

PWS-872FL

10" Rugged Tablet with Intel® Core™ i3/i5/i7/Celeron® Processor



DeviceOn/iService 

Features

- 7th generation Intel® Core™ i3/i5/i7/Celeron® processor with integrated Intel® Turbo Boost technology
- 10.1" high-brightness WXGA and WUXGA LED display with scratch-resistant Corning® Gorilla® Glass 3 panel
- Multi-touch PCAP touchscreen with support for gloved operation
- Rugged design with MIL-STD-810G certification, IP65 rating, and 4-ft. drop tolerance
- WiFi 6, 4G LTE, Bluetooth 5.2, and GPS modules with BeiDou/GLONASS support
- Built-in front and rear cameras, 1D/2D barcode scanner, and NFC RFID reader
- Hot-swappable battery supports up to 11 hours operation*
- Microsoft® Windows 10 IoT LTSC OS
- Optional peripherals include vehicle docking station, desk docking station, and multiple extension modules
- Equipped with DeviceOn/iService software for remote device management



Introduction

PWS-872FL is an industrial-grade tablet equipped with an Intel® Core™ i3/i5/i7/Celeron® processor, 10.1" WXGA and WUXGA LED display with multi-touch PCAP control, mSATA SATA III SSD storage, multiple I/O, and WiFi 6, NFC, 4G LTE, and Bluetooth 5.2 communication technologies. The built-in front (2MP) and rear (8MP) cameras, 1D/2D barcode scanner, and NFC reader provide convenient data collection tools, and the high-brightness sunlight-readable display supports outdoor applications. For mobile field-service applications, PWS-872FL can be integrated with a hot-swappable external battery that supports up to 11 hours operation to enable long-duration use. Designed for harsh environments, PWS-872FL is also MIL-STD-810G certified for shock and vibration tolerance, IP65 rated for protection from water and dust ingress, and can withstand drops up to 4 ft. Moreover, PWS-872FL can be integrated with a wide range of peripherals, such as vehicle docking station, multi-bay battery charger, universal cover, and various I/O extension modules, to provide application-specific solutions.

Moreover, PWS-872FL is equipped with Advantech's DeviceOn/iService software, which is a next-generation unified device management solution based on the WISE-DeviceOn platform. With support for batch operations and multi-device control, DeviceOn/iService enables easy device configuration and deployment for convenient remote device management.

Specifications

Core	CPU & Chipset	Intel® Celeron® 3965U, 2.2 GHz Intel® Core™ i3-7100U, 2.4 GHz Intel® Core™ i5-7300U, 2.6 GHz (3.5 GHz Intel® Turbo Boost) Intel® Core™ i7-7600U, 2.8 GHz (3.9 GHz with Intel® Turbo Boost)	
	Memory	SODIMM DDR4, 2100 MHz (up to 16 GB)	
	Storage	mSATA SATA III SSD (128 GB – 1 TB)	
Display	Display	WXGA 1280x800 LED display 300-nits brightness, anti-glare surface for sunlight readability WUXGA 1920x1200 LED display 1000-nits brightness, anti-glare surface for sunlight readability	
	Touch Panel	Multi-touch projected capacitive touchscreen with scratch-resistant Corning® Gorilla® Glass 3 panel and support for gloved operation	
	Sensor	Ambient light, accelerometer (g-sensor), e-compass, gyroscope (0°, 90°, 270° screen rotation)	
System	WLAN+Bluetooth	WiFi6+Bluetooth5.2 or WiFi5+Bluetooth5.1	
	WWAN	4G LTE, HSPA+/UMTS, GSM/GPRS/EDGE (optional) Support EU B1/B3/B5/B7/B8/B20/B38/B40/B41, US B1/B2/B3/B4/B5/B8/B28, China B1/B3/B5/B8/B34/B38/B39/B40/B41, Japan B1/B3/B8/B18/B19/B26/B41 (optional)	
	GNSS	Integrated GPS, BeiDou, GLONASS	
	Camera	Front: 2 megapixel CMOS sensor camera with video streaming support Rear: 8 megapixel CMOS sensor camera with LED flash and auto focus	
	Data Collection	Optional 2D barcode scanner (Honeywell N4680), and NFC RFID reader (13.56 MHz, supports ISO14443A/B, ISO15693, MIFARE, FeliCa)	
	Security	1 x Fingerprint scanner (optional), 1 x Trusted Platform Module 2.0, 1 x Kensington Security Slot	
	Audio	2 x 2W speakers, 1 x microphone	
	Input	Multi-touch projected capacitive touchscreen, 2 x programmable buttons, 5 x programmable capacitive touch sensor inputs, 1 x capacitive stylus, on-screen QWERTY keyboard	
	LED Indicators	Power, battery, RFID	
	I/O		2 x USB 3.0, 1 x USB 2.0 1 x HDMI 1.4 1 x SD card slot (SDXC/UHS1/UHS2) 1 x Audio combo jack (line-in/line-out) 1 x DC-in 1 x SIM slot 1 x Docking port (32 pin) (USB 3.0, USB 2.0, PCIe 2.0, DisplayPort)
		Battery	Main battery: 4S1P 14.4V 3250mAh Hot-swappable external battery: 4S2P 14.4V 4300mAh (supports up to 11 hours operation*)
		Power Input	19V ± 5%
		OS	Microsoft® Windows 10 IOT LTSC (64 bit), Linux Ubuntu1604

