WA-CU Control Series

PC-based Cabinet Controller with CODESYS Control Runtime & Visualization

NEW

EtherCAT.   PROFINET   EtherNet/IP   CANopen   Modbus   CODESYS

intel Security   Acronis   WISE-PaaS/RMM   iDoor   R33138   CCC   CE   FCC   c UL us LISTED

Features

Enable Open Control Solution by Application-Ready-Package including:

PC-based Cabinet Controller

- Powerful Intel Atom/Core-i multi-core CPU dedicated for control and HMI
- DIN-rail fanless compact design with less maintenance effort
- 2MB MRAM retained control data value
- 128 GB SSD installed
- Microsoft Windows Embedded 7 Pro 32-bit installed
- Supports iDoor technology providing flexible I/O and wireless options

CODESYS Control Runtime & Visualization

- Preinstalled CODESYS Control Runtime & Visualization
- Supports real-time PLC/Softmotion control with main Fieldbuses: PROFINET, EtherCAT, EtherNet/IP, CANopen and Modbus
- Supports PLCopen IEC-61131-3 standard programming languages
- Displays and operates the same control program on different visualization clients

Introduction

The WA-CU Controller series is a complete application-ready-package which includes a PC-based Cabinet Controller with high performance Intel Atom/Core-i multi-core processor, DIN-rail fanless compact form factor design, 128GB SSD, 2MB MRAM, Microsoft Windows embedded 7 Pro and CODESYS Control Runtime & Visualization. This allows users to easily achieve an open control solution, the PC-based real-time control system, enabling real-time PLC or PLC/Softmotion control with flexible Fieldbus options such as PROFINET, EtherCAT, EtherNet/IP, CANopen, Modbus TCP/RTU and providing the visualization in parallel on different HMI clients. It also features with MRAM retaining the data values and dual-power input avoiding causing operating failure from unexpected power interruption. The software/hardware flexibility and stability of PC-based Cabinet Controller is able to fulfill various control applications in vertical industries.

Ready-to-go Open Control Solution Package enabling Industry 4.0 includes:

- PC-based Cabinet Controller
- 128GB SSD and 2MB MRAM
- Microsoft Windows embedded 7 Pro 32bit
- CODESYS Control Runtime & Visualization

Open Control Solutions Specifications

One Open Controller for all Control Systems

- Supports main Fieldbuses configurators and portable protocol stacks:
  - PROFINET (Master)
  - EtherCAT (Master)
  - EtherNet/IP (Master)
  - CANopen
  - Modbus TCP (Server/Client)
  - Modbus RTU (Master)
- Flexible in selecting the object-oriented IEC 61131-3 (FBD, LD, IL, ST, SFC) standard programming languages
- Integrated Control Runtime & Visualization allow user to develop the HMI screen in parallel to the IEC 61131-3 program
- Easy hardware configuration by iDoor technology implement for flexible I/O expansion and wireless communication options

High Performance CPU for Real-time Control Applications

- Intel Atom/Core-i multi-core level CPU both for entry and high performance requirements
- The multi-core CPU distributes PLC Runtime, Visualization and other tasks to dedicated cores.
- Optimized system BIOS setting guarantees the consistent CPU clock rate for real-time control

Visualized Control on Field side Operation and Remote Mobile Clients

- Creates Visualized HMI on extended touch panel for on-site operation
- Supports browser-based (HTML5) visualization enabling remote operating on iOS/Android mobile devices
- The complete visualization screens can be deposited into library and reused as IEC 61131-3 function blocks

Reliable Controller Design for harsh environment

- Includes MRAM retaining data values and dual-power input avoiding causing operating failure from unexpected power interruption
- DIN-rail mounting fanless compact design for higher reliability and less maintenance effort
- Supports remote system status monitoring by WISE-PaaS/RMM
- Approved Certifications: BSMI, CCC, CE, FCC Class A, UL
- Wide operating temperature

