PWS-872

10" Industrial-Grade Tablet with 7th Generation Intel® Core™ i3/i5/i7/Celeron® Processor

Features

- Equipped with DeviceOn/iService software for remote device management
- 7th generation Intel® Core™ i3/i5/i7/Celeron® processor with integrated Intel® Turbo Boost technology
- 10.1" high-brightness WXGA 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
- 4G LTE, WLAN (802.11 a/b/g/n/ac), Bluetooth 4.1, 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 OS
- Optional peripherals include vehicle docking station, desk docking station, and multiple extension modules

DeviceOn/iService

Introduction

PWS-872 is an industrial-grade tablet equipped with an Intel® Core™ i3/i5/i7/Celeron® processor, 10.1" WUXGA LED display with multi-touch PCAP control, mSATA SATA III SSD storage, multiple I/O, and Wi-Fi (802.11 a/b/g/n/ac), NFC, 3G/4G LTE, and Bluetooth 4.1 communication technologies. The built-in front (2M) and rear (8M) 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-872 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-872 is also MIL-STD-810G certified for shock and vibration tolerance, IP65 rated for protection from water and dust ingress, and can withstand drops of up to 4 ft. Moreover, PWS-872 can be integrated with a wide range of peripherals, such as a vehicle docking station, multi-bay battery charger, universal cover, and various I/O extension modules, to provide application-specific solutions.

Moreover, PWS-872 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 (64 GB ~ 1 TB)
Display	Display	WXGA LED display with resolution, 300-nit brightness, anti-glare surface for sunlight readability, and LED backlight
	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	IEEE 802.11 a/b/g/n/ac wave 2 + Bluetooth 4.1 EDR
	WWAN	4G LTE, HSPA+/UMTS, GSM/GPRS/EDGE (optional) PLS8-E for EU 800/900/1800/2600, PLS8-X for US 700/850/AWS/1900 (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 1D barcode scanner (Honeywell N4313), 2D barcode scanner (Honeywell N3680), and NFC RFID reader (13.56 MHz, supports ISO14443A/B, ISO15693, MIFARE, FeliCa)
	Security	1 x Fingerprint scanner (optional), 1 x Trusted Platform Module 1.2, 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 2730mAh Hot-swappable external battery: 4S2P 14.4V 4300mAh (supports up to 11 hours operation*)
	Power Input	19V ± 5%
	OS	Microsoft® Windows 10 IoT (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.
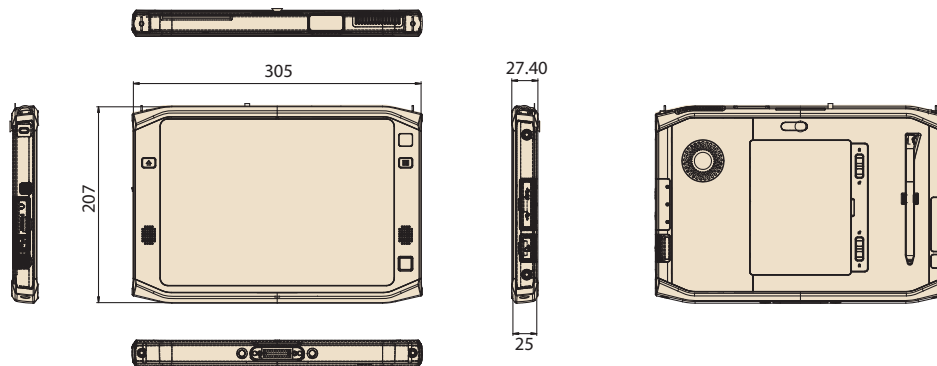* WIFI certification only; LTE certification by project.

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	1.5 Kgs (3.30 lb)
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	
*Dependant on device model	Peripherals Watchlist	✓*

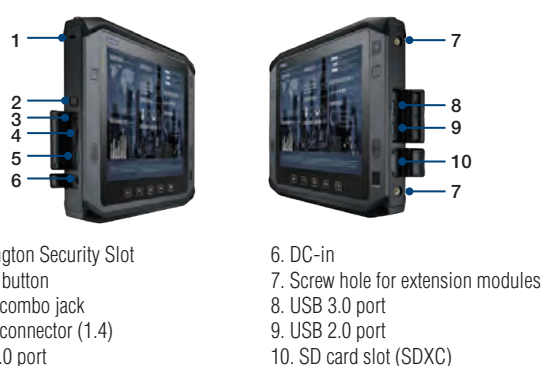Note: DeviceOn/iService software must be downloaded from the Advantech website at https://www.advantech.com/search/?q=DeviceOn%2FiService&st=support&sst=Utility

