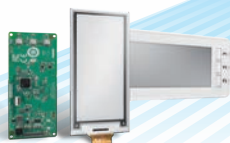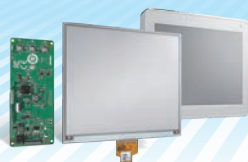# Wireless ePaper Display Solutions
Enable Battery-Powered IoT Display Applications

- ⁄ ePaper Display Modules
- ⁄ ePaper Display Devices
- ⁄ CMS Software Built-In
- ⁄ Wireless Capability
- ⁄ Design-In Services

ePaper Manager

2.4G   WiFi   NB-IoT   Lte

2.9"   5.65"   9.7" & 13.3"   32" & 42"

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Enabling an Intelligent Planet

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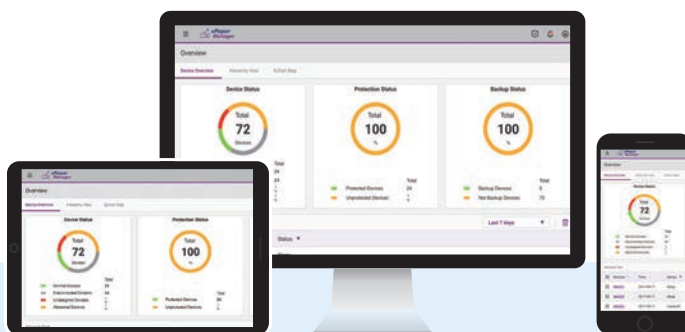# ePaper Manager – Centralized Management Software

Advantech's end-to-end solutions include our ePaper Manager server. With ePaper Manager, you can manage all information on ePaper devices in real-time. Remotely control all services to provide your customers with the latest information and have proper interactions with them. We also provide APIs to integrate data with your original management system.

Full Centralized Control at a Glance

- Monitoring functions for low power, etc.
- Immediate/scheduling information to end user
- Control stock levels in stocktaking mode
- Easily check product expiration dates

Flexible Content Editor for Users

- Creation of templates with simple GUI
- Content previews for system management
- Auto-generated content by system

Device Management

- Device monitoring
  - Tag battery alerts
  - Tag status reports
- Remote control

Account Management

- Account and role
- Setup permissions

Service Management

- Auto firmware updates
  Content and scheduling
  automatic updates

Image Generator

- Preview image files
- Transform images and
  compress

Advantech Wireless ePaper Display Solutions

Advantech provides hardware and software integrated wireless ePaper display solutions: wireless ePaper modules, gateways, server and ePaper Manager CMS software to accelerate the implementation in a wide range of applications such as shelf labelling, digital signages in smart warehouses, factory, and public spaces. The ePaper Manager software package enables easy management over the whole system locally or remotely over the Internet using the MQTT protocol. System integrators and developers can focus on their own application development and use their application to control EPD by sending RESTful API to ePaper Manager.

Vertical Market	Smart City Solutions						Industry 4.0 Solutions			IIoT Solutions		
	Retail	Hospital	Building	Fleet	Transportation	Parking	Factory	Robotics	Warehouse	Environment	Agriculture	Oil & Gas

RESTful API

ePaper Device Management Software	ePaper Manager / EPD-2250L	Device Management	Service Management	Account Management	Image Generator

MQTT

ePaper Device Management Gateway	WISE-3610Z/ WISE-3610W	WISE-3240

EPD Series Display Module	2.4G · WiFi · NB-IoT · lte			
	2.9"	5.65"	9.7"/13.3"	32"/42"

Product features

Ultra-Low Power
Efficient power-saving design

Fast Transmission
Update 10,000 ePaper devices in one hour

2-Way Communication
End devices can report data accuracy, battery levels, and abnormal status

Centralized ePaper Manager
Visualized user interface and simple RESTful API for integration with existing vertical applications

OTA Upgrade
Regular system patches and updates

AES-128 Security
AES-128 encryption and data compression

Device Association
Easy association between ePaper devices and end-device applications

Self-organization Network Topology
Self-organization network groups with self-reported status

