DIN-2.1	2.1	 8586022930034
TH-CORE-DIN-2.1B	2.1B	 8586022930430

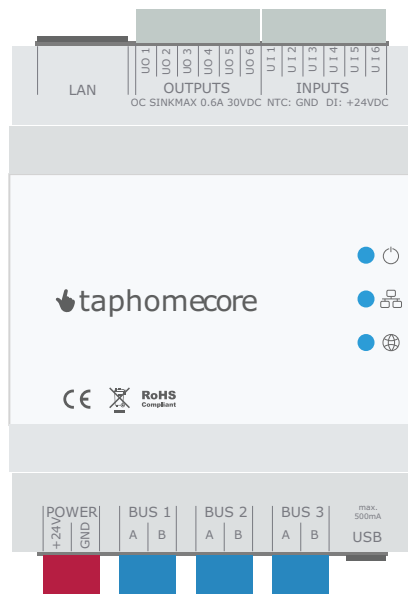
Technical Specifications

ELECTRICAL	
Power supply	24 VDC ±10%
Power consumption (idle)	7 W
INTERFACE	
Bus ports	3
INPUTS	
Universal inputs	6
OUTPUTS	
Open collector outputs	6× universal output

Terminal Connectors

Connector	Pins	Wire range	Strip length
● Power	+24V, GND	0.2–4 mm ² (30–12 AWG)	6.5–7.5 mm
● Bus 1	A, B	0.2–4 mm ² (30–12 AWG)	6.5–7.5 mm
● Bus 2	A, B	0.2–4 mm ² (30–12 AWG)	6.5–7.5 mm
● Bus 3	A, B	0.2–4 mm ² (30–12 AWG)	6.5–7.5 mm
● Outputs	UO1, UO2, UO3, UO4, UO5, UO6	0.34–4.0 mm ² (26–10 AWG)	7.2 mm
● Inputs	UI1, UI2, UI3, UI4, UI5, UI6	0.34–4.0 mm ² (26–10 AWG)	7.2 mm

Wiring Diagram



Features

- Linux computer
- 3 universal bus terminals for:
 - TapHome IO modules. One terminal can handle a maximum of 32 bus modules.
 - ModBus RTU/TCP for third-party devices such as HVAC.
- 6 universal inputs configurable for:
 - NTC temperature inputs with resistance measurement range 100Ohm-100kOhm +-50Ohm. Measurement deviation on 1 km Cat6 cable: -0.3°C at 25°C.
- Button inputs
- Status inputs
- Pulse counter inputs, frequency 100 Hz per channel, sampling rate 200 Hz per channel, on time > 5 milliseconds
- Analog 0-10V inputs with 0-12VDC voltage measurement range, single-ended type, 8-bit resolution, 0.1% full-scale accuracy, input impedance > kOhm, normal mode rejection 50 dB at 55 Hz, conversion time 1250 milliseconds
- For 4-20mA analog input, a 500Ohm resistor must be connected and set to 2V in the Service Settings of the input minimum voltage
- 6 outputs with open collector, maximum current 600mA @ 30VDC for each output, maximum 2A continuous on all outputs together
- LAN port
- 24VDC +-10% power supply
- Power consumption 7W *Operating temperature: 0 - 45°C
- DIN rail, 4 modules. Width 72 mm, height 59 mm.

Bus cable requirements

- The maximum number of modules on one BUS branch is 30.
- The maximum length of each of the 3 bus lines is 1200 meters.
- The optimal bus line topology is daisy chain or tree with short branches. Both star and tree topologies with long branches are possible, but a shorter maximum cable length is recommended. If the control measurement of the voltage between GND and Bus A and B are between 1.3 - 2VDC, it is assumed that the bus is OK.
- Bus A and Bus B must be led by a twisted double line. Otherwise, they will have about 100 times more interference from the surroundings, which can cause communication problems.
- A shielded cable for the bus is not required, a minimum distance from power line cables is not required.
- In the case of connecting modules with relay outputs, we recommend using larger cross-sections of the cable to +24V / GND, because if several relays are switched on, they have a larger consumption and can cause a drop in the supply voltage of the module.
- The end of each bus cable must be terminated with a 100 Ohm resistor, which is included in the package. In the case of a tree or star topology, we put a 100 Ohm resistor at the end of the branch that is farthest from the Core control unit.



Product page

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