



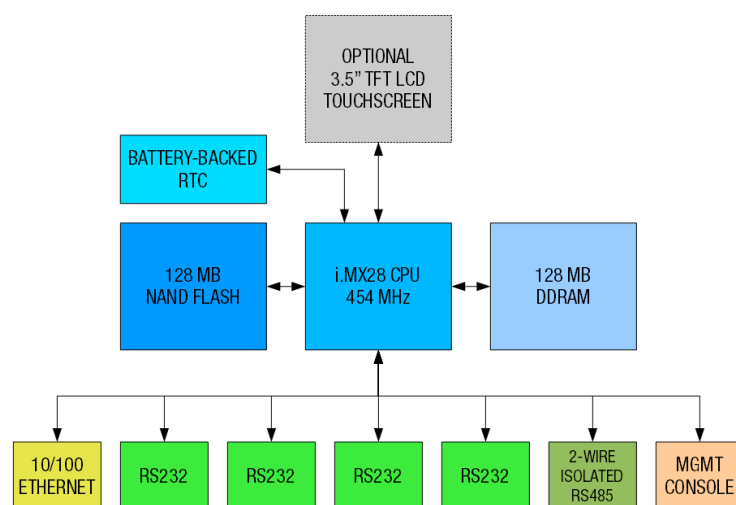
OpenBox is a compact communication RTU. It supports communication with multiple slave devices and multiple master stations using standard telemetry and industrial protocols. Measurements are acquired from slave devices, processed by measurement pipeline and then provided to master stations. Commands are received from master stations, processed by command pipeline and then forwarded to slave devices.

The software is built on the Linux operating system. It is an open architecture allowing functionality extensions by adding new software modules. There is a web-based human-machine interface runtime built-in. HMI applications can be displayed on optional 3.5" LCD TFT touchscreen, or viewed by a web browser. Built-in management interface is web-based and can be accessed by a web browser or a terminal emulator.

RTU has durable aluminium body with a DIN rail mounting bracket.

Key features:

- high-performance 32-bit CPU
- integrated data acquisition framework (OpenDAF)
- integrated web-based HMI (uHMI)
- integrated management web
- uplink protocols: IEC-60870-5-101, IEC-60870-5-104
- downlink protocols: IEC-60870-5-101, IEC-60870-5-104, Modbus/RTU, Modbus/TCP, SNMP
- compact single-box design with DIN mount
- optional 3.5" TFT LCD touchscreen
- exceptional price/performance ratio



▲ Hardware blocks diagram

General	
Power input	24VDC/48VDC/PoE
Power consumption	2W / 5W with optional display
Connectors	4x 5-pin plug-in terminal blocks (RS232) 2x 2-pin plug-in terminal blocks (power, RS485) 1x RJ45 (Ethernet)
Mount	DIN rail
Dimensions	102x102x31 mm

Environment	
Humidity	5 to 95% RH
Operating temperature	-40 to 85°C / -20 to 70°C with optional display
Storage temperature	-40 to 85°C / -30 to 80°C with optional display

Communication interfaces	
Serial	4x RS232 (RxD, TxD, RTS, CTS, GND) 1x RS485, 2-wire, optoisolated
Ethernet	1x 10/100 Mbps

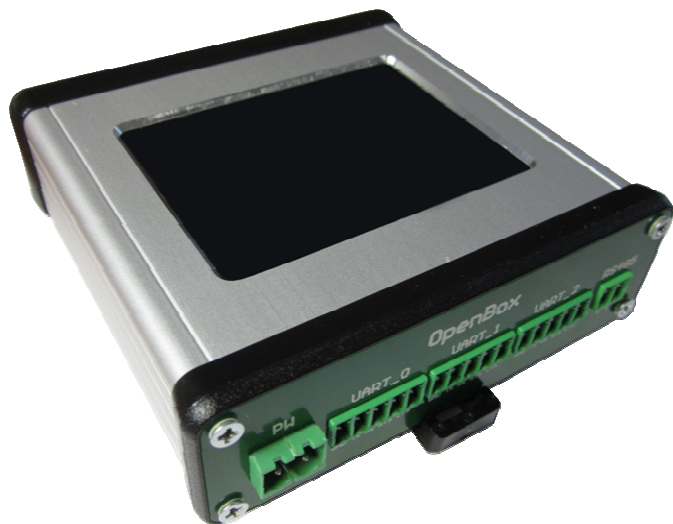
Communication protocols	
Uplink	IEC-60870-5-104 controlled station IEC-60870-5-101 controlled station*
Downlink	Modbus/RTU Modbus/TCP SNMP IEC-60870-5-104 controlling station* IEC-60870-5-101 controlling station*

