

# WA-HT HMI Series

## 6.5" ~ 21.5" TFT LCD Windows-Based Touch Panel HMI with WebAccess/HMI Runtime

NEW



WebAccess/HMI



### Features

#### Open HMI Application-Ready-Package with Touch Panel

- Industrial 6.5"~21.5" TFT LCD Panel with 50K Lifetime LED backlight
- Durable 5-wire resistive / capacitive touch screen
- True-flat IP66 certified front panel protection
- 32GB industrial CFast card installed in standard series
- Microsoft Windows Embedded 7 Pro 64-bit installed in standard series
- Supports iDoor technology for diverse applications (optional accessory required)

#### WebAccess/HMI Runtime

- Includes HMI Runtime 1500 tags
- Supports 450 industrial communication protocol and drivers for PLC/devices
- Rich object library for easy application design
- Supports on-/off-line design simulation by the development tool

### Introduction

The WA-HT HMI series is a complete application-ready-package that includes a thin-client terminal with a 6.5 ~ 21.5" TFT LCD panel, 32 GB CFast card, Microsoft Windows Embedded 7 Pro, and WebAccess/HMI Runtime. This provides users with an efficient, integrated HMI solution for flexible system integration in the automation industry. The thin-client terminal equipped with an Intel® Atom™ processor provides a high-performance fanless, compact system for diverse field operations.

The built-in Open HMI Runtime software offers a rich object library, online/offline simulation, and over 450 industrial protocols and drivers. Open HMI Runtime is designed to enable a wide range of HMI control and visualization functions for creating powerful, user-friendly, reliable solutions for sophisticated applications.

#### Contents of the Open HMI Application-Ready-Package Solution for Industry 4.0

- Touch panel thin-client terminal
- 32 GB CFast card (standard series)/512 MB SD card (lite series)
- Microsoft Windows Embedded 7 Pro, 64 bit (standard series)/WinCE 6.0 (lite series)
- WebAccess/HMI Runtime 1500 tags

### Open HMI Solution Specifications

#### HMI Visualization for Process Information

- Wide selection of panel sizes (6.5 ~ 21.5")
- Multiple 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 Functions

- 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 Operations

- Backlight life of up to 50,000 hours
- Touch screen passed 36 million touches test at single point
- True-flat touch screen designed with IP66 front protection
- Easy panel mounting installation
- Approved Certification: BSMI, CCC, CE, FCC Class A, UL
- Wide operating temperature
- Vibration Protection With CFast: 2 Grms (5~500 Hz)



For more Open HMI application stories and technical support documents, visit the Advantech website at <http://select.advantech.com/open-hmi-solutions>

