# WA-HT HMI Series

### 6.5"~21.5" TFT LCD Windows-based Thin Client Terminal with WebAccess/HMI Runtime

**Open HMI Solution by Application-Ready-Package includes:** 

Durable 5-wire resistive / capacitive touch screen True-flat IP66 certified front panel protection 32GB industrial CFast card installed in standard series

Rich object library for easy application design

Industrial 6.5"~21.5" TFT LCD Panel with 50K Lifetime LED backlight

Microsoft Windows Embedded 7 Pro 64-bit installed in standard series Supports iDoor technology for diverse applications (optional accessory

- Supports 450 industrial communication protocol and drivers for PLC/devices

Supports on-/off-line design simulation by the development tool



## 

### Introduction

The WA-HT HMI standard series is a complete application-ready-package which includes a Thin Client Terminal with panel sizes from 6.5"~21.5" TFT LCD, 32GB CFast card, Microsoft Windows Embedded 7 Pro and WebAccess/HMI Runtime. This allows users to easily achieve efficient, integrated HMI solutions for flexible system integration in automation industries. The Thin Client Terminal with Intel<sup>®</sup> Atom™ or relevant processor providing computing performance in a compact fanless system for any field side operation.

The built-in Open HMI Runtime features a rich object library, online/offline simulation, and over 450 industrial protocols and drivers. It is dedicated to providing a wide range of HMI control and visualization for powerful, user-friendly and reliable solutions in most sophisticated applications.

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

- Touch Panel Thin Client Terminal
- 32GB CFast card (Standard series) / 512 MB SD card (Lite series)
- Microsoft Windows embedded 7 Pro 64bit (Standard series) / WinCE 6.0 (Lite series)
- WebAccess/HMI Runtime 1500 tags

### **Open HMI Solutions Specifications**

#### **HMI Visualization for Process Information**

- Wide panel size selection from 6.5" to 21.5"
- Multi-languages for HMI (up to 10 languages)
- Object library: includes default/common objects, objects groups and global objects
- HMI Designer: a powerful develop tool supports online/offline design simulation
- User-customized picture/sounds database

#### Application-oriented HMI Design Function

- Data log: up to 16 datalog blocks (saved as csv/txt file)
- Operation log: operation history for process parameter inspection (saved as csv file)
- Alarm: up to 16 alarm blocks, e-mail notification (supports SSL/TSL encryption)
- Recipe: up to 16 Recipe blocks
- Schedule: up to 80 sets
- Event: up to 36 sets
- User-customized data process: Macros
- Security Authority: 9 levels password

#### **Communication with Multiple Systems**

- Includes rich interfaces as RS-232/422/485, USB 3.0/2.0, Ethernet, Audio I/O
- Maximum Serial/Ethernet Links: 4-links (serial), 16-links (Ethernet)
- Supports 450 communication protocols and drivers for industrial devices
- Gateway service by Modbus for HMI devices communication
- Flexible I/O expansion by iDoor technology

#### **Reliable Design for Field side Operation**

- 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 panel mounting installation

Features

**Thin Client Terminal** 

required)

WebAccess/HMI Runtime
Includes HMI Runtime 1500 tags

- Approved Certifications: BSMI, CCC, CE, FCC Class A,, UL
- Wide operating temperature
- Vibration Protection With CFast: 2 Grms (5~500 Hz)



For more details of successful stories with Open HMI Solution and technical support documents, visit the Advantech website: http://select.advantech.com/open-hmi-solutions

