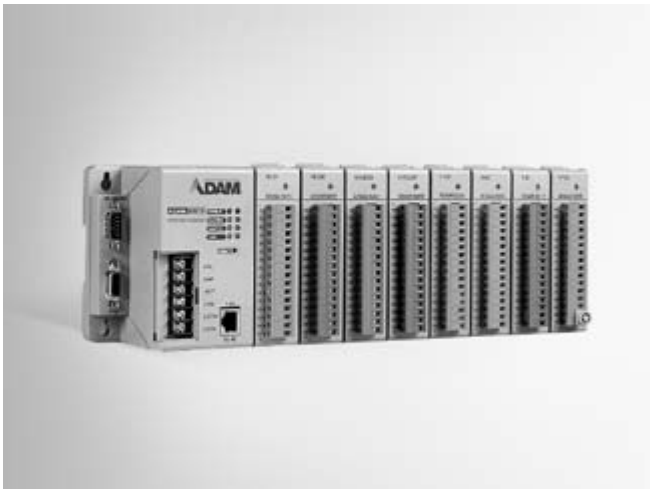
ADAM-5510/TCP
ADAM-5510E/TCP

4-slot PC-based Controller with Ethernet

8-slot PC-based Controller with Ethernet



RoHS COMPLIANT 2002/95/EC CE FCC

Features

- 10/100Base-T Ethernet interface
- Supports Web Server function
- Supports Email Alarm function
- Supports FTP Server and Client functions
- Supports Modbus/TCP Server and Client function libraries
- Supports Modbus/RTU Master and Slave function libraries
- 1.5 MB Flash ROM (960 KB for user applications)
- 640 KB SRAM (384 KB for battery backup)
- ROM-DOS operating system
- Watchdog timer and real-time clock
- 4 serial communication ports
- 4 or 8 I/O slot expansion

Introduction

In the ADAM-5510 series of PC-based programmable controllers, Advantech has introduced Ethernet-enabled features. The new 4-slot ADAM-5510/TCP and 8-slot ADAM-5510E/TCP support HTTP server, FTP server, and e-mail alarm functions. These functions can be used to monitor a system via the Internet, acquire data through an FTP connection and send alarms to designated e-mail addresses if a critical situation emerges. Both products also support Modbus/TCP server/client functions. The ADAM-5510/TCP and ADAM-5510E/TCP can work as a Modbus/TCP client to retrieve data from remote I/Os, and Modbus/TCP server to connect with the HMI/SCADA software.

Specifications

Control System

- **CPU** 16-bit processor
- **I/O Slots** ADAM-5510/TCP: 4
ADAM-5510E/TCP: 8
- **LED Indicators** Power, CPU, communications, and battery
- **Memory** Flash disk: 1 MB (960 KB for user applications)
Flash memory: 256 KB
Flash ROM: 256 KB
RAM: 640 KB SRAM (384 KB for battery backup RAM)
- **Operating System** ROM-DOS
- **Real-time Clock** Yes
- **Watchdog Timer** Yes
- **Communications (Ethernet)**
- **LAN** 10/100Base-T
- **Transmission Distance** 100 m
- **Communications (Serial)**
- **Max. Nodes** 256 (in RS-485 daisy-chain network)
- **Transmission Distance** 1.2 km (4000 feet)
- **Transmission Speed** 1200 bps ~ 115.2 kbps

Protection

- **Communication Line Isolation** 2,500 V_{DC} (COM2 only)
- **Communication Power Isolation** 3,000 V_{DC}
- **I/O Module Isolation** 3,000 V_{DC}

Software

- **C Library** Borland C++ 3.0 for DOS

Power

- **Power Consumption** 4 W @ 24 Vdc (not including I/O modules)
Unregulated 10 ~ 30 V
- **Power Input** Unregulated 10 ~ 30 V_{DC}