Application

Smart Factory Logistics

- Computer aided picking system (CAPS)
  - Picking system
  - Inventory system
- Production line tracking
- Equipment monitoring

Benefits

- Accurate information for stock level and expiry date
- Detailed information for operator to check status
- Increased productivity without extra manpower
- Great solution for mobile process tracking

Benefits

- Easy installation without extra cables
- Sunlight readability with better viewing angles
- Increase efficiency without extra manpower

EPD-023   EPD-023M

- 2.9" E Ink display
- Arm Cortex-M3 core processor
- Supports IEEE 802.15.4 / 2.4 G networks
- Low power consumption, up to 5 years
- Multiple I/O control with 3 buttons & 3 LEDs for more interactive behaviors
- Integrated with RTOS, supports OTA

Focused on retail, warehouse, and pharmacy applications using computer assisted picking (CAP) systems, up to 3 pickers can work on the same ePaper devices at the time.

EPD-053   EPD-053M

- 5.65" E Ink display
- Arm Cortex-M3 core processor
- Supports IEEE 802.15.4 / 2.4 G networks
- Low power consumption, up to 3 years
- 1 button & 1 LED for flexible usage scenarios
- Integrated with RTOS, supports OTA

Focused on equipment, meeting rooms, and factory production management, these big screens show more detailed information, so users can easily check all data without any handsets or equipment. LED and button provide page changes and indication for flexible usage scenarios.

Information Signage

- In-vehicle signage
- Vehicle stop signage
- Hospital bedside card
- Billboard signage
- Smart building management

Benefits

- Easy installation without extra cables
- Sunlight readability with better viewing angles
- Selectable power type: DC-in / battery
- No power needed for emergency alerts

EPD-092M/090M   **EPD-132M/130M**

- 9.7" / 13.3" E Ink Display
- ARM Cortex-M4 core processor
- Supports IEEE 802.11b/g/n + Bluetooth 4.1 standard
- Rich control I/O : expansion pin header & I2C
- Integrated with RTOS, supports OTA

Focused on information signage in hospital clinics, wards, meeting rooms, smart bus stops and bulletin boards in public spaces. Provides real-time information with better viewing angle and superior advantages over traditional signage or posters without extra cables.
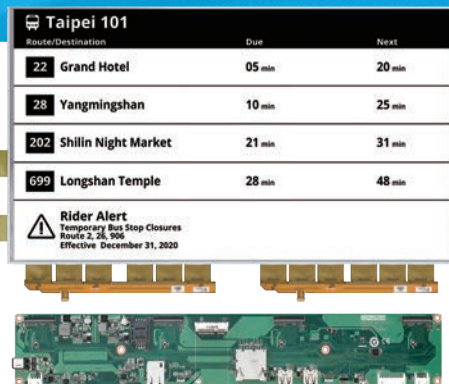
Large Format Signage

- In-vehicle signage/Vehicle stop signage
- Emergency evacuation signage
- Direction signage in amusement park signage/ national park signage
- Gas station for pricing signage

Benefits

- Easy installation without extra cables
- Sunlight readability with better viewing angles
- Ultra low power for green energy and environment
- No power needed for emergency alerts

EPD-322M/327M, EPD-422M/427M

- 32" / 42" E Ink Display
- Supports IEEE 802.11 ac/b/g/n, LTE Cat.1
- Multiple I/O connections
- Supports OTA
- Supports 16-levels gray scale & 2560 x 1440 pixels resolution
- Supports 4096 Color filter & 1280 x 720 pixels resolution

Focused on public signage including hospital clinics, operation rooms, smart buildings, in-vehicle and smart bus stops which can be read under sunlight with better viewing angles.