* The estimated battery life is based on MobileMark® 2014 benchmark. Actual battery performance will vary according to system settings and configuration.

** WiFi certification only; LTE certification by project.

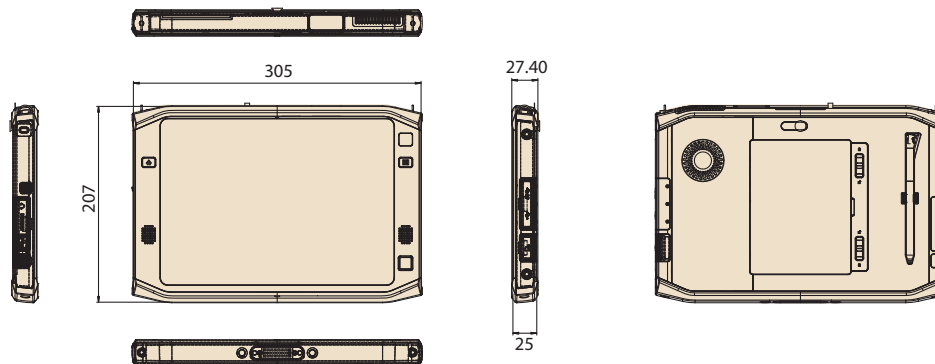
Specifications (Cont.)

Environment	Temperature	Operating: -20 ~ 50 °C/-4 ~ 122 °F (0 ~ 40 °C/32 ~ 104 °F when charging to protect the battery) Storage: -40 ~ 60 °C (-40 ~ 140 °F)
	Humidity	5 ~ 95% @ 40 °C/104 °F
	IP Rating	IP65
	Drop Tolerance	Up to 4 ft.
Certification	Vibration/Shock	MIL-STD-810G
	EMC/RF	CE/FCC/CCC/SAR**
	Safety	UL/CE/CB/CCC
	Mobile Device Management	SOTI compatible
Mechanical	Dimensions (L x W x H)	305 x 207 x 25/27 mm (12 x 8.14 x 0.98/1.06 in)
	Weight	1.38 KG (3.04lb) / 1.5 KG (3.30lb)
DeviceOn/iService Remote Device Management	Operating System	Windows 10
	Common Controls (Reboot, Shutdown)	✓
	Remote desktop	✓(VNC)
	Device-Specific Controls	Audio
	Connection Status	✓
	Hardware Status	✓***
	Hard Disk Status	✓***
	Batch Operation Support	✓
	OTA Storage Management	FTP
	OTA Software Updates	✓
	Software Watchlist	✓
	Software Start/Stop	✓***
	Kiosk Mode	
	Peripherals Watchlist	✓***

