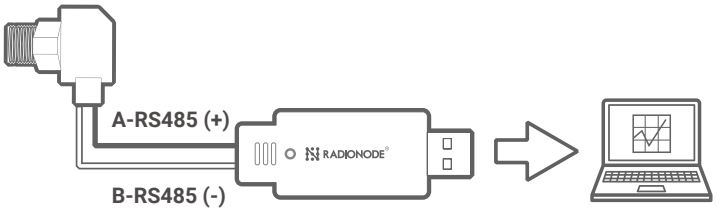
RADIONODE®

The most innovated data logger

RS485 to USB Modbus RTU UART Converter

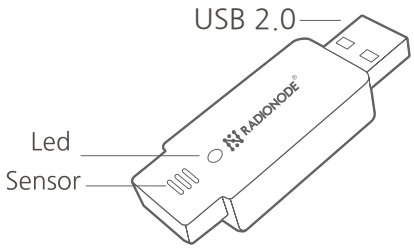
UA20-E

- MODBUS® RTU Protocol
- RS485 Serial Communications Interface
- Set of data independently on CH1~6
- Operating On Windows / Linux / MacOS
- AT Command Support
- Free Recording Software on PC

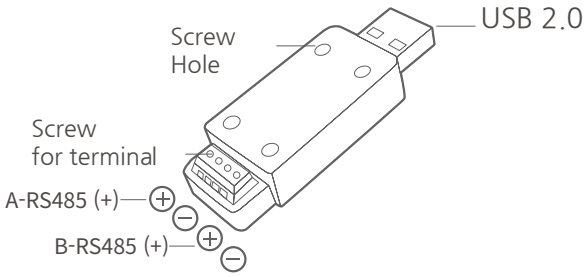


The UA20-E device, acting as a master, transmits requests via the RS485 Modbus interface to retrieve data from connected devices. Based on the specifications below, you can configure the device to receive data independently on channels CH1 through CH6, allowing access to specific information defined for each channel. It supports various industrial devices, including sensors, PLC, and control systems. The UA Series is automatically recognized as a serial port on the operating system and accessed using the AT command. Multiple UA devices connected via USB can create a multi-channel sensor system. Real-time monitoring software, Tapaculo Lite (supporting up to 128 channels), is available for download on our website (www.radionode365.com), and an Android recording application is available on the Google Play Store. For remote web monitoring, the optional RN17X model can be used to set up a web-based monitoring system.

Hardware

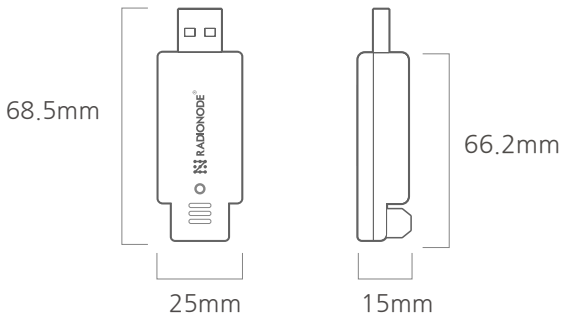


〈Front〉



〈Bottom〉

Dimensions



Notice

- Download the Tapaculo Lite (monitoring software on PC) **from www.radionode365.com.**
- Download the Tapaculo Mobile (monitoring software on Android) from google play store.

Contact Information

- www.radionode365.com
- master@dekist.com

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UA20-E Specifications

Power	5V(USB Power), 50mW	
Sensing Interval	Min: 100ms	
Channel Info.	CH1 to CH6 to read from Holding Register of RS485 device.	
Body Material	PC	
Transmission Mode	Half Duplex (2wire)	
Transmission Medium	Normal line, twisted-pair or shield line	
RS485	Standard	RS485
	Number of Port	1
	Baud Rate	4800 9600(default) 19200 38400 57600 115200
	Data Bits	8bit
	Parity	None(default), Even, Odd
	Stop Bits	1
Operating Range	• Temp : -40 ~ 80°C (-40 ~ 176°F) • Humidity: 5 ~ 95%RH	
Power Consumption	TBC	
USB Port	USB 2.0 Type A Plug	
Output signal	USB digital, CDC Device (AT Command)	
LED	Device Status Indicator • RED KEEP ON : USB connection Failed • GREEN BLINK : Measuring Sensors	
Software Support	*Tapaculo Mobile > 1CH recording software on Android devices *Tapaculo Lite > 128CH recording software on PC *Calibration Software > Calibrator that compensates measuring error.	

UA20-E Modbus RTU Setting

The table below shows the configurable items for the Modbus request frame, with the default values of UA20E provided as an example (Currently, only holding registers are supported).
ex) if you want to read two data values from address 0x0000 of the device with Slave ID 1, you would specify these settings.

Modbus RTU frame	User define	UA 20E default
Slave address (1 Byte)	Slave ID	1 ~ 247 (0 : disable)
Function code (1 Byte)	Holding Register	3
Register Address (2byte)	Start Address	0000-270E
Data Count (2byte)	Number of Register	2 * (holding register word(2byte))
CRC (2 bytes)	Byte swap	little endian

In PLC mode, Holding Register with Register Numbers 40001 - 49999, Data Access 0000-270E, 16-bit Data Type

Product Components

Model	Component
UA20-E	• UA20-E (RS485 Modbus serial interface to a USB port)

Optional Accessories

Type	Model Number	Spec.
Sensor data transmitter via Ethernet	RN171 WC	• Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: PoE 48V, IEEE802.3af/at, DC6V, 1.9W
Sensor data transmitter via WiFi	RN172 WC	• Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: DC6V, 2.4W