

ADAM-5511

Introduction and System Features



Features:

- On-line Diagnostic Function
 - Monitoring current I/O status while user's AP is running
 - Support Palm OS PDA monitoring function (ex: IBM WorkPad 3C, Palm IIIc/Vx, etc.)
- Windows Utility
 - Network auto-detecting and I/O module configuration
 - File Management function for Remote download, run, stop, terminate, and delete user's AP
 - Analog/Digital Latch Output Function
 - Analog input engineering unit scaling function
- Modbus/RTU industrial standard communication protocol
- Up to 115.2Kbps communication speed
- Remote I/O integration with ADAM-4000 series
- Support Modem Function with communication library
- Watchdog Timer Function Library
- Off-line User's Program Debug Tool (Simu_io.lib)

Introduction

The ADAM-5511 is a compact, stand-alone controller with an Intel x86-based CPU running Datalight ROM-DOS. The C/C++ Programmers can write and compile application in Inprise (Borland) Turbo C and download to ADAM-5511. In addition to 256KB of Flash ROM, it offers 512KB of Flash Disk space for user's programming files and data storage; 256KB of SRAM for AP execution. And it provides more capacity and reliability for your versatile application requirement.

Software Support

This powerful, full-featured stand-alone controller is very easy to learn and use. As a configuration tool, Windows Utility not only provides on-line diagnostic function but also supports remote download, run, stop, terminate, and program delete. For system integration, the ADAM-5511 supports OPC Server and Modbus drivers for a wide range of HMI software packages such as InTouch, iFIX, and ICONICS. This will effectively reduce system installation and maintenance effort. Moreover, ADAM-5511 supports the Palm OS PDA monitoring functions the user can read the current system status via their PDA machine.

