

WA-CT Control Series

PC-based Panel Controller with CODESYS Control Runtime & Visualization

NEW



EtherCAT PROFIBUS EtherNet/IP CANopen Modbus CODESYS



Introduction

The WA-CT Control series is a complete application-ready-package offering which includes PC-based Panel Controller with 15.6"/18.5" wide screen TFT LCD & multi-touch panel, high performance Intel Core-i multi-core processor, 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 on-site visualized HMI operation. It also features with 7H hardness anti-scratch surface and MRAM retaining the data values for any operation under harsh environment. 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 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

Features

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

PC-based Panel Controller

- Industrial 15.6"/18.5" TFT LCD Panel with 50K Lifetime LED backlight
- True-flat 16:9 wide screen with PCT multi-touch and IP66 protection
- Powerful Intel Core-i multi-core CPU dedicated for control and HMI
- 128 GB SSD installed and 2MB MRAM retained control data value
- Microsoft Windows Embedded 7 Pro 32-bit installed
- Supports iDoor technology providing flexible I/O expansion and wireless communication options

CODESYS Control Runtime & Visualization

- Preinstalled CODESYS Control Runtime & Visualization
- Enables real-time PLC or PLC/Softmotion control with main Fieldbuses: PROFINET, EtherCAT, EtherNet/IP and CANopen
- Supports object-oriented IEC-61131-3 standard programming languages
- Displays and operates the same control HMI program both on Panel Controller and other visualization clients

Visualized Control on Field side Operation and Remote Mobile Clients

- Smoothly operates on-site HMI control on projected capacitive touch panel
- 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 during unexpected power interruption
- Rugged fanless Panel PC with backlight Life up to 50,000 hrs
- Touch screen passed 36 million touches test at single point
- True-flat touch screen designed with IP66 front protection
- Easy installation by panel mounting
- Supports remote system status monitoring by WISE-PaaS/RMM
- Approved Certifications: BSMI, CCC, CE, FCC Class A, UL
- Wide operating temperature

Configuration Options

Series	Operator Panel Controller	
Ordering P/N	WA-CT1581W-3RHE5AE	WA-CT1881W-3RHE5AE
Platform	TPC-1581WP-433AE	TPC-1881WP-433AE
Operating System	Microsoft Windows Embedded 7 Pro (32 bit)	
Control Software	CODESYS V3.5 SP7 Control RTE & Visualization	
Aspect ratio	16 : 9	
CPU	Intel Core i3-4010U Dual-core 1.7 GHz	
Processing times	Bit operation (3.654 μs)	Bit operation (3.654 μs)
	Word operation (3.672 μs)	Word operation (3.672 μs)
	REAL operation (6.263 μs)	REAL operation (6.263 μs)
Memory	4GB DDR3L	
Backup Memory	2MB MRAM	
Display Size/Type	15.6" WXGA TFT LED LCD	18.5" WXGA TFT LED LCD
Max. Resolution	1366 x 768	
Backlight MTBF(hrs)	50,000 hrs	
Touchscreen	Projected capacitive	
Storage	128GB SSD	
Expansion Slots	CFast slot x 1	
Mounting	Panel Mount	
Network(LAN)	10/100/1000 Base-T x 2 (LANB: Intel i210)	
I/O	RS-232 x 1	
	RS-232/422/485 x1	
	USB 3.0 x 2	
	HDMI x 1	
	Line-out x 1	
DC Power Input (Voltage)	24 VDC ± 20%	
Ingress Protection	Front Panel IP66	
Operating Temperature	0 ~ 55°C	
Storage Temperature	-20 ~ 60°C	
Dimensions (W x D x H)	419.7 x 269 x 56.7 mm	
Certification	BSMI, CCC, CE, FCC, UL	

* For Softmotion control, contact Advantech for further ordering information

Ordering Information

- **WA-CT1581W-3RHE5AE** TPC-1581WP-433AE, Control RTE & Visua., 128G SSD, MRAM, WES7P
- **WA-CT1881W-3RHE5AE** TPC-1881WP-433AE, Control RTE & Visua., 128G SSD, MRAM, WES7P

Accessories

- **PWR-248-AE** 100-240V 150W 24V 6.25A Power Supply
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596** Power Cable China/Australia Plug 1.8 M



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