## Configuration Options

| Series                                        | Touch Panel HMI - Lite                                                                                                                            |                    |                    | Touch Panel HMI - Standard                                        |                                                                   |                                                                   |                                                                   |                                                                                            |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Part Number                                   | WA-HT3070T-R15H0AE                                                                                                                                | WA-HT3100T-R15H0AE | WA-HT3120T-R15H001 | WA-HT651T-E15H1AE                                                 | WA-HT1251T-E15H1AE                                                | WA-HT1551T-E15H1AE                                                | WA-HT1751T-E15H1AE                                                | WA-HT2140W-G15H1AE                                                                         |
| Thin-Client Terminal                          | WOP-3070T-C4BE                                                                                                                                    | WOP-3100T-C4BE     | WOP-3120T-C4AE     | TPC-651T-6E3AE                                                    | TPC-1251T-E3AE                                                    | TPC-1551T-E3AE                                                    | TPC-1751T-E3AE                                                    | TPC-2140WP-T3AE                                                                            |
| Operating System                              | Microsoft WinCE 6.0                                                                                                                               |                    |                    | Microsoft Windows Embedded 7 Pro (64 bit)                         |                                                                   |                                                                   |                                                                   |                                                                                            |
| HMI Software                                  | WebAccess/HMI Runtime 1500 tags                                                                                                                   |                    |                    | WebAccess/HMI Runtime 1500 tags                                   |                                                                   |                                                                   |                                                                   |                                                                                            |
| CPU                                           | ARM® Cortex™-A8 600 MHz                                                                                                                           |                    |                    | Intel® Atom™ E3827 1.75GHz                                        |                                                                   |                                                                   |                                                                   | AMD G-series T56E 1.65 GHz                                                                 |
| Memory                                        | 256 MB DDR2                                                                                                                                       |                    |                    | 4 GB of DDR3L                                                     |                                                                   |                                                                   |                                                                   |                                                                                            |
| Aspect Ratio                                  | 16:9                                                                                                                                              |                    |                    | 4:3                                                               | 4:3                                                               | 4:3                                                               | 4:3                                                               | 16:9                                                                                       |
| Display (Size, Type)                          | 7" WVGA TFT LCD                                                                                                                                   | 10.1" WVGA TFT LCD | 12" XGA TFT LCD    | 6.5" VGA 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   | 1024 x 768 / 64k   | 640 x 480 / 262k                                                  | 1024 x 768 / 16.2 M                                               | 1024 x 768 / 16.7M                                                | 1280 x 1024 / 16.7M                                               | 1920 x 1080 / 16.7M                                                                        |
| Backlight MTBF                                | 50,000 hrs                                                                                                                                        |                    |                    | 50,000 hrs                                                        | 50,000 hrs                                                        | 50,000 hrs                                                        | 50,000 hrs                                                        | 50,000 hrs                                                                                 |
| Touchscreen                                   | 5-wire resistive                                                                                                                                  |                    |                    | 5-wire resistive                                                  | 5-wire resistive                                                  | 5-wire resistive                                                  | 5-wire resistive                                                  | Projected capacitive                                                                       |
| Storage                                       | 512M micro SD on board (SLC type)                                                                                                                 |                    |                    | 1 x 32G CFast card                                                |                                                                   |                                                                   |                                                                   |                                                                                            |
| Expansion Slots                               | 1 x Micro SD                                                                                                                                      |                    |                    | 1 x Full-size Mini PCIe                                           |                                                                   |                                                                   |                                                                   |                                                                                            |
| Mounting                                      | Panel                                                                                                                                             |                    |                    | Desktop, wall, or panel                                           |                                                                   |                                                                   |                                                                   |                                                                                            |
| Network (LAN)                                 | 1 x 10/100 Base-T                                                                                                                                 |                    |                    | 2 x 10/100/1000 Base-T                                            |                                                                   |                                                                   |                                                                   |                                                                                            |
| I/O                                           | 1 x RS-232/422/485 (DB9),<br>1 x RS-422/485 (4 pin),<br>1 x RS-485 (2 pin),<br>1 x USB 2.0 (1 x Client X1, 1 x Host),<br>1 x Line Out, 1 x Mic In |                    |                    | 1 x RS-232,<br>1 x RS-232/422/485,<br>1 x USB 3.0,<br>1 x USB 2.0 | 1 x RS-232,<br>1 x RS-232/422/485,<br>1 x USB 3.0,<br>1 x USB 2.0 | 1 x RS-232,<br>1 x RS-232/422/485,<br>1 x USB 3.0,<br>1 x USB 2.0 | 1 x RS-232,<br>1 x RS-232/422/485,<br>1 x USB 3.0,<br>1 x USB 2.0 | 3 x RS-232,<br>1 x RS-422/485,<br>2 x USB 2.0,<br>1 x HDMI,<br>1 x Mic In,<br>1 x Line Out |
| iDoor Expansion (TPC-1251T-EHKE is required)* | N/A                                                                                                                                               |                    |                    | 1 x iDoor *                                                       |                                                                   |                                                                   |                                                                   | N/A                                                                                        |
| DC Power Input (Voltage)                      | 24 V <sub>DC</sub> ± 10%                                                                                                                          |                    |                    | 24 V <sub>DC</sub> ± 20%                                          |                                                                   |                                                                   |                                                                   | 18 ~ 32 V <sub>DC</sub>                                                                    |
| Power Consumption                             | 7 W                                                                                                                                               | 9 W                | 20 W               | 19.2 W                                                            | 45.6W                                                             | 40.8W                                                             | 43.2W                                                             | 35 W                                                                                       |
| Ingress Protection                            | IP66-rated front panel                                                                                                                            |                    |                    | IP66-rated front panel                                            |                                                                   |                                                                   |                                                                   |                                                                                            |
| Operating Temperature                         | -20 ~ 60°C                                                                                                                                        |                    |                    | -20 ~ 60°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-C4BE, HMI Runtime 1500 tags, 512M SD, WinCE
- **WA-HT3100T-R15H0AE** WOP-3100T-C4BE, HMI Runtime 1500 tags, 512M SD, WinCE
- **WA-HT3120T-R15H001** WOP-3120T-C4AE, HMI Runtime 1500 tags, 512M SD, WinCE
- **WA-HT651T-E15H1AE** TPC-651T-6E3AE, 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** 100-240V 60W 24V 2.5A Power Adapter
- **TPC-1251T-EHKE** HDD/SSD and iDoor extension kit for WA-HT651T/1051W/1251T/1551T/1751T
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596-11** Power Cable China/Australia Plug 1.8 M

## Selected iDoor Modules

- **PCM-24D2R2-BE** 2-Ports Isolated RS-232 mPCIe, DB9
- **PCM-24D2R4-BE** 2-Ports Isolated RS-422/485 mPCIe, DB9
- **PCM-24D4R2-BE** 4-Ports Non-Isolated RS-232 mPCIe, DB37
- **PCM-24D4R4-BE** 4-Ports Non-Isolated RS-422/485 mPCIe, DB37
- **PCM-27D24DI-AE** 24-Channels Isolated Digital I/O with counter mPCIe, DB37
- **PCM-27J3AU-AE** 3-Port Audio Stereo, mPCIe, 3.5 mm Jack
- **PCM-24S2WF-BE** 802.11 a/b/g/n 2T2R w/ Bluetooth 4.0, half-size mPCIe
- **PCM-24R1TP-AE** Intel® 82574L, GbE, RJ45 x 1



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