

INCREASE
PRODUCTION
RATE WITH
INTEGRATED
TECHNOLOGIES



Worldwide
certification



Ingress
Protection



MIL-STD-810G/
H compliance

Smart Manufacturing (Industry 4.0)

IIoT | Manufacturing Digitalization | Edge Computing

About Winmate

Founded in 1996, Winmate Inc. is a pioneer in rugged computing technology. Winmate has provided business leaders worldwide with reliable, robust solutions for the most challenging industrial conditions for over two decades. From R&D to manufacturing to in-house testing, Winmate Inc. manages the entire product development process with ready-made products available for quick deployment. Today Winmate's innovative approach has helped countless enterprises at every level with equipment automation and seamless Industrial Internet of Things (IIoT) integration.

From the industrial display, panel PC, HMI, embedded systems to rugged mobile devices, Winmate caters to industries ranging from transportation and logistics to marine and military, railway, oil, and gas, and provides customization services to create a unique solution for specific customer requirements.

The Winmate Difference

Innovation and Ruggedness

With innovation and ruggedness, our products are designed to meet the requirements of vertical markets' environmental standards.

Engineering Intelligence

We are committed to maintaining the highest standards in engineering excellence to ensure our products deliver reliability, durability, and optimized performance.

Quality Commitment

Quality assurance and entire engineering processes are conducted in-house. It is why we invested significantly in our state-of-the-art testing facility with additional global support.

“
**INNOVATIVE
TECHNOLOGY FOR
OPERATIONAL
EXCELLENCE.**
”

Efficiency

Our team is committed to efficiency and maintaining the shortest possible development cycles. The whole development process is conducted in-house to achieve the market advantage in speed and quality from design to testing.

Reliability

Reliability, service, and support are part of our foundation. Every product scrutinizes industrial standards testing to verify electrical, mechanical, thermal, and firmware design performance.

Customized Solutions

Years of experience allow Winmate to offer customized solutions for different applications.

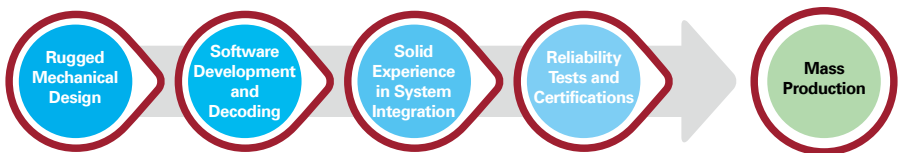
From product design to accessories, our engineering team designs and support the system integration process.

- CUSTOMIZED CONFIGURATION
- CUSTOM OS IMAGE
- CUSTOM BIOS
- ENCLOSURE DESIGN
- PERIPHERALS AND OPTIONS
- CUSTOM-DESIGNED ACCESSORIES

Technical Know-How

We understand that access to cutting-edge solutions purposely built for their applications is imperative for enterprises operating in rugged or potentially hazardous environments. As a result, Winmate locates its resources from project research and design, software development and customization, product verification and validation, and in-house testing to research and implement the latest technologies available.

The latest technologies we deploy for our rugged products:



- Dry and wet optical bonding
- Panel enhancement for sunlight readability
- Anti-reflection (AR) and anti-glare (AG) glass protection coating
- Light sensor
- Hyper dimming
- Electronic potting
- Touch screen integration: projected capacitive, resistive, or SAW touch
- Waterproof enclosure
- Military EMI and mesh coating
- Wireless capabilities
- Data capture devices integration
- Defroster for ultra-low temperature environments
- Stainless steel SUS 316/ AISI 316
- Shock and vibration resistance
- Wide-range operation temperature

IIoT & Edge Computing

Overview

Winmate offers a full range of embedded platforms for you to build unique solutions for industrial embedded systems. Our embedded computing solutions are designed to give developers the freedom to create fast and convenient solutions for industrial applications such as factory automation, machine control, transportation, IoT gateways, and edge computing.

Our embedded computing solutions include:

- AI-ready embedded hardware, IoT gateways, embedded box PCs, industrial servers, and Single Board Computers (SBC)
- The latest Windows®, Android™, and Linux operating system
- Board development and production purpose-built for your needs

First-class enterprises already benefit from IoT and plant-floor data using the collected data to predict and prevent equipment failure, improve reliability and reduce downtime. Manufacturers apply data insights to upgrade the quality and lower inspection costs.



**Make the most out of IoT data.
Deploy IoT solutions to optimize operations.**

Technology

The Industrial Internet of Things (IIoT) requires the right software, hardware, and expertise to make the whole ecosystem smoothly. And Winmate is ready to provide new solutions and services for the IIoT market.