* currently under development

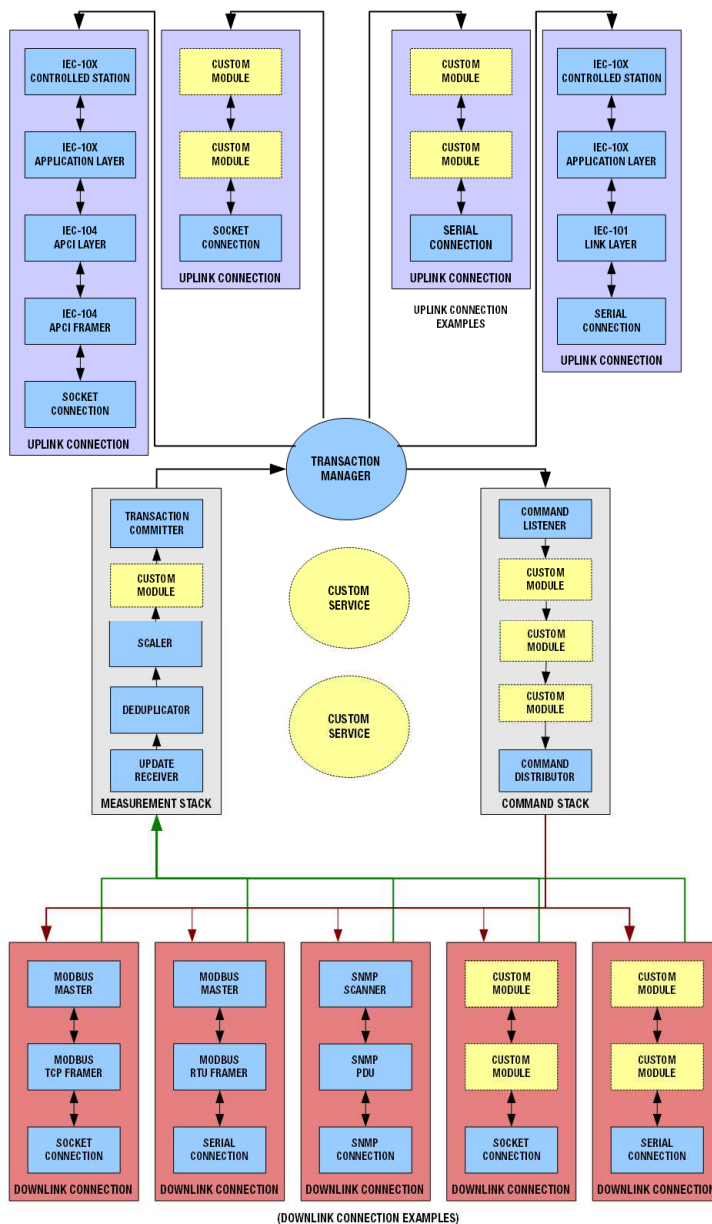
Display	
Type	18-bit TFT LCD with resistive touchscreen
Resolution	320x240
Size	3.5"

System hardware	
CPU	32-bit ARM926EJS, 454 MHz, onchip watchdog
RAM	128 MB DDR2-400 SDRAM
ROM	128 MB NAND Flash

Operating system	
Bootloader	U-Boot
Kernel	Linux v3.3
C-library	uClibc 0.9.33
Filesystem	UBIFS
Services	OpenDAF, uHMI, management web, SSH server, NTP, watchdog keepalive service (more services available on order)
Interpreters	Python 2.7



▲ Variant with TFT 3.5" display



▲ OpenDAF block diagram

Order number	Power supply	Display
CPCTRTU_24	24V DC	-
CPCTRTU_48	48V DC	-
CPCTRTU_POE	PoE	-
CPCTRTU_24_D	24V DC	3.5" LCD touchscreen
CPCTRTU_48_D	48V DC	3.5" LCD touchscreen
CPCTRTU_POE_D	PoE	3.5" LCD touchscreen

▲ Ordering information