### **WA-HT HMI Series**

### **Configuration Options**

Unit: mm

Series	Touch Panel HMI - Lite series		Touch Panel HMI - Standard series					
Ordering P/N	WA-HT3070T- R15H0AE	WA-HT3100T- R15H0AE	WA-HT651T- E15H1AE	WA-HT1051W- E15H1AE	WA-HT1251T- E15H1AE	WA-HT1551T- E15H1AE	WA-HT1751T- E15H1AE	WA-HT2140W- G15H1AE
Thin Client Terminal	WOP-3070T-C4AE	WOP-3100T-C4AE	TPC-651T-6E3AE	TPC-1051WP-E3AE	TPC-1251T-E3AE	TPC-1551T-E3AE	TPC-1751T-E3AE	TPC-2140WP-T3AE
<b>Operating System</b>	Microsoft WinCE 6.0		Microsoft Windows Embedded 7 Pro (64bit)					
HMI Software	WebAccess/HMI Runtime 1500 tags		WebAccess/HMI Runtime 1500 tags					
CPU	ARM <sup>®</sup> Cortex™-A8 600 MHz		Intel Atom E3827 1.75GHz					AMD G-series T56E 1.65GH
Memory	256MB DDR2		4GB DDR3L					
Aspect ratio	16		4:3	16:9	4:3	4:3	4:3	16:9
Display (Size, Type)	7" WVGA TFT LCD	10.1" WVGA TFT LCD	6.5" VGA TFT LED LCD	10.1" WXGA TFT LED LCD	12.1" XGA TFT LED LCD	15" XGA TFT LED LCD	17" SXGA TFT LED LCD	21.5" Full HD TFT LED LCD
Max. Resolution / Colors	800 x 480 / 64k	1024 x 600 / 64k	640 x 480 / 262k	1280 x 800 / 262k	1024 x 768 / 16.2 M	1024 x 768 / 16.7M	1280 x 1024 / 16.7M	1920 x 1080 / 16.7M
Backlight MTBF(hrs)	50,000 hrs		50,000 hrs	25,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs
Touchscreen	5-wire Resistive		5-wire Resistive	Projected capacitive	5-wire Resistive	5-wire Resistive	5-wire Resistive	Projected capacitive
Storage	512M micro SD on board SLC type		32G CFast card x1					
Expansion Slots	micro SD x1		Full-size Mini PCIe x1					
Mounting	Panel		Desktop, Wall or Panel					
Network(LAN)	10/100 Base-T x 1		10/100/1000 Base-T x 2					
1/0	RS-232/422/485 x 1 (DB9) RS-422/485 x 1 (4 pin) RS-485 x 1 (2 pin) USB 2.0 x 1(Client X1, Host x 1) Lin out x 1, Mic in x 1		RS-232 x 1 RS-232/422/485 x1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1 RS-232/422/485 x1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1 RS-232/422/485 x1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1 RS-232/422/485 x1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 1 RS-232/422/485 x1 USB 3.0 x 1 USB 2.0 x 1	RS-232 x 3 RS-422/485 x1 USB 2.0 x 2 HDMI x 1 Mic in x 1, Line out x1
iDoor Expansion (TPC-1251T-EHKE is required)*	N/A		iDoor x1 *					N/A
DC Power Input (Voltage)	24 V <sub>DC</sub> ± 10%		$24V_{DC} \pm 20\%$					18 ~ 32 V <sub>DC</sub>
Power Consumption	7 W	9 W	19.2 W	36 W	45.6W	40.8W	43.2W	35 W
Ingress Protection	Front Panel IP66		Front Panel IP66					
Operating Temperature	-20 ~ 60°C		-20 ~ 60°C	-20 ~ 55°C	-20 ~ 60°C	-20 ~ 60°C	-20 ~ 60°C	0 ~ 55°C
Certification	CE, FCC, BSMI, CCC, UL		CE, FCC, BSMI, CCC, UL					

### **Ordering Information**

- WA-HT3070T-R15H0AE WOP-3070T-C4AE, HMI Runtime 1500 tags, 512M SD, WinCE
- WA-HT3100T-R15H0AE WOP-3100T-C4AE, HMI Runtime 1500 tags, 512M SD, WinCE
- WA-HT651T-E15H1AE TPC-651T-6E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- WA-HT1051W-E15H1AE TPC-1051WP-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- WA-HT1251T-E15H1AE TPC-1251T-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- WA-HT1551T-E15H1AE TPC-1551T-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- WA-HT1751T-E15H1AE TPC-1751T-E3AE, HMI Runtime 1500 tags, 32G CFast, WES7P
- WA-HT2140W-G15H1AE TPC-2140WP-T3AE, HMI Runtime 1500 tags, 32G CFast, WES7P

### Accessories

- PWR-247-CE
- TPC-1251T-EHKE
- 1702002600
- 17020020001702002605
- 17020020031702031801
- 1700000596

100-240V 60W 24V 2.5A Power Supply HDD/SSD and iDoor extension kit for WA-HT651T/1051W/1251T/1551T/1751T Power Cable US Plug 1.8 M Power Cable EU Plug 1.8 M Power Cable UK Plug 1.8 M

Power Cable China/Australia Plug 1.8 M

### **Selected iDoor Modules**

- PCM-24D2R2-AE
- PCM-24D2R4-AE
- PCM-24D4R2-AE
- PCM-24D4R4-AE
- PCM-27D24DI-AE
- PCM-27J3AU-AE
- PCM-24S2WF-AE
- PCM-24R1TP-AE
- OXPCIe-952 UART, Isolated RS-422/485, DB9 x 2 OXPCIe-954 UART, Non-Isolated RS-232, DB37 x 1 OXPCIe-954 UART, Non-Isolated RS-422/485, DB37 x 1
- Isolated Digital I/O, 16DI/8DO, mPCle, DB37 x 1

OXPCIe-952 UART, Isolated RS-232, DB9 x 2

- 3-Port Audio Stereo, mPCle, 3.5 mm Jack 802.11 a/b/g/n 2T2R w/ Bluetooth4.0, Half-size mPCle
  - Intel<sup>®</sup> 82574L, GbE, RJ45 x 1



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