

APAX-5520KW

Micro PAC with XScale® CPU



Features

- Onboard XScale® PXA270 520 MHz processor
- 64 MB SDRAM on board, 32 MB Flash
- Expands I/O by connecting with APAX-5000 I/O modules
- Combines with APAX-5570XPE/5571XPE to deliver dual CPU functionality
- Supports real-time control tasks under Windows CE .NET through ProConOS
- Supports IEC-61131-3 programming languages through Multiprog
- 1 x CompactFlash slot for data logging
- 1 x 10/100 Mbps LAN and 1 x RS-485 ports

Introduction

APAX-5520KW can operate in two different ways. APAX-5520KW can be inserted on the backplane, and control I/O modules which are stacked together. In this way, the APAX-5520KW performs as standalone controller since it can run process program by itself. The second way is to combine APAX-5520KW and APAX-5570XPE/5571XPE to form dual CPU architecture. Installing APAX-5520KW on the expansion slot of APAX-5570XPE/5571XPE or on the expansion backplane, the CPU of APAX-5520KW can concentrate on the I/O control process. Since there is no other tasks bothering CPU of APAX-5520KW, its control ability can deliver the best performance, providing the real-time execution. The CPU of the APAX-5570XPE/5571XPE controller can execute other tasks such as HMI/SCADA, recipe, database, communication with other system, data logging, etc. This architecture can deliver more reliability to system when HMI software makes XP Embedded system hang on the the APAX-5570XPE/5571XPE controller, since APAX-5520KW will still continuously execute its task. APAX-5520KW with industrial standard IEC 61131-3 programming tool, Multiprog KW software and stable ProConOS, makes engineers develop their applications in shortest time and save their time-to-market.

Specifications

System Hardware

- **CPU** XScale PXA270 520 MHz
- **Memory** Flash 32M bytes, SDRAM 64M bytes
- **Battery Backup Memory** 256 KB file system, 256 KB direct access
- **Real-time Clock** Yes
- **Watchdog Timer** Yes
- **VGA** DB15 connector
- **USB Ports** 1 x USB 1.1
- **Storage** 1 x Type II CompactFlash card slot (internal)
- **Connected I/O Modules** 32 (max.)*
- **Digital Signals** 2048 (max.)
- **Analog Signals** 512 (max.)

Communication (Ethernet)

- **LAN Ports** 1 x RJ-45 Port, 10/100 Mbps
- **Protocol** Modbus/TCP Server and Client

Communication (Serial)

- **Medium** 1 x isolated RS-485
- **Maximum Nodes** 32 (in RS-485 daisy-chain network)
- **Protocol** Modbus/RTU Master and Slave
- **Isolation Protection** 2500 V_{DC}

Software

- **Operating System** Windows CE .NET
- **Control Software** KW Multiprog (development tool)
ProConOS (runtime kernel)

General

- **Certifications** CE, FCC class A
- **Dimensions (W x H x D)** 30 x 139 x 100 mm
- **Enclosure** ABS+PC
- **Weight** 210 g
- **Power Consumption** 4.5 W @ 24 V_{DC} (typical)

Environment

- **Operating Temperature** -10 ~ 55° C (when mounted vertically)
- **Storage Temperature** -40 ~ 70° C
- **Relative Humidity** 5 ~ 95% (non-condensing)
- **Shock Protection** 20 G @ wall mount, half sine, 11 ms
(Confirms to IEC 60068-2-27)
- **Vibration Protection** 1 Grms @ 5 ~ 500 Hz (Random, operating, 1 hr/axis)
2 G @ 5 ~ 500 Hz (Sine, non-operating, 1 hr/axis)
(Confirms to IEC 60068-2-64 and IEC 60068-2-6)

Ordering Information

- **APAX-5520KW** Micro PAC with XScale CPU, KW
- **MPROG-ADV46E** KW Multiprog Advanced v4.6 (64K bytes I/O)
- **MPROG-BAS46E** KW Multiprog Basic v4.6 (128 bytes I/O)
- **APAX-5002** 2-slot Backplane Module
- **APAX-5343E** Power Supply for APAX Expansion Module

*: APAX DI/O modules can use ID numbers 0 ~ 31, while AI/O modules and counter modules can only use ID numbers 0 ~ 15