Product Selection

ePaper Device

Product		EPD-023	EPD-053
Display	Panel Size	2.9"	5.65"
	Resolution	296x128 Pixels	600 x448 Pixels
	Color	Black/White	Black/White/Red
Interface		LED x 3, Button x3	LED x 1, Button x1
Dimension		100 x 47 x 17.9 mm	140.3 x 118.3 x 14 mm
Network		2.4G/IEEE802.15.4 Proprietary	2.4G/IEEE802.15.4 Proprietary
Power		Battery CR2450x4	Battery CR2450x4
Operation Temperature		0~50 °C	0~40 °C
Certification		CE/FCC/NCC/UL/CB	CE/FCC/NCC/UL/CB
Ordering Information		EPD-023B2AG-NTC02	EPD-053R2AG-NTC02

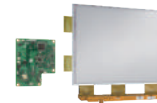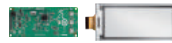## EPD Network Module

Product	WISE-1840
Interface	Mini-PCIe
Protocol	IEEE 802.15.4, Proprietary
Connected Quantities	400pcs EPD-023/EPD-053
Operation Temperature	-20 ~ 70 °C
Certifications	CE,FCC, NCC
Platform	WISE-3610Z
Ordering Info.	WISE-1840WTB-TD010 WISE-1840WTB-TD01E for EU

EPD Gateway

Product	WISE-3610Z	WISE-3610W
Interface	Ethernet and Wireless	Ethernet and Wireless
Protocol	IEEE 802.15.4, Proprietary	IEEE 802.11 b/g/n
Connected Quantities	400pcs EPD-023/EPD-053	100pcs EPD-132/EPD-092
Power	DC12V/5A	DC12V/5A
Operation Temperature	-20 ~ 70 °C	-20 ~ 70 °C
Dimensions	187.9mm x 150mm x 39mm	187.9mm x 150mm x 39mm
Certifications	CE/FCC/IC Class B,NCC	CE/FCC/IC Class B, NCC
Ordering Info	WISE-3610ZOS-41B1E for EU WISE-3610ZOS-41B1J for JP WISE-3610ZOS-41B1N for NA WISE-3610ZOS-41B1T for TW WISE-3610ZOS-41B1C for China	WISE-3610WOS-21B1E for EU WISE-3610WOS-21B1J for JP WISE-3610WOS-21B1N for NA WISE-3610WOS-21B1T for TW WISE-3610WOS-21B1C for China

ePaper Module

Product		EPD-023M	EPD-053M	EPD-132M / EPD-130M	
Display	Panel Size	2.9"	5.65"	13.3"	
	Resolution	296x128 Pixels	600 x448 Pixels	1600x1200 Pixels	
Interface		LED x 3, Button x3	LED x 1, Button x1	GPIO for LED & Button, I2C x 1	
PCBA Dimension		79.0 x 36.7 x 1.15 mm	79.0 × 36.7 × 1.15 mm	108 x 122 x 3.9 mm	
Network		2.4G/IEEE802.15.4 Proprietary	2.4G/IEEE802.15.4 Proprietary	2.4G/IEEE 802.11 b/g/n	
MCU		Arm® Cortex M3	Arm® Cortex M3	Arm® Cortex M4	
Power		Battery CR2450x4	Battery CR2450x4	DC-in 5V	
Operation Temperature		0~50 °C	0~40 °C	R/B/W: 0~40 °C, B/W: 0~50 °C	
Certification		CE/FCC/NCC/UL/CB	CE/FCC/NCC/UL/CB	CE/FCC/NCC/Telec	
Ordering Information		EPD-023MBAG-NTC02	Black/White	EPD-053MRAG-NTC02	Black/White/Red	EPD-130MBAG-NSD01	Black/White, without wireless capability
						EPD-132MBAG-NSD01	Black/White
						EPD-130MRAG-NSD01	Black/White/Red, without wireless capability
						EPD-132MRAG-NSD01	Black/White/Red