***Dependant on device model
Note: DeviceOn/iService software must be downloaded from the Advantech website at <https://www.advantech.com/search?q=DeviceOn%2FiService&st=support&ssl=Utility>

Dimensions

Unit: mm



System I/O

PWS-872 Front/Rear View



1. 2M camera
2. Home key (programmable)
3. Function key
4. Speakers
5. Fingerprint scanner
6. Programmable capacitive touch input
7. 8M AF camera with flash
8. Fan
9. NFC reader
10. Capacitive stylus
11. Latch (for external battery)

PWS-872 Right/Left Side View



1. Kensington Security Slot
2. Power button
3. Audio combo jack
4. HDMI connector (1.4)
5. USB 3.0 port

6. DC-in
7. Screw hole for extension modules
8. USB 3.0 port
9. USB 2.0 port
10. SD card slot (SDXC)

Ordering Information

PN	CPU	LCD	Capacity Hot Key	Memory	Storage	F Camera	R Camera	WiFi & BT	GPS	4G/LTE	OS	Barcode	RFID (NFC)	Fingerprint
PWS-872-CSCW0X001	Celeron	1280x800, 300nits	-	8GB	128GB	-	-	WiFi6 & BT5.2	-	-	Win 10 IoT LTSC	-	-	-
PWS-872-3SCW0X001	Core i3	1280x800, 300nits	Yes	8GB	128GB	Yes	Yes	WiFi6 & BT5.2	-	-	Win 10 IoT LTSC	-	-	-
PWS-872-5HCG0X201	Core i5	1920x1200, 1000nits	Yes	8GB	128GB	Yes	Yes	WiFi6 & BT5.2	Yes	-	Win 10 IoT LTSC	Yes	-	-
CTOS	Celeron/ i3/i5/i7	1920x1200, 1000nits 1280x800, 300nits	Yes No	16GB	256GB 512GB 1TB	Yes No	Yes No	WiFi5 & BT5.1 WiFi6 & BT5.2	Yes No	US LTE EU LTE Japan LTE China LTE No	Win 10 IoT LTSC	Yes No	Yes No	Yes No

Packing List

Part Number	Description
96PSA-A65W19V1-1	1 x 65W adapter
9680015843	1 x Capacitive stylus

Option Power Cord

Part Number	Description
1700001524	Power Cord Connector USA plug
1700008921-11	Power Cord Connector JP plug
1700021374-01	Power Cord Connector China plug
170203180A	Power Cord Connector UK plug
170203183C	Power Cord Connector EU plug

DeviceOn/iService

Unified Remote Device Management Software



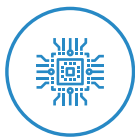
Features

- Supports Advantech devices equipped with Windows, Android, and Linux OS
- Flexible device, location, user, and permissions management
- Enables remote monitoring and control of hardware, software, and peripherals
- Supports over-the-air (OTA) firmware and software updates
- Ensures quick, easy, and secure device onboarding
- RESTful APIs for third-party system integration

Introduction

Advantech's DeviceOn/iService is a next-generation unified device management solution based on the WISE-DeviceOn platform. Designed to enable centralized monitoring and remote management, DeviceOn/iService supports Advantech devices equipped with Windows, Linux, or Android operating systems. The software also supports the management of applications and integrated peripherals, such as a barcode scanner, card reader, camera, and printer. Users can remotely access and control connected devices, take screenshots, rollout OTA upgrades, and use remote desktop capabilities for troubleshooting from any location at any time. Moreover, DeviceOn/iService supports batch operations to facilitate the management of multiple devices simultaneously for easy and convenient device configuration and deployment.

