

Introduction

1.1 Overview

The ADAM-5000 series is a complete product line that provides a wide variety of features in a data acquisition and control application. They are remotely controlled by the host computer through a set of commands and transmitted in a RS-485 network. The system kernel is small, but offers many good features to the users. The modular design also provides more flexibility in the system configuration. The following is a summary of the major ADAM-5000 system components.

ADAM-5000 System Kernel

The ADAM-5000 system kernel includes a CPU card, a power regulator, a 4-slot base, a built-in RS-232 communication port and one built-in RS-485 communication port. Details of the system kernel features and more are covered in Chapter 3.

I/O Configuration

The ADAM-5000 CPU can support up to 64 I/O points with the 4-slot base currently available. These points can be assigned as input or output points.

I/O Modules

The ADAM-5000 series has a complete range of I/O modules for your applications. A full range of digital modules which support 10 to 30 V_{DC} and relay outputs are offered. The analog modules provide 16-bit resolution and programmable input and output signal ranges (including bipolar).

Software Utilities

There are some software utilities available to the ADAM-5000 systems. The DOS utility software helps you to configure your ADAM-5000. The DLL (Dynamic Link Library) is provided to write Windows applications, and the DDE (Dynamic Data Exchange) server provides links to popular Windows packages such as Intouch, FIX DMACS, Genie, etc.

1.2 System Configuration

The following diagram shows the system configurations possible with the ADAM-5000.

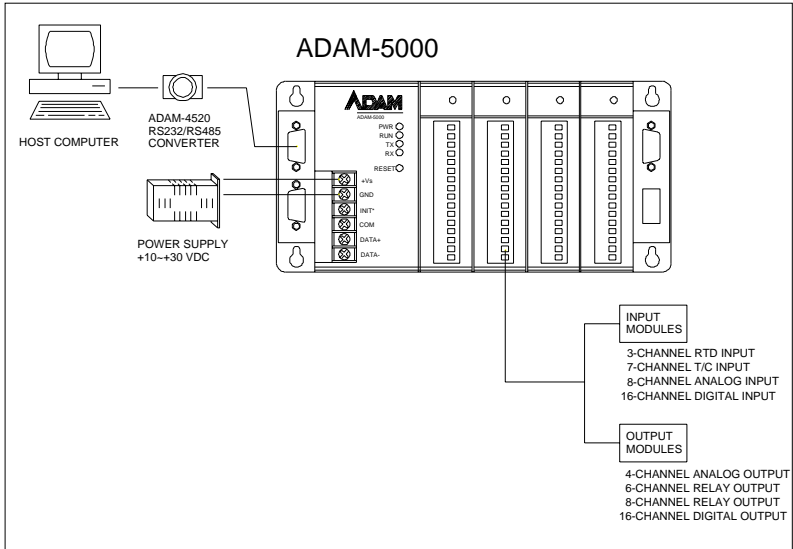


Figure 1-1 ADAM-5000 System Configurations

1.3 A Few Steps to a Successful System

Step 1: Review the Installation Guideline

You should always make safety your first priority in any system application. Chapter 2 provides several guidelines that will help provide a safer, more reliable system.

Step 2: Understand the System Kernel

The system module is the heart of ADAM-5000 system. Make sure you take time to understand the various features and setup requirements.

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Step 3: Understand the I/O System Configurations

It is important to understand how your I/O modules can be configured. It is also important to understand how the system power budget is calculated. This can affect your I/O configuration.

Step 4: Understand the Utility Software

Before you begin to link your applications in your host computer with the ADAM-5000 systems, it is very helpful to understand how the DOS utility software helps you configure your ADAM-5000.

Step 5: Review the Programming Concepts

All control systems differ in some areas. The ADAM-5000 system allows you to develop your applications in DOS or Windows. It provides an ASCII command set, DLL (Dynamic Library Link) and DDE (Dynamic Data Exchange) server to you.

Step 6: Understand the Troubleshooting Procedures

Many things can happen on the factory floor: switches fail, the power supply is incorrect, etc. In most cases, the majority of the troubleshooting time is spent trying to locate the problems. The ADAM-5000 system has some built-in features that help you quickly identify problems.