Configuration Options

Series	Visualized Cabinet Controller	
Ordering P/N	WA-CU1372G-ERHE5AE	WA-CU1483G-3RHE5AE
Platform	UNO-1372G-E3AE	UNO-1483G-434AE
Operating System	Microsoft Windows Embedded 7 Pro (32 bit)	
Control Software*	CODESYS V3.5 SP7 Control RTE & Visualization	
Form Factor (Front-accessible I/O)	Small size	Regular size
CPU	Intel Atom E3845 Quad-core 1.91 GHz	Intel Core i3-4010U Dual-core 1.7 GHz
Processing times	Bit operation (3.654 µs) Word operation (3.672 µs) REAL operation (6.263 µs)	Bit operation (3.654 µs) Word operation (3.672 µs) REAL operation (6.263 µs)
Memory	4GB DDR3L	8GB DDR3L
Backup Memory	2MB MRAM	
Display Type	HDMI: 1920 x 1080 @ 60Hz VGA: 1920 x 1200 @ 60Hz	DP: 1920 x 1080 @ 60Hz VGA: 1920 x 1200 @ 60Hz
Storage	128GB SSD	
Diagnostics LED	System Power x 3, RTC status x 1, HDD x 1, COM x 2, PL x 1	System Power x 3, RTC status x 1, HDD x 1, COM x 3
Expansion Slots	Full-size Mini PCIe x 1 mSATA x 1	PCIe x 1 Full-size Mini PCIe/mSATA x 1 Half-size Mini PCIe x 1
Mounting	DIN-rail, Wall	
Network(LAN)	10/100/1000 Base-T x 3 (LAN A/B: Intel i210)	10/100/1000 Base-T x 4 (LAN B/C/D: Intel i210)
I/O Port	RS-232 x 1 RS-422/485 x 1 USB 2.0 x 2 USB 3.0 x 1 4-ch DI/O Line-out x 1	RS-232 x 1 RS-422/485 x 2 USB 2.0 x 2 USB 3.0 x 2 4-ch DI/O Line-in/out x 1
iDoor Expansion	iDoor x 1	
Dual DC Power Input (Voltage)	10~36 VDC	12/24 VDC ± 20%
Operating Temperature	-20 ~ 60°C	
Storage Temperature	-40 ~ 85°C	
Dimensions (W x D x H)	85 x 139 x 152 mm	106 x 139 x 198 mm
Certification	CE, FCC, UL, CCC, BSMI	

* For Softmotion control, contact Advantech for further ordering information

Ordering Information

- **WA-CU1372G-ERHE5AE** UNO-1372G-E3AE, Control RTE & Visua., 128G SSD, MRAM, WES7P
- **WA-CU1483G-3RHE5AE** UNO-1483G-434AE, Control RTE & Visua., 128G SSD, MRAM, WES7P

Accessories

- **PWR-247-CE** 100-240V 60W 24V 2.5A Power Supply for WA-CU1372G
- **96PSA-A90W19OT-1** 100-240V 90W 19V Power Supply for WA-CU1483G
- **1702002600** Power Cable US Plug 1.8 M for WA-CU1372G
- **1702002605** Power Cable EU Plug 1.8 M for WA-CU1372G
- **1702031801** Power Cable UK Plug 1.8 M for WA-CU1372G
- **1700000596** Power Cable China/Australia Plug 1.8 M for WA-CU1372G
- **1700001524** Power cable 3-pin US type 1.8 M for WA-CU1483G
- **170203183C** Power cable 3-pin EU type 1.8 M for WA-CU1483G
- **170203180A** Power cable 3-pin UK type 1.8 M for WA-CU1483G

Selected iDoor Modules

- **PCM-26D2CA-AE** SJA1000 CANBus, CANOpen, DB9 x 2
- **PCM-24D2R2-AE** OXPCIe-952 UART, Isolated RS-232, DB9 x 2
- **PCM-24D2R4-AE** OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2
- **PCM-24D4R2-AE** OXPCIe-954 UART, Non-Isolated RS-232, DB37 x 1
- **PCM-24D4R4-AE** OXPCIe-954 UART, Non-Isolated RS-422/485, DB37 x 1
- **PCM-24U2U3-AE** USB 3.0, mPCIe, USB-A type x 2
- **PCM-24S2WF-AE** 802.11 a/b/g/n 2T2R w/ Bluetooth4.0, Half-size mPCIe
- **PCM-24R1TP-AE** Intel® 82574L, GbE, RJ45 x 1
- **PCM-24R2GL-AE** Intel® i350 Gigabit Ethernet, mPCIe, RJ45 x 2