

# Ethernet I/O: EtherStax® Series

## ESW-MBLIB Ethernet Modbus C Library Software



```

Command Prompt - exmbtcpip

Modbus TCP/IP Example 9500-370A

1. Exit this Program
2. Set IP Address: 10.1.1.161
3. Set Register Address: 0
4. Set Register Count: 4
5. Report Slave I.D.
6. Read Output Status
7. Read Input Status
8. Force Single Coil
9. Force Multiple Coils
10. Read Output Registers
11. Read Input Registers
12. Preset Single Register
13. Preset Multiple Registers

Select: 11
00 0002
01 0000
02 0000
03 0000
    
```

Universal support for five operating systems ♦ C source code provided ♦ Demo program included

### Description

Acromag's Modbus C Library software greatly simplifies development of programs to interface with Acromag's BusWorks® and EtherStax® Ethernet I/O products. The library also supports any standard Ethernet Modbus slave device that communicates via Modbus TCP/IP or UDP/IP protocol. This utility is ideal for developers that are unfamiliar with Modbus protocol or the framing of TCP/IP or UDP/IP messages.

The C library makes programming easy and portable by simply linking user code with the provided function calls (below). Most function calls require passing only a few parameters such as the IP address, Modbus register address, and register count.

Codes	Functions
01 (01H)	Read Coil (Output) Status
02 (02H)	Read Input Status
03 (03H)	Read Holding Registers
04 (04H)	Read Input Registers
05 (05H)	Force Single Coil (Output)
06 (06H)	Preset Single Register
15 (0FH)	Force Multiple Coils (Outputs)
16 (10H)	Preset Multiple Registers
17 (11H)	Report Slave ID

### Example Program

The included example program is menu-driven to help users build Modbus TCP/IP and UDP/IP commands. Menu selections let users configure, read, and write Ethernet I/O slave devices such as Acromag's Busworks and EtherStax products.

Users may also leverage this demonstration application into a tool for configuration or test by supplying commands and/or data values in the form of a text file. The program will execute each command in the text file as if it had been typed from the console terminal.

### Key Features & Benefits

- Library of function routines simplify communication with I/O modules
- Works with 32 Bit and 64 Bit operating systems
- Function calls provided for a variety of operating systems
- C source code supplied
- Demonstration program included
- Saves development time
- Ideal for use with Acromag's BusWorks and EtherStax I/O modules
- Compatible with any standard Modbus TCP/IP or UDP/IP device



### Ordering Information

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ESW-MBLIB  
Ethernet Modbus C Library Software (CD-ROM)



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