

µC/Modbus™ Embedded Modbus Stack

DESCRIPTION

The Modbus protocol consists of the reception and transmission of data, in predefined packets, referred to as “frames.” The Modbus protocol operates with two types of frames: an ASCII frame, and a Remote Terminal Unit (RTU) frame. The ASCII frame is a frame based on ASCII hexadecimal characters, while the RTU frame is strictly a binary implementation. ASCII mode is easier to implement and debug but offers roughly half the data transfer speed of RTU mode. With µC/Modbus, you can use either mode.

µC/Modbus supports any number of communications channels. The ASCII or RTU mode of operation is selectable on a per ‘channel’ basis. µC/Modbus-S is a Modbus Slave (server) software module enabling an embedded system to communicate to a Modbus Master (client). µC/Modbus-M is a Modbus Master (client) module that enables communication to a Modbus Slave.

µC/Modbus enables a developer to read or write integer, floating-point (assuming Daniels extensions) and discrete values from and to the target system.

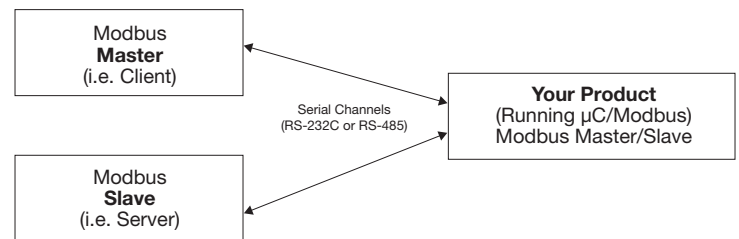
APPLICATIONS

- Industrial controls
- Process control
- Food processing
- Smart sensors
- A wide-range of embedded applications

FEATURES

- Enables multiple serial interfaces on a single target system
- Allow for multiple RS-232C or RS-485 ports on the same target, limited only by the number of serial ports available. The baud rate depends on the processor used.
- Supports both Modbus ASCII and RTU on an individual channel basis.
- Assign nearly any application variable to any Modbus holding register (up to 65536), input register (up to 65536), coil (up to 65536) or input status (up to 65536).
- Complete, clean ANSI C source code included
- Scalable from 6 to 15 kBytes. Compile only the function codes necessary for the target.

- Portable to nearly any processor architecture, 8-, 16-, 32-, 64-bits and DSPs.
- Works with or without an RTOS. µC/OS-II and µC/OS-III interface code provided.



Supported Modbus function codes

Function Code	Description
1	Coil Read
2	Discrete Input Read
3	Holding Register Read
4	Input Register Read
5	Write Single Coil
6	Write Single Holding Register
8	Diagnostic Loopback
15	Write Multiple Coils
16	Write Multiple Holding Registers
20	File Read
21	File Write

MONITORING

Use µC/Probe to visualize all µC/Modbus-based applications allowing a design engineer to monitor and change values in a product at run-time. µC/Probe interfaces to any embedded target whether or not it has a real-time kernel, and works with any 8-, 16-, 32-, 64-bit CPU or DSP. µC/Probe saves valuable time throughout product design, and can also serve as a product’s user interface.

For pricing, delivery, and ordering information, please contact Micrium at +1 954-217-2037, or visit Micrium’s website at: www.micrium.com.