ADAM-5550KW
ADAM-5550CE

8-slot Programmable Automation Controller

NEW

Features

- Designed for control tasks that meet robust and computing performance requirements for PLC and Industrial PC's
- SoftLogic support in Win CE 5.0
- Can be operated with or without display/keyboard/mouse
- Remote monitoring through Web Server and Email Alarm
- Remote maintenance via FTP Server
- Supports Modbus/RTU Master and Modbus/TCP (Server/Client) Protocol
- Supports OPC Server
- Supports SQL database
- Supports SD Storage I/O Module
- Supports AMONet Master Module
- Supports Motion Control Modules
- Deterministic I/O at 1 ms
- Remote I/O expansibility
- Rich support to ADAM-5000 I/O Modules

RoHS COMPLIANT 2002/95/EC   CE

Introduction

ADAM-5550KW is a Programmable Automation Controller designed for control tasks which require Industrial PC computing performance with the PLC's robustness. ADAM-5550KW offers an AMD Geode GX533 CPU along with control specific features such as watchdog timer, battery backup RAM and deterministic I/O. ADAM-5550KW features 5 standard IEC - 61131-3 programming languages in CE 5.0, so PLC users can develop control strategies with their own familiar programming languages. The powerful Multiprog KW Software and stable ProConOS have allowed ADAM-5550KW to become the best choice for a Programmable Automation Controller on the market today. With the optional HMI Software and built-in VGA port, no longer will users be required to build up additional SCADA PC's in their applications. This compact and powerful PAC is ideal for a variety of applications ranging from machine automation to SCADA applications. As the growth of PC-based technology, Advantech PC-based Programmable Controllers have been widely applied in variety of industrial automation applications.

Specifications

Control System

- **CPU**   AMD Geode GX533 (GX2)
- **I/O Capacity**   8 slots
- **LED Indicators**   Power, User define
- **Memory**   128 MB DDR SDRAM with 1 MB Battery Backup
                       1 x CompactFlash® Card (Internal)
- **Operating System** Windows® CE 5.0
- **Real-time Clock** Yes
- **Watchdog Timer**   Yes

Communications

- **Comm. Protocol**   Modbus/RTU and Modbus/TCP
- **Medium**   2 x 10/100 Base-T Ethernet Interface with RJ-45 connectors

Protection

- **Communication**   2500 V_{DC} (COM2 RS-485)/1000 V_{DC} (COM4 RS-485)
- **Power Reversal Protection** Yes

Power

- **Power Consumption** 12 W @ 24 Vdc (not including I/O modules)
- **Power Input**   Unregulated +10 to +30 V_{DC}

General

- **Certificate**   CE
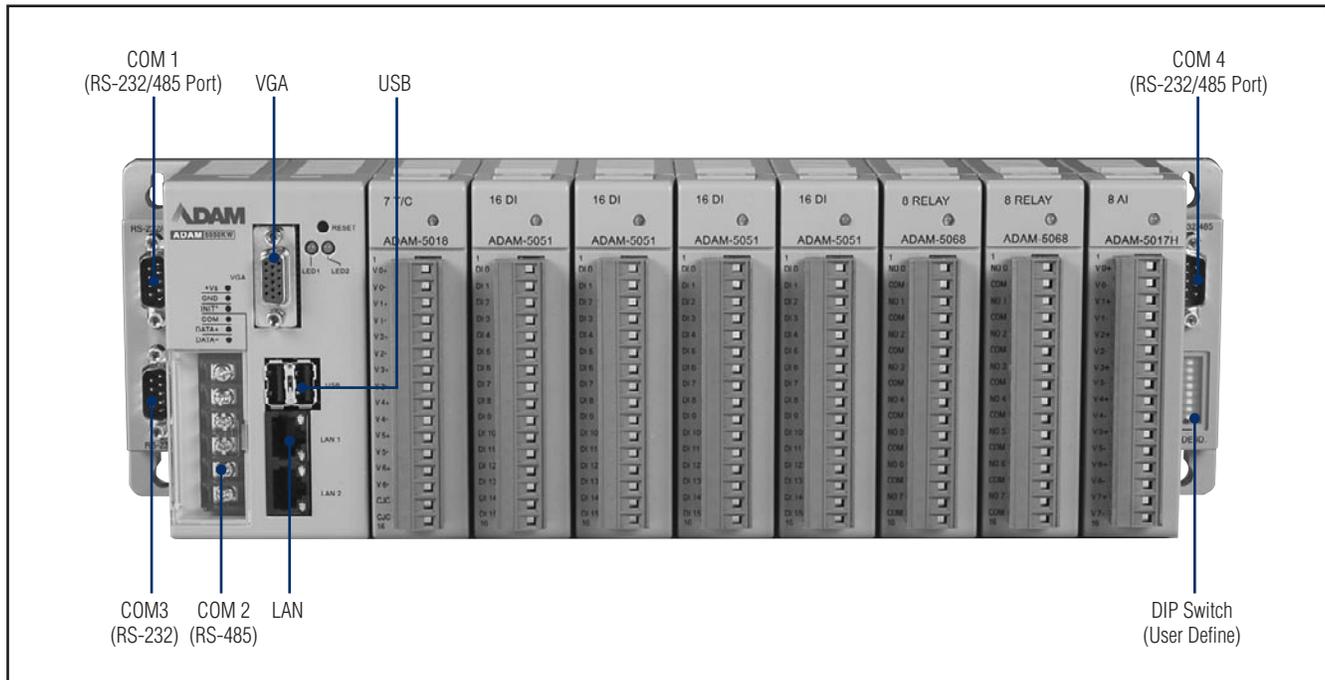- **Connectors**   1 x RS-232/485 (COM1)
                       1 x RS-485 (COM2)
                       1 x RS-232 (COM3)
                       1 x RS-232/485 (COM4)
                       2 X USB 1.1 ports (KB/Mouse via USB Ports)
                       1 x VGA (1024 X 768 Resolution)
- **Dimensions**   355 x 110 x 75 mm
- **Enclosure**   ABS+PC
- **Plug-in Screw Terminal** Accepts 0.5 mm² to 2.5 mm², 1 - #12 or 2 - #14 to #22 AWG