Winmate IIoT Solution & Services



Why Winmate

Our expertise for your application:



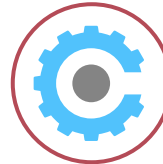
Hardware designed for the IIoT applications

Interfaces to enable machine-to-machine communications and wireless connectivity to send data to the cloud.



Experience in software integration

Our software team has Windows, Android, and Linux operating systems and software integration experience.



Customization for your unique application

We have a strong customization capability and can help you design hardware for specific needs.



Application Story

Predictive Maintenance



Background

The customer in this application was looking for a new high-performance HMI as a production line controller of an intelligent factory. The customer desired a high-performance multi-touch interface that could handle the everyday task of controlling a production line and is also easily maintainable. Winmate offered the M Series HMI with Intel's Core i5 CPU as the solution. The modular design of the M Series allows for easy repairs for either the display or the Box PC module, thus reducing the total cost of ownership.

Core products

- M Series HMI Panel PC

“**INCREASE PRODUCTIVITY AND EFFICIENCY ON THE FACTORY FLOOR.**”

Main Challenges

- Integrating the various components and sensors of the production line to the M Series HMI

Why Winmate

- Modular design for repairs with minimum downtime
- High-performance processor
- Digital I/O to allow industrial sensors to be integrated with the HMI
- PCAP multi-touch screen and user-friendly interface



Application Diagram: Predictive Maintenance

Application Story

Operator Control and Monitoring Systems



Background

Winmate understands the demands of modern factories and industrial facilities by offering a series of industrial-grade HMI made to deliver stable performance and functionality for increased productivity and efficiency. Winmate's multi-touch HMI goes beyond the standard industrial panel computers with its elegant, edge-to-edge design, rugged build, powerful performance, a full line-up of I/O options, and flexible mounting options.

Core Products

- E Series HMI Panel PC

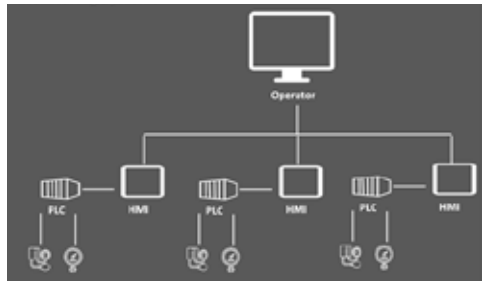
Main Challenges

- Series of certification and documentation
- Software customization

Why Winmate

- Extensive know-how for industrial systems with ARM and Linux OS
- Fast product development
- After-sales service and customer support

“ **HIGH-PERFORMANCE
HMI TOUCH PANELS FOR
OPERATOR MONITOR AND
CONTROL** ”



Application Diagram: Industrial Field Work

IoT Gateway EAC Mini Series

EACIL20/ EACIL21/ EACIL67

Custom configuration



WLAN



WWAN



Expansion
Module



“ **CONNECT EVERYTHING,
CONTROL EVERYWHERE.** ”

- Compact design
- Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz)
- Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz) (Optional)
- Windows 10 IoT Enterprise (Optional),
Linux Ubuntu 18.04 (Optional)

Application



Predictive Maintenance System

“ BRIDGING THE GAP
BETWEEN IT AND OT ”

Most predictive maintenance systems rely on machine learning to formulate predictions. The advantages are numerous and can significantly reduce costs, while eliminating the need for planned downtime in many cases.

Fanless cooling system

4 GB LPDDR4 2400MHz

Expansion module for additional interfaces

Two RJ45 for Ethernet

USB 2.0, USB 3.0 (EACIL20/ EACIL21); USB Type-C (EACIL21)

9~36 V DC, chassis grounding

Desk, wall, VESA, DIN-Rail

IP30/ IP67 (EACIL67) waterproof and dustproof

Certified Microsoft Azure for IoT, AWS IoT Greengrass

IoT Gateway EAC Mini Series EACFA20



“ **FOR ANDROID-BASED
IIOT APPLICATIONS.** ”

- Compact design
- NXP i.MX6 Dual Core 1GHz
- Linux Ubuntu 18.04

Fanless cooling system

1 GB system memory, 16 GB eMMC

Two USB 2.0, one USB 2.0 OTG

Two Giga LAN RJ45

9~36 V DC, chassis grounding

Desk, wall, VESA, DIN-Rail

IP30 waterproof and dustproof

Certified Microsoft Azure for IoT

Custom configuration



Memory



Storage



HDMI



Expansion
Module



WWAN



WLAN

Application



Industrial Utility Control

“IMPROVE EFFICIENCY
AND REDUCE
OPERATIONAL COSTS”

Efficient utility control can improve efficiency and reduce operational costs of the entire plant or factory. Complex system with the IoT gateway EACFA20 includes automation to control HVAC, lighting, utility consumption and access control systems.

