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Category	■FAQ □SOP	Related OS	N/A
Abstract	How to Tell Modbus Function Code, and IO Value From ADAM Module Using Wireshark		
Keyword	Advantech ADAM, Function Code, IO Value, Wireshark		
Related Product	ADAM-6000 and 6200 Modules		

■ Problem Description:

This document explains how to analyze Modbus/TCP's contents of Function Code, Address Length, Starting Address and IO Value from ADAM Module using Wireshark.

■ Brief Solution - Step by Step:

Wireshark Captured Packet Example:

Modbus/TCP Request:

Packet ID (from_IP.port-to_IP.port): 10.60.0.134.56101-10.60.0.6.502

45 00 00 34 18 06 40 00 40 06 0D BB 0A 3C 00 86 0A 3C 00 06 DB 25 01 F6 75 F8
0D B9 BC BD D4 93 50 18 39 08 6E 8E 00 00 00 00 00 00 06 01 **01** **00** **00** **00** **01**

Illustrated that controller device request to read 1st DI status(i.e. DI0).

Note: DI0=1, rest of other DI equal to Zero(i.e. DI1~DI7)

01: The Function Code

0000: The Data Address of the first register requested

0001: The total number of registers requested(i.e. **only requesting one coil DI**). If user wants to read all 8 DI, commend should be 0008, instead of 0001.

Modbus/TCP Response:

Packet ID (from_IP.port-to_IP.port): 10.60.0.6.502-10.60.0.134.56101

45 00 00 32 AA 6A 00 00 FF 06 FC 57 0A 3C 00 06 0A 3C 00 86 01 F6 DB 25 BC BD
D4 93 75 F8 0D C5 50 18 07 F4 9E 9A 00 00 00 00 00 00 00 04 01 **01** **01** **01**

01: The Function Code (read Coil Status)

01: The number of data bytes to follow

01: Coils 1-8(**0000 0001**) => DI0 = 1, DI1~DI7=0

Link below is an good reference site regarding modbus function code.

<http://www.simplymodbus.ca/>

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