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

| Standard SKU | Configuration | | | | | | | | | | | RFID reader | Barcode scanner | Fingerprint scanner |
	CPU	LCD	Memory	Storage	Front camera	Rear camera	Wi-Fi	BT	GPS	4G	OS			
PWS-872-CS6W0X000	Celeron	Standard (without capacity hot keys)	DDR4 4GB	SSD 64GB (0 ~ 70 °C)	-	-	Yes	Yes	-	-	Win 10 IoT	-	-	-
PWS-872-CS6W0X200	Celeron	Standard (without Capacity Hot Key)	DDR4 4GB	SSD 64GB (0~70°C)	Yes	Yes	Yes	Yes	-	-	Win10 IoT	-	2D	-
PWS-872-3S6W0X000	Core i3	Standard	DDR4 4GB	SSD 64GB (0 ~ 70 °C)	Yes	Yes	Yes	Yes	-	-	Win 10 IoT	-	-	-
PWS-872-3S6W4X200	Core i3	Standard	DDR4 4GB	SSD 64GB	Yes	Yes	Yes	Yes	-	LTE-US	Win 10 IoT	-	2D	-
PWS-872-3S6W6X200	Core i3	Standard	DDR4 4GB	SSD 64GB	Yes	Yes	Yes	Yes	-	LTE-EU	Win 10 IoT	-	2D	-
PWS-872-5S6W4X200	Core i5	Standard	DDR4 4GB	SSD 64GB	Yes	Yes	Yes	Yes	-	LTE-US	Win 10 IoT	-	2D	-
PWS-872-5S6W6X200	Core i5	Standard	DDR4 4GB	SSD 64GB	Yes	Yes	Yes	Yes	-	LTE-EU	Win 10 IoT	-	2D	-
PWS-872-7S6W4X200	Core i7	Standard	DDR4 4GB	SSD 64GB	Yes	Yes	Yes	Yes	-	LTE-US	Win 10 IoT	-	2D	-
PWS-872-7S6W6X200	Core i7	Standard	DDR4 4GB	SSD 64GB	Yes	Yes	Yes	Yes	-	LTE-EU	Win 10 IoT	-	2D	-

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	Power Cord Connector JP plug
1700021374-01	Power Cord Connector China plug
170203180A	Power Cord Connector UK plug
170203183C	Power Cord Connector EU plug

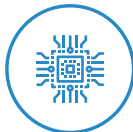# DeviceOn/iService
Unified Remote Device Management Software

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

Client Devices	LAN	DeviceOn Server	Internet	Browser

Client Devices
- Hardware (android)
- Software
- Peripherals

Free Installation
Via the Advantech website

DeviceOn Server
- Cloud
- On-site installation

Download Installer
Via the Advantech website

Required Hardware
Windows10 | 8GB RAM | Intel® Core™ i5 storage | 125GB

Browser
- Monitor status
- Controls

Free Installation
Via browser

PWS-870/872 Peripherals

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)

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 (for PWS-872)

Features

- 10.1" replacement anti-glare screen protection film

Ordering Information

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

PWS-870/872 Peripherals

Vehicle Docking Station for the PWS-870/872 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 supports both the PWS-870 and PWS-872 series. Designed to provide a stable platform for in-vehicle mounting and battery recharging, the vehicle docking station is 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 provision of 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
	HDC I/O	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

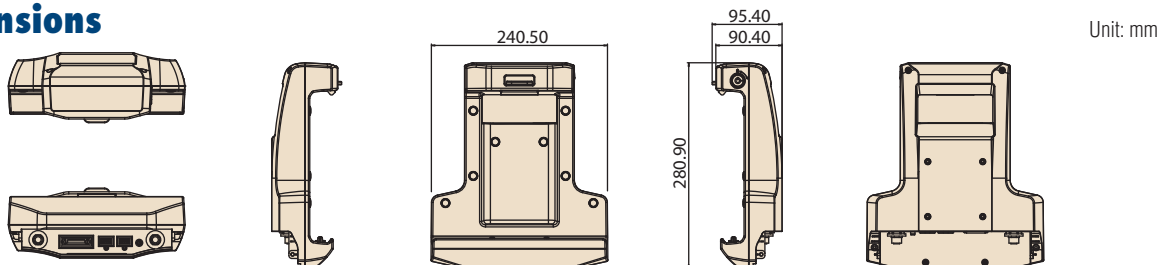| Part Number	Description (for PWS-870/872 series)
PWS-870-VCRADLE00E	Vehicle docking station with LAN cable and M12(M) to 8P/RJ45(F) cable (5 cm)
PWS-870-VCRADLE01E	Charge-only vehicle docking station
PWS-870-VMOUNT00E	Vehicle docking station without I/O
PWS-770-CADAP00E*	Vehicle power DC 10 ~ 32V 90W (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-870/872 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-out, 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-870/872 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
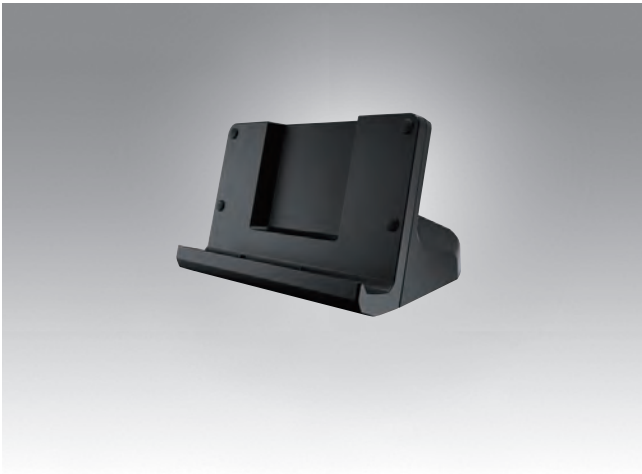5. 1 x DC-in (M12)

Dimensions

240.50

95.40
90.40

280.90

Unit: mm

PWS-870/872
Peripherals

Docking Station for the PWS-870/872 Series

Features

- Provides complete port replication for PWS-870/872 tablets
- Wide operating temperature range (-20 ~ 50 °C/-4 ~ 122 °F)

Introduction

The desk docking station supports both the PWS-870 and PWS-872 series. Designed to provide a stable platform for positioning the tablet on a desk or countertop, the desk docking station allows data transfers and synchronization and supports battery recharging. Moreover, the provision of 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-870/872 tablets.

Ordering Information

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

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

Dimensions

Unit: mm

223.8
146.7
33
25.90
146.7
223.8
128.5