Embedded Computing

DIN Rail Box PC

IBDRW100-P



“ **COMPACT.
POWERFUL. VERSATILE.** ”

- DIN Rail mount
- Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz)
- Windows 10 IoT Enterprise (Optional),
Linux Ubuntu 18.04 (Optional)

64 GB B-key /M.2 2242 SSD

Fanless cooling system

1 x RS232/422/485, select thru BIOS,
1 x RS422/485 (Default RS422)

1 x VGA

3 x USB3.0 (Type-A), 1 x USB2.0 (Type-A)

Four RJ45 for Ethernet

Terminal block with digital 9 in/ 9 out

9~36 V DC power input with isolation

DIN Rail mount

Custom configuration



Memory



Storage



WLAN



DIN-Rail
Mounting



WWAN

Application



Factory Automation

“STABLE PERFORMANCE
IN A COMPACT RUGGED
DESIGN”

This DIN Rail Box PC was
integrated as the system
controller for a beverage
production line.

7"~15.6" Featured Display USB Type-C



FCCE

“
SINGLE CABLE SOLUTION.
”

- 7"~15.6", PCAP touchscreen
- USB Type-C port
- Chassis or open-frame housing

USB Type-C Alt mode (5V/3A) for power, touch, video input

IP65 Rating

Aluminum enclosure

Support VESA mount

Custom configuration



Audio and
Speaker



Protection
Glass

Application



Industrial Machinery

“SAVE CABLE SPACE BY
USING A SINGLE CABLE”

The USB Type-C display connected to the EAC Mini-C IoT gateway is used as a machine vision solution for industrial machinery applications, delivering higher power and performance than traditional USB 2.0 and USB 3.0 protocols.

10.1"~15.6" Featured Display PoE Series

Custom configuration



Protection
Glass



Anti-Glare
Coating



Speaker



**“ FAST INSTALLATION
WITHOUT ADDITIONAL
ELECTRICAL WIRING. ”**

- 10.1"~15.6"; PCAP touchscreen
- Power over Ethernet (PoE)
- Chassis housing

Power Device (PD) follows IEEE 802.3at (25 W),
IEEE 802.3af (15 W)

VGA, HDMI video input

Panel mount, support VESA mount

Stylish and elegant design

OSD control five keys

Application



Factory Building Digital Signage

“POWER AND DATA IN A
SINGLE CABLE.”

The PoE Touch Monitor was installed as digital signage in a factory building. The PoE function can be installed high up on a wall without the need for additional wiring costs.

10.1"~21.5" Stainless Panel PC IP65 B Series with Push Buttons



“**SPEED UP RESPONSE TIME IN
EMERGENCY SITUATIONS.**”

- 10.1"~21.5"; PCAP touchscreen
- Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)

Fanless cooling system

Full IP65 waterproof enclosure, good corrosion resistance

A true flat, easy-to-clean front surface with an edge-to-edge design

Supports VESA mount

Rotary switch adjust different touch mode for Hand/
Rain/ Glove application

Emergency and Flat buttons for automation device control

Stainless steel housing

Custom configuration



Memory



Wide Power
Input

Application



Factory Automation

“VANDAL RESISTANT,
STYLISH HMI
CONTROLS IN HARSH
ENVIRONMENTS”

Winmate's all-new 17" panel PC with push buttons was installed inside machine-control terminals in the factory operating in the food and beverage industry. Push buttons on the HMI terminal provide excellent tactical feedback necessary for emergencies.

15"~23.8" Stainless Panel PC IP69K P Series with Conduit Pipe

Custom configuration



Memory



Storage



HDMI



Wide Power Input



“ **PERFECT TERMINAL FOR
STRICT HYGIENE DEMANDS.** ”

- 15"~23.8", PCAP touchscreen
- Intel® Core™ i5-8265U 1.6 GHz (turbo to 3.9 GHz)
- Windows 10 IoT Enterprise (Optional),
Linux Ubuntu 18.04 (Optional)

Fanless cooling system

Stainless steel for food and chemical industries

Full IP69K waterproof enclosure, good corrosion resistance

A true flat, easy-to-clean front surface with an edge-to-edge design

Waterproof sealed conduit pipe for cable protection

Supports VESA mount, and optional Yoke mount stand



Pharmaceutical Packaging Automation

“CORROSION-RESISTANT,
HYGIENIC, HIGH-
PERFORMANCE”

HMI control terminals for packaging machines to improve processes, capping, labeling, and collation systems and monitor the operation on a supervisory level, checking for low hopper levels, fallen bottles, and low-level supplies.