Total Management



Devices & Hardware

- Windows, Linux, Android
- Hardware, storage, battery



Software & Peripherals

- Software monitoring & access
- Screens, USB devices, printers



Open for Expansion

- Peripheral integration
- Open APIs for integration

Remote Access



Real-Time Monitoring

- Connection/hardware status
- Software/peripheral status
- Failure notifications



Remote Controls

- Power controls
- Audio, backlight controls
- Software controls



Troubleshooting

- Screenshots
- Remote desktop support

Operational Efficiency



OTA updates

- System/software updates
- File repository management
- App store



Batch Controls

- 1-to-many batch reboot, etc.
- Time-saving tasks



Setup Booster

- Software/peripheral watchlist
- Roles, rule templates

Note: Some functions may vary according to the product

System Architecture



PWS-872 Series Peripherals

Optional Accessories and Extension Modules for the PWS-872 Series



Universal Cover Package



Features

- Material: Plastic, PVC
- Color: Black
- Dimensions: 305 x 254.2 x 88.4 mm (12 x 10 x 3.48 in)
- Weight: 500 g (1.10 lb)
- Package contents: Universal cover with handle, stand, strap, and holster options

Extension Modules

MSR and Smart Card Reader



Features

- Smart Card Reader
 - ISO 7816 PC/SC
 - EMV 4.0 Level 1
 - Supports I2C memory cards (SLE4418, SLE4428, SLE4432, SLE4442, SLE4436, SLE5536, SLE6636, AT88SC1608, AT45D041)
- Magnetic Stripe Reader
- MagneSafe™ IntelliHead
- Supports US 7810, ISO 7811/AAMVA
- Read speed: 6 ~ 60 IPS (15.4 ~ 12.4 cm)
- Triple DES encryption
- DUKPT key management
- Operating temperature: -20 ~ 50 °C (-4 ~ 122 °F)
- Storage temperature: -20 ~ 60 °C (-4 ~ 140 °F)
- Dimensions: 192.2 x 40.2 x 25 mm (7.56 x 1.58 x 0.98 in)
- Weight: 120 g (0.26 lb)

Additional I/O



Features

- Interfaces: 1 x USB 3.0 (type A, 5V/0.9A), 2 x RS-232 (D-sub 9), 1 x 10/100/1000 Ethernet (RJ45)
- Operating temperature: -20 ~ 50 °C (-4 ~ 122 °F)
- Dimensions: 192.2 x 45.2 x 25 mm (7.56 x 1.77 x 0.98 in)
- Weight: 140 g (0.30 lb)

Optional Accessories and Extension Modules for the PWS-872 Series

External Battery



Features

- Capacity: 14.4V 4300mAh
- IP rating: IP65
- Dimensions: 141.2 x 106.2 x 17 mm (5.55 x 4.18 x 0.66 in)
- Weight: 385 g (0.84 lb)

Multi-Bay Battery Charger



Features

- Supports up to 4 external batteries
- Charging time: 4 hr
- Charge status LED indicators
- Screw holes for secure installation
- Power input: 19.5V/7.7A
- Dimensions: 214.4 x 229.4 x 60 mm (8.44 x 9.03 x 2.36 in)
- Weight: 1.4 kg (3.08 lb)
- Packing material: XAASC-FSP150-RFBN2 (1 x 150w adapter)

Screen Protection Film



Features

- 10.1" anti-glare screen protection film

Ordering Information

Part Number	Description
PWS-870-UCOVER00E	Universal cover package
PWS-870-EXT300E	MSR and smart card reader
PWS-870-EXT100E	I/O extension module
PWS-870-BAT200E	External battery
PWS-870-MBC00E	Multi-bay battery charger
PWS-872-PROFILM	10.1" replacement screen protection film

PWS-872 Series Peripherals

Vehicle Docking Station for the PWS-872 Series



Features

- CAN 2.0 A/B (J1939) and OBDII (ISO 15765) protocol support for vehicle diagnostics
- Anti-theft locking mechanism
- External GPS SMA antenna
- Compatible with 12V/24 V vehicle power
- Ignition control
- Rapid device docking and removal
- Provides complete port replication
- Compliant with MIL-STD-810G and SAE J1455 for vibration and shock tolerance
- E-mark (E13) certified for vehicle safety

Introduction

The vehicle docking station is designed to provide a stable platform for in-vehicle mounting and battery recharging, equipped with a locking mechanism to prevent theft. Replica I/O ports are provided to ensure convenient I/O access for full tablet functionality. Moreover, with the added CAN bus support for vehicle diagnostics, the vehicle docking station provides the ideal in-vehicle solution for diverse automobile applications, including warehouse forklifts and police, fire brigade, and ambulance fleets.