General

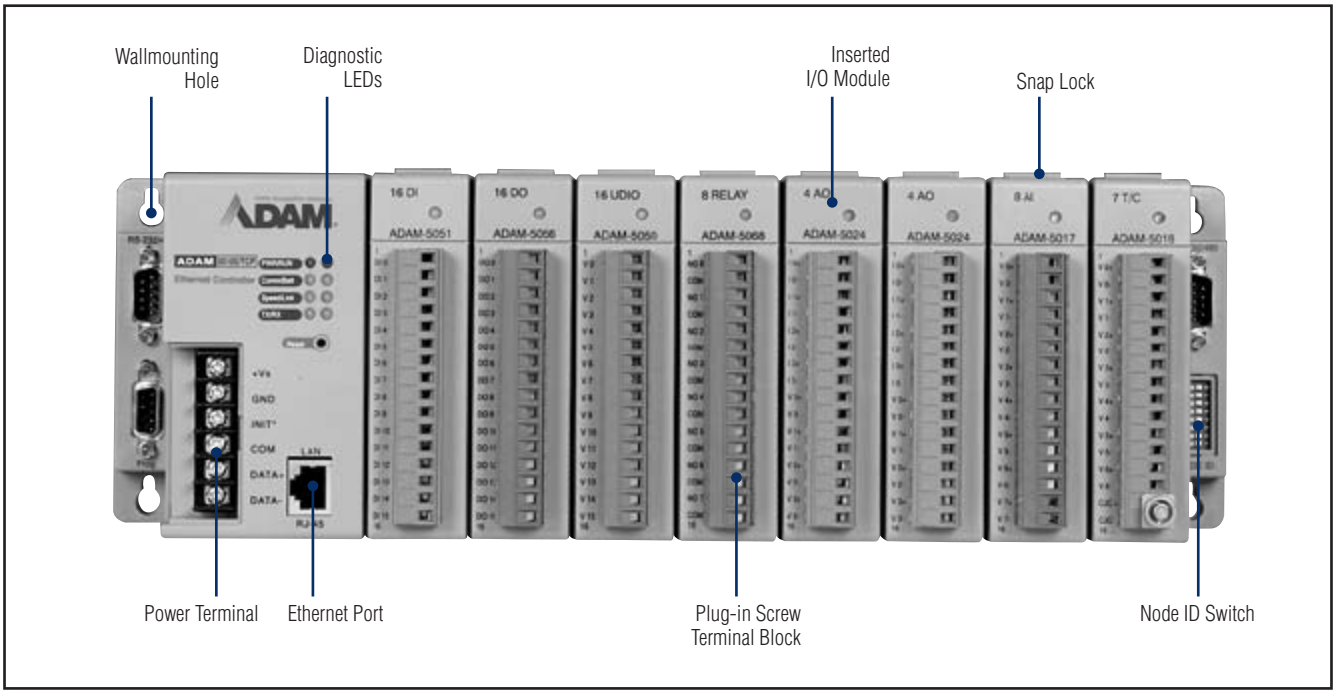
- **Certifications** CE, FCC class A
- **Connectors** ADAM-5510/TCP: 1 x DB9-M for RS-232 (COM1)
ADAM-5510E/TCP: 1 x DB9-M for RS-232/485 (COM1)
1 x Screw terminal for RS-485 (COM2)
1 x DB9-F for RS-232/Programming (COM3)
1 x DB9-M for RS-232/485 (COM4)
1 x Screw-terminal for power input
1 x RJ-45 for LAN
- **Dimensions** 4-slot: 231 x 110 x 75 mm
8-slot: 355 x 110 x 75 mm
- **Enclosure** ABS+PC
- **Mounting** DIN-rail, stack, wall

Environment

- **Humidity** 5 ~ 95%, no-condensing
- **Operating Temperature** -10 ~ 70° C (14 ~ 158° F)
- **Storing Temperature** -25 ~ 85° C (-13 ~ 185° F)

Ordering Information

- **ADAM-5510/TCP** 4-slot PC-based Controller with Ethernet
- **ADAM-5510E/TCP** 8-slot PC-based Controller with Ethernet



Feature Details

Supports Powerful Ethernet Features

ADAM-5510/TCP and ADAM-5510E/TCP are Ethernet-enabled Programmable Controllers. The new 4-slot ADAM-5510/TCP and 8-slot ADAM-5510E/TCP support HTTP server, FTP server, and e-mail alarm functions. These functions can be used to monitor a system via the Internet, acquire data through an FTP connection and send alarms to designated e-mail addresses if a critical situation emerges.

Enable Ethernet Connectivity with Other Devices

ADAM-5510/TCP and ADAM-5510E/TCP support both Modbus/TCP Server function library and Modbus/TCP Client function library. The ADAM-5510/TCP and ADAM-5510E/TCP can work as a Modbus/TCP client to retrieve data from remote I/O modules, and Modbus/TCP server to connect with the HMI/SCADA software.

More Data Memory & I/O Slots to Support Versatile Applications

The ADAM-5510/TCP and ADAM-5510E/TCP offer more than enough spare memory for developing complex logic or data storage applications, such as data recording, which is difficult for traditional controllers. The ADAM-5510/TCP and ADAM-5510E/TCP feature 1.5 MB flash memory and 640 KB SRAM (up to 384 KB battery backup memory). ADAM-5510/TCP and ADAM-5510E/TCP also support up to 4 or 8 I/O slots for I/O modules, which can provide more flexibility and I/O points for user's applications.

Complete I/O Module and C Library Support

The ADAM-5510/TCP and ADAM-5510E/TCP support industrial I/O modules including digital I/O, analog I/O, counter and special purpose I/O modules such as Thermocouple and RTD. It also offers well-stocked Borland C libraries, including system resources function, I/O functions, communication functions, socket functions, Modbus/TCP functions, Modbus/RTU functions and the functions of Ethernet features. All the functions have sample programs which can save development time and efforts.

Supports Four Communication Ports

The ADAM-5510/TCP and ADAM-5510E/TCP has four independent communication ports. That means they can simultaneously communicate with one RS-232/485 device (COM1), one RS-485 device (COM2), one RS-232 3-wire device (COM3), and one RS-232/485 device (COM4). They also support Modbus/RTU master function library for connecting Modbus remote I/O modules and Modbus/RTU slave function library for connecting to HMI/SCADA software.

Multiple RS-232 Port Support

The ADAM-5090 is a 4-port RS-232 module that is equipped with 4 RS-232 ports, which make it especially suitable for bi-direction communication. It can simultaneously read/write data from other third-party devices such as barcode readers or PLCs, as long as they have an RS-232 interface. Furthermore, commands can be issued through the ADAM-5090 to control other devices. It is fully integrated with the ADAM-5510/TCP and ADAM-5510E/TCP, and transmits data through RS-232 ports. The whole integrated system supports Modbus/RTU master function, which can connect and issue commands to control Modbus remote I/O devices by Modbus/RTU protocol.