Environment

- **Humidity**   5% to 95%, non-condensing
- **Operating Temperature** 0 ~ 55° C (32 ~ 131° F)
- **Storage Temperature** - 25 ~ 85° C (-13 ~ 185° F)

Ordering Information

- **ADAM-5550KW**   8-slot Programmable Automation Controller with KW
- **ADAM-5550KWAS**   8-slot Programmable Automation Controller with KW & AS1500-CR60
- **ADAM-5550CE**   8-slot Programmable Automation Controller
- **MPROG-BAS33**   KW Multiprog SoftLogic Development Kit Basic Edition v3.3 for Windows NT/2000/XP (128-byte I/O)
- **MPROG-ADV33**   KW Multiprog SoftLogic Development Kit Advanced Edition v3.3 for Windows NT/2000/XP (64k-byte I/O)

PAC Features

ADAM-5550KW is designed for control tasks which need Industrial PC's computing performance and PLC's robustness. Its multiple functionalities include discrete, analog and motion functions. The well-integrated programming tool and optional HMI software provide a flexible and easy-to-use software solution for versatile applications. ADAM-5550KW supports Modbus protocol which allows data exchange with various Modbus devices.

SoftLogic Support in CE 5.0

ADAM-5550KW supports IEC-61131-3 programming in WinCE 5.0. The five programming languages of Ladder Diagram, Function Block, Sequential Function Chart, Structured Text and Instruction List cover most of the PLC programming languages in the market. The reliable ProConOS runtime engine and powerful MULTIPROG software from KW-Software empower ADAM-5550KW as the best solution of Programmable Automation Controller.

Visualization

ADAM-5550KW has a built-in VGA port which can directly connect to a display. So HMI function can be integrated into this controller. ADAM-5550KW can be operated with or without display/keyboard/mouse which can meet different requirements of applications.

Widely Used IT Technology

ADAM-5550KW supports widely used IT technology of industrial PC. For remote monitoring function, the built-in web server can provide local I/O status for internet access and email alarm function can send alarm message to dedicated email addresses when there is any alarm occurs. For remote maintenance function, the built-in FTP server provides service for uploading application program or downloading data logging files.

Dual Ethernet Ports

ADAM-5550KW provides two Ethernet ports for different application requirements such as redundant Ethernet connection for reliability concern or separated network connections for security concern. Both of the functions are possible to be implemented by customer's application program.

Deterministic I/O

ADAM-5550KW can guarantee deterministic I/O at 1 ms. This feature guarantees control and response speed at I/O level so HMI software or operations of other application programs cannot affect the I/O control performance.

Remote I/O Expansibility

ADAM-5550KW supports not only Modbus/RTU Master function via serial ports, but also the Modbus/TCP Client to retrieve data from remote I/O, and Modbus/TCP Server to exchange data with other Modbus devices via Ethernet port. This Modbus feature is very useful when the control system needs expand the remote I/O modules or connect to other controllers.

Rich Support to ADAM-5000 I/O Modules

Most of the ADAM-5000 I/O modules are supported by ADAM-5550KW including analog I/O modules, digital I/O modules, and motion control module. All the operations of supported modules are the same with the operations of ADAM-5510KW series.

AMONet Motion Control Modules

AMONet Module supports two RS-485 master ports, and transfers data between host and slaves directly without any operations in between. Each port of the master can control up to 2048 I/O points, 64 axes, or a combination of I/O points and axes for motion control. The master ports support up to 20 Mbps transfer rate and a maximum communication distance of up to 100 meters. The communication between master and slave is based on a customized RS-485 solution that saves wires, covers a long distance, supports high-speed communication and has time-deterministic features. Various functions can be chosen on the slave modules, and standard industrial DIN rail mounting design makes it easy to distribute them in the field.

Motion Control Modules

ADAM-5550KW supports two types of motion control modules. One is a stepping/pulse-type servo motor control module, designed for general-purpose applications, and the other is the cost-effective intelligent stepping motor control module. The servo motor control module's intelligent NOVAR MCX314-motion ASIC comes built-in with a variety of motion control functions, such as 2/3-axis linear interpolation, 2-axis circular interpolation, T/S-curve acceleration/deceleration rate and more. It performs these motion control functions without processor loading during driving. The intelligent stepping motor control module's PCD-4541 motion controller can execute a variety of motion-control commands. Each axis can be controlled directly through the card's I/O registers.