EPD Server with CMS

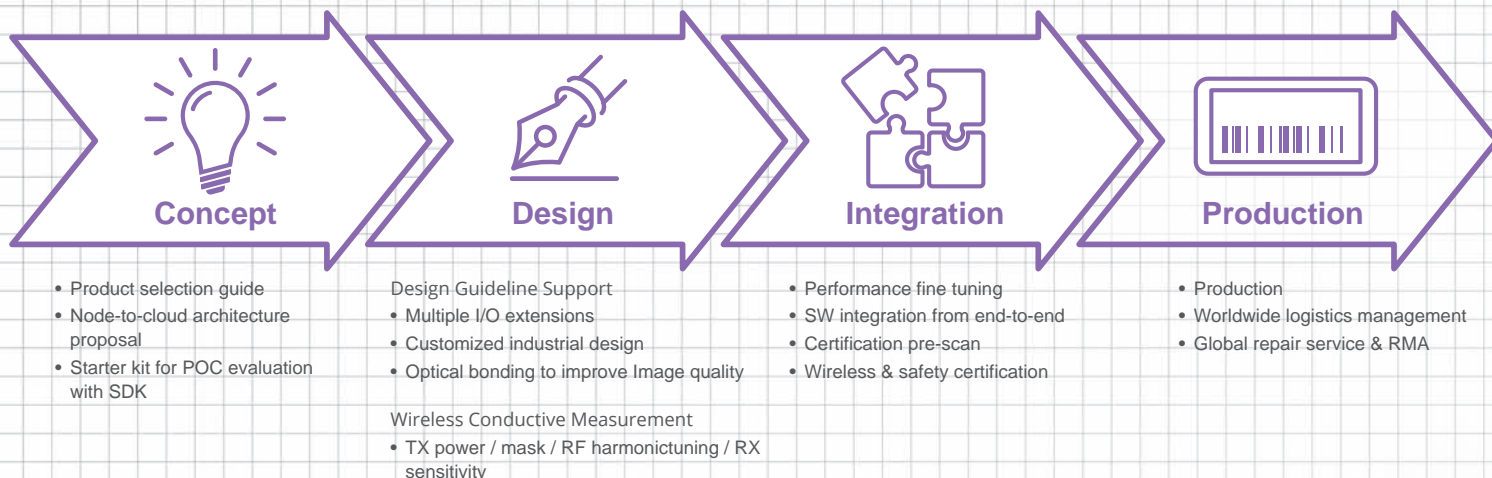| Product	EPD-2250L
Description	ARK2250L, Intel i7-6600U, 500GHDD,8GRAM,ADP
Software	ePaper Manager (CMS) on Win7
Connected Quantities	10,000pcs EPD-023/EPD-053 or 500pcs EPD-132
Power	DC12V/5A
Certifications	CE/FCC Class B, CCC, BSMI, UL, CCC, BSMI
Ordering Info.	ARK2250L1901E-T

Development Kit

Product	EPD-DK023053-FS01 2.9" & 5.65" Development Kit		EPD-DK132R-FS01 13.3" Development Kit	
Device	EPD-023B2AG-NTC02 EPD-053R2AG-NTC02	2pcs 2pcs	EPD-132R2AG-NSD01	1pc
Gateway	WISE-3610ZOS-41B1E for EU WISE-3610ZOS-41B1J for JP WISE-3610ZOS-41B1N for NA WISE-3610ZOS-41B1T for TW WISE-3610ZOS-41B1C for China	1pc	WISE-3610WOS-21B1E for EU WISE-3610WOS-21B1J for JP WISE-3610WOS-21B1N for NA WISE-3610WOS-21B1T for TW WISE-3610WOS-21B1C for China	1pc
Network Module	WISE-1840WTB-TD010 WISE-1840WTB-TD01E for EU	1pc	-	-
Server	ARK2250L1901E-T (Build in ePaper Manager Software with 500 device licenses)	1pc	ARK2250L1901E-T (Build in ePaper Manager Software with 500 device licenses)	1pc

Design-in Services

Concept	Design	Integration	Production

Concept
- Product selection guide
- Node-to-cloud architecture proposal
- Starter kit for POC evaluation with SDK

Design

Design Guideline Support
- Multiple I/O extensions
- Customized industrial design
- Optical bonding to improve Image quality

Wireless Conductive Measurement
- TX power / mask / RF harmonictuning / RX sensitivity

Integration
- Performance fine tuning
- SW integration from end-to-end
- Certification pre-scan
- Wireless & safety certification

Production
- Production
- Worldwide logistics management
- Global repair service & RMA

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Netherlands Eindhoven 31-40-267-7000

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