Specifications

I/O	HDC	1 x HDC connector 1 x RS-232, 1 x CAN 2.0 A/B (supports J1939) with OBDII protocol (supports ISO 15765), 1 x line-in, 1 x line-out, 2 x DI, and 2 x DO
	USB	2 x USB 3.0 (locking type)
	Ethernet	1 x 100/1000 LAN (M12)
	SMA for GPS	1 x for external GPS antenna
	DC-In	1 x Power jack (M12) 19V ± 5% (can be paired with a vehicle adapter (PWS-770-CAD1200E/PWS-770-CAD2400E/PWS-770-CADAP00E) or DC-in (M12) adapter cable (1700021797-01))
Environment	IP Rating	IP54 (with tablet docked and all cables connected)
	Operating Temperature	-20 ~ 50 °C/-4 ~ 122 °F (0 ~ 40 °C/32 ~ 104 °F when charging) with tablet docked
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
Certifications	Vibration/Shock	MIL-STD-810G, Method 514.5; SAE J1455
	EMC	CE, FCC
	Safety	UL, CB
	Vehicle Safety	E-mark (E13) (when paired with PWS-770-CAD1200E/PWS-770-CAD2400E)
Mount Options	VESA (75 x 75 mm)	
Weight	950 g (2.09 lb)	
Dimensions	240.5 x 280.9 x 95.4 mm (9.46 x 11.05 x 3.75 in)	

Ordering Information

Part Number	Description (for PWS-872 series)
PWS-870-VCRADLE00E	Vehicle docking station with LAN cable and M12(M) to 8P/RJ45(F) cable (5 cm)
PWS-870-VCRADLE01E	Charge-only vehicle docking station
PWS-870-VMOUNT00E	Vehicle docking station without I/O
PWS-770-CADAP00E*	Vehicle power DC 10 ~ 32V 90W (120cm) to cigarette lighter adaptor with M12 connector
PWS-770-CAD1200E*	Vehicle power DC 10 ~ 32V 90W adaptor with 12V relay (120 cm) and M12 connector
PWS-770-CAD2400E*	Vehicle power DC 10 ~ 32V 90W adaptor with 24V relay (120 cm) and M12 connector
1700021797-01	M12 connector to DC-in cable (10 cm) Note: Connect the PWS-872 series vehicle docking station DC-in port (M12) to the power jack adapter (96PSA-A65W19V1-1)
PWS-870-CHDC00E	Vehicle docking station HDC cable (200 cm), supports 1 x RS-232, 1 x CAN 2.0, 2 x DI, 2x DO, 1 x line-in, 1 x line-out
PWS-770-GPSAN00E	GPS antenna cable 5.5V 22mA (500 cm)
RAM-MOUNT-06E	5.625" double socket arm for 1.5" ball base, 3.625" VESA base at both sockets
RAM-MOUNT-07E	5.625" double socket arm for 1.5" ball base (1 socket with 3.625" VESA base, 1 socket with flat 2.5" diameter base AMPS hole pattern)
PWS-870-VDOCK-CBE	Vehicle docking starter cable kit (power cable, HDC cable, and GPS antenna)

Notes:

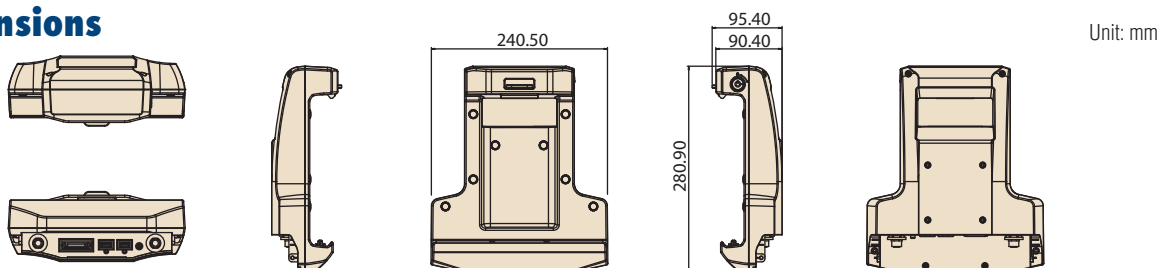
1. The PWS-872 series vehicle docking station includes a LAN cable for M12-to-RJ45 connector. The vehicle adapter is optional. Do not attempt to connect the vehicle adapter M12 plug to the tablet's DC-in port.
2. Advantech strongly recommends initially purchasing the starter cable kit and power adapter for evaluation (suitable power adapters are marked*)

Underside I/O



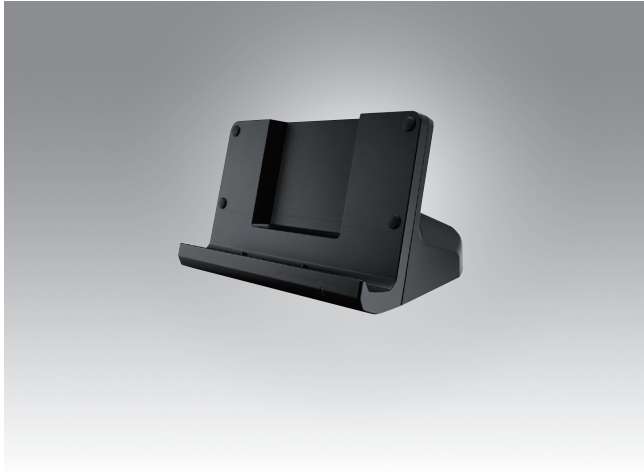
1. 1 x LAN 100/1000 (M12)
2. 1 x GPS SMA
3. 2 x USB 3.0 (locking type)
4. 1 x HDC: 1 x RS232, 1 x CAN 2.0, 2 x DI, 2 x DO, 1 x line-in, 1 x line-out
5. 1 x DC-in (M12)

Dimensions



PWS-872 Series Peripherals

Docking Station for the PWS-872 Series



Features

- Provides complete port replication for PWS-872 series tablets
- Wide operating temperature range (-20 ~ 50 °C/-4 ~ 122 °F)

Introduction

The desk docking station is designed to provide a stable platform for positioning the tablet on a desk or countertop, that allows data transfers and synchronization and supports battery recharging. Moreover, the replica I/O ports ensures convenient connectivity to peripherals for full tablet functionality.

Specifications

I/O	1 x LAN (10/100/1000) 1 x VGA 1 x RS-232 2 x USB 3.0 host connectors 1 x DC-in (19V ± 5%)
Environment	Operating temperature: -20 ~ 50 °C (-4 ~ 122 °F) Storage temperature: -20 ~ 60 °C (-4 ~ 140 °F) Humidity: 5 ~ 95%
Certifications	CE, FCC, UL, CB
Dimensions	223.8 x 146.7 x 128.5 mm (8.81 x 5.77 x 5.05 in)
Weight	820 g (1.80 lb)



No.	Component	Function
1	LAN port	Connect an RJ-45 cable to access LAN connection
2	VGA port	Connect a VGA port to connect to another monitor
3	Serial port	Connect a serial cable to connect to another PC
4	USB ports	Connect USB connectors to transfer data
5	DC-in	Connect the AC adapter to charge the battery

Note: To prevent damage to the desk docking station, only use the desk docking station with PWS-872 series tablets.

Ordering Information

Part Number	Description
PWS-870-CRADLE00E	Desk docking station for PWS-872 series

Note: This product does not include a power adapter. Use the standard tablet power adapter.

Dimensions

