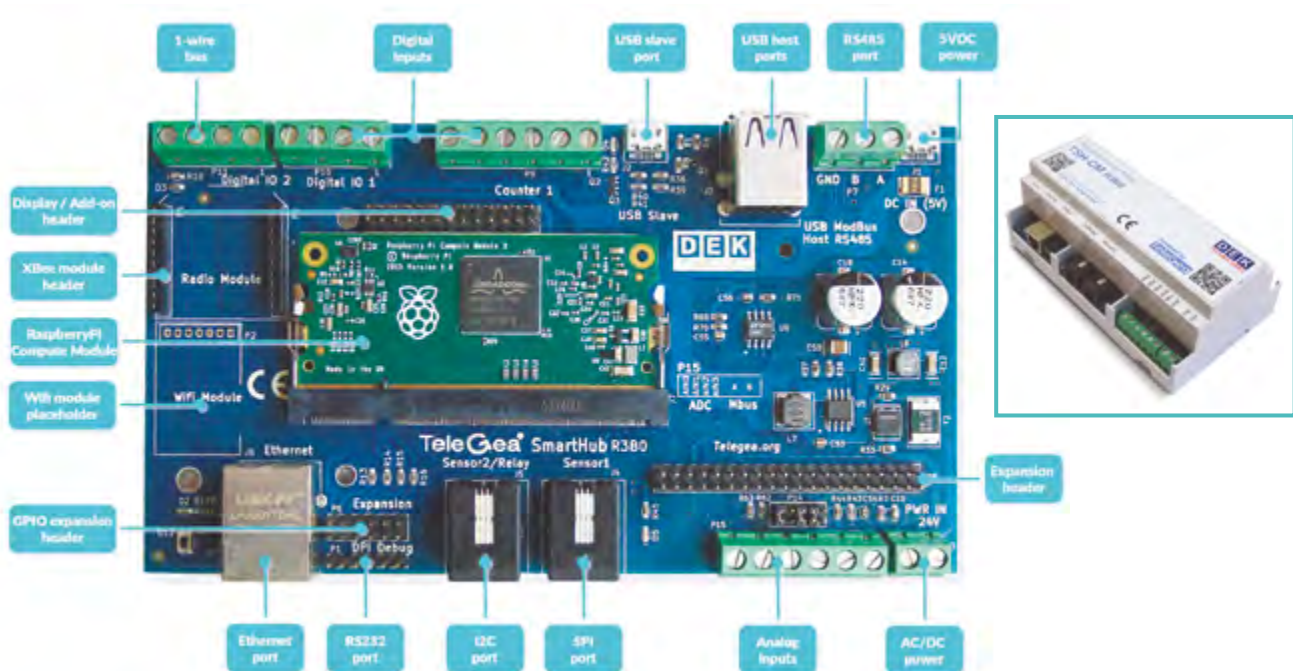




Telegea Smart Hub

The Telegea Smart Hub is designed to be a gateway between the real world and the communication network targeted mainly at IoT applications.

- Build on the Raspberry Pi Compute Module
- Industrial design and reliability
- Professional and robust installation
- Open platform with standard interfaces
- Extensible with add-on modules
- Compatible with Raspberry Pi software ecosystem



Typical Applications



- Data logger device
- IoT edge gateway for remote data acquisition and control
- Smart Home server hardware for OpenHAB, Home Assistant and others
- Smart Thermostat for efficient heating and cooling



Open Hardware

The Telegea Smart Hub and all of its hardware components are well documented.

Specifications and data sheets are freely available. Each component is supported

by open source drivers and additional software that can be obtained free of charge and modified to fit specific needs. In particular the provided hardware is fully compatible with recent Linux Kernels.

The customized Linux OS "SmartHub OS" (based on Raspbian Jessie lite) as headless server system is available from the Telegea Github repositories. It gives instant access to



all the integrated components and peripheral devices which can be connected to the Hub.

Comparison RaspberryPi Telegea Smart Hub

Being based on the Raspberry Compute Module, the Telegea Smart Hub is compatible with the officially supported RaspberryPi Operating Systems and a wealth of

available open source applications. But it offers additional features compared to the "off the shelf"

RaspberryPi which make it an excellent solution for semi-professional deployment scenarios. The following table is a summary of the main differences in terms of technical features of the 2 hardware solutions.



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WEB COMPANY
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WEB PROJECT
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TECHNICAL SPECIFICATION

PROCESSOR	BCM2837 System on Chip (Quad core Cortex A53)
STORAGE	4GB eMMC
MEMORY	1GB LPDDR2 RAM
COMMUNICATION	Ethernet port (100BASE-TX) RS485 serial port RS232 serial debug port Wifi 802.11 b/g/n a 2.4 GHz (optional)
INPUTS	6 digital inputs via screw terminals (for dry contacts or S0 interface) 4 analog inputs (0-5V) via screw terminals Dallas 1-wire bus via screw terminals
ON BOARD SENSOR	SHT21 temperature and humidity sensor
EXPANSIONS	2 USB host ports 1 RJ14 connector for I2C bus peripherals 1 RJ14 connector for SPI bus peripherals 1 XBee module compatible connector for ZigBee and other RF modules 3 expansion headers with additional GPIO, SPI and I2C bus connections
POWER SUPPLY	5VDC via micro USB connector 24VDC/24VAC via screw terminals
OTHER	Real Time Clock with integrated battery 256 byte EEPROM for persistent product data storage Programmable Push button Programmable yellow LED USB OTG port for flash programming
OPERATING SYSTEM	Raspbian Jessie Lite, Linux kernel 4.9.x and later
DIMENSIONS	155x86mm

FEATURES	RASPBERRYPI3	TELEGEA SMART HUB
Chipset	BCM2837	BCM2837
RAM	1GB	1GB
Storage	SD card	eMMC
Power supply 5V DC	✓	✓
Power supply 12-24 AC/DC	✗	✓
Ethernet connector	✓	✓
Wifi module	✓	optional
XBee module connector	✗	✓
GPIO header (40pin)	✓	✓
RS485 communication port	✗	✓
RS232 debug port	✓	✓
Sensor connector	✗	✓
GPIO screw terminal	✗	✓
Analog/Digital converter (4 channels)	✗	✓
On board temperature/humidity sensor	✗	✓
Real time clock	✗	✓
256 byte EEPROM	✗	✓
Programmable Push button	✗	✓
Programmable Activity LED	✓	✓
USB ports	4	2