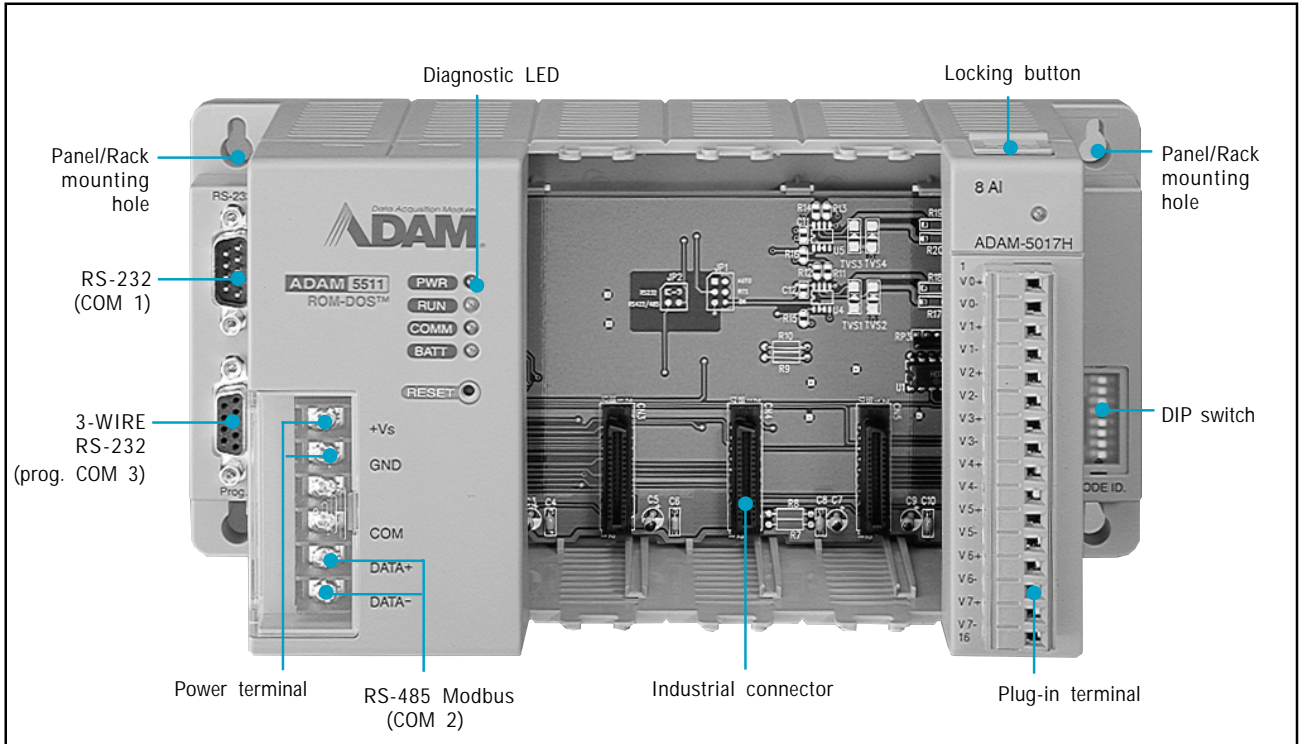
User Program Debug Tool Support

For developing application programs in Turbo C++, Advantech has provided a local I/O simulation library (named simu_io.lib file) for the developer's convenience to debugging the desired program. It's not necessary to waste time downloading an incomplete program into the ADAM-5511 and fixing errors. At the programmer's convenience, one only need to connect the ADAM-5511 to the programming PC and link to this library and execute the program in a Turbo C++ environment on

the PC. As the program runs on the PC, the programmer can monitor and force I/O data with Turbo C++ debugging commands, such as Inspect, Evaluate/Modify, Call Stack, Watch Value, Set Breakpoints, etc. Through these functions, the programmer can reduce testing, verification and downloading time when launching the constructed application program.

Communication

The ADAM-5511 adopts Modbus/RTU protocol which is the most popular and cost-effective solution for field data communicating, and the transmission speed is up to 115.2Kbps. There are three communication ports in the ADAM-5511, the COM1 and COM2 are designed for system configuration and device networking. And the COM3 is designed for I/O configuring and calibrating. You can also expand four additional communication ports by using each ADAM-5090 module. If the system requires wireless or distributed applications, the ADAM-5511 also provides complete libraries to satisfy your needs via modem function or to integrate the ADAM-4000 as it's remote I/O.



ADAM-5511 Specifications

System

- **CPU:** 16-bit microprocessor
- **Memory:**
256 K Flash ROM: 170 KB of the 256 KB for user applications
256 K SRAM: 240 KB of the 256 KB for system use, 12 KB for user with battery backup
512 K Flash Disk: 400 KB of the 512 KB for user applications
- **Operating System:** ROM-DOS
- **Timer BIOS:** Yes
- **Real-time Clock:** Yes
- **Watchdog Timer:** Yes
- **COM1:** RS-232 (Modbus)
- **COM2:** RS-485 (Modbus)
- **Programming Port/COM3:** Tx, Rx, GND (RS-232 Interface)
- **I/O Capacity:** 4 slots (only one ADAM-5024 allowed)
- **Status Display:** Power, CPU, Communication, Battery

- **CPU Power Consumption:** 1.0 W
- **Power Requirement:** Unregulated 10 to 30 V_{DC}

Isolation

- **Communication Power:** 3000 V_{DC}
- **Input/Output:** 3000 V_{DC}
- **Communication:** 2500 V_{DC} (COM2 only)

Network

- **Medium:** RS-485 (2-wire)
- **Speeds (bps):** 9600, 38400, 57600 and 115.2 K
- **Maximum nodes:** up to 32 multi-drop system per serial port
- **Remote I/O:** up to 32 nodes ADAM-4000 I/O modules
- **Communication protocol:** Modbus/RTU

Software Support

- **C Library:** Turbo C++ 3.0 for DOS
- **Windows Utility**

- **Modbus OPC Server**
- **Palm OS PDA monitoring function**
Ex: IBM WorkPad 3C, Palm IIIc/Vx, etc

Power

- **Unregulated + 10 to + 30 V_{DC}**
- **Protected against power reversal**

Mechanical

- **Case:** KJW with captive mounting hardware
- **Plug-in Screw Terminal Block:** Accepts 0.5 mm 2 to 2.5 mm 2 , 1 - #12 or 2 - #14 to #22 AWG

Environment

- **Operating Temperature:** -10° to 70° C (14° to 158° F)
- **Storage Temperature:** -25° to 85° C (-13° to 185° F)
- **Humidity:** 5% to 95%, non-condensing