10.4"~23.8" Windows HMI Panel PC Open Frame Panel PC



“ OPEN FRAME. BEST FOR KIOSK APPLICATIONS. ”

- 10.4"~23.8",TFT SVGA LCD
- Intel® Celeron® Bay Trail-M N2930
- Integrated VGA, 24 bit Dual-channel LVDS, DVI
- Intel® I210-AT GbE

1 x SATA II, 3 x COM, 1 x USB 2.0, 1 x USB 3.0,
2 x Mini PCIe slot

Integrated Dual Broadcom I210AT GbE Controller

1 x mPCIe slot (for half size Wifi module)

1 x Brightness adjustment knob

1 x Mini PCIE(For WLAN)

Custom configuration



Memory



Storage



PCIe 3.0 (x16)



WLAN



BT



HDMI

Application



Self-Service Kiosk

“SUITABLE FOR
EMBEDDED SOLUTIONS”

Installed a self-service payment kiosk Winmate's 15" open frame HMI and data reader components brings automation to gas stations.

10.4"~23.8" Windows HMI Panel PC PP Series

Custom configuration



SATA III



WLAN



BT



HDMI



**“ HIGH COMPUTING
PERFORMANCE. PANEL MOUNT. ”**

- 10.4"~23.8"; PCAP touchscreen
- Intel® Core™ i5 -8265U (6M Cache, 1.6 GHz up to 3.9 GHz)
- Windows 10 IoT Enterprise (Optional),
Linux Ubuntu 18.04 (Optional)

4 GB SO-DIMM, DDR4 2400 MHz, 64 GB M.2 M-key
SSD

Expansion M.2 2242/2280 Slot (for NVME SSD or
SATA III SSD), 1 x M.2 2232 E-Key Slot (for half-size
Wi-Fi module)

Two USB 3.2 Gen.1 (Type-A)

RS-232/422/485 (Default RS232), RS232

Two Giga LAN RJ45 for Ethernet

Brightness adjustment knob

Panel mount, support VESA mount

Front IP65 waterproof and dustproof

Application



Operator Control & Monitoring

“VIVID GRAPHICS
AND USER-FRIENDLY
CONTROLS”

Accurate machine control and monitoring with vivid images depicted on a 21.5" screen with crystal clear resolution for more complex graphics inside smart factory.

10.4"~21.5" G-WIN Windows Panel PC G-WIN GS Series



“ **TOUGH. RUGGED.
HEAVY DUTY.** ”

- 10.4" ~ 21.5", P-CAP touchscreen
- Low power consumption with Intel® Celeron® N2930
- Fanless cooling system and ultra low power

S1 x SO-DIMM, DDR3L 1600 MHz, 4GB 8GB (Optional)

VESA Mount/ Panel Mount

A true flat, easy-to-clean front surface with edge-to-edge design

Plenty of I/O, including 2 x LAN, 1 x COM, 1 x USB 3.0, 1 x USB 2.0, 1 x HDMI

Complete input range power supply

Front IP65 protection against water and dust with M12 Connectors

Custom configuration



Memory



Storage



mPCIe



WLAN



Protection Glass

Application



Automated Machine Control Panel

“ULTIMATE IMAGING.
COMPACT FORM FACTOR”

Winmate 15" GS Series Panel PC was installed as a part of an automated machine control panel in a smart factory application. Monitor and control factory operations in real-time for increased productivity.

10.4"/ 15" G-WIN Android Panel PC

G-WIN GS Series

Custom configuration



Memory



Storage



WLAN



Protection
Glass



“ **SATISFY YOUR
HEAVY-DUTY NEEDS.** ”

Application



Robot Hand Machine Industry

“INTERACTIVE AND
SMART TERMINAL
FOR INDUSTRIAL
AUTOMATION”

Tailored for those who are in demand of compact and excellent visualization systems operated in rugged environments that experience strong vibration from industrial machine operations.

- 10.4"/ 15", 1024 x 768 with P-CAP touchscreen
- NXP i.MX6 Dual Core 1GHz (Optional Quad Core)
- Fanless cooling system and Ultra-low power

Onboard LPDDR3 1GB

Onboard 16GB eMMC Flash

Full IP65

1 x LAN, 1 x RS232, 1 x USB, 1 x USB OTG, 1 x Console, 1 x Micro SD

Onboard 16GB eMMC

Storage temperature -30°C to 60°C

1 x RS232 (M12 type)(Optional 422/485)

15" Windows HMI Panel PC R15IB3S-EHC3



“ ELEGANT DESIGN. ”

- 15", 1024 x 768 with PCAP Multi-touch screen
- Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)
- Front IP65 Water and Dust Proof

Dual Gigabit Ethernet

Fanless cooling system and ultra-low power consumption

Plastic front bezel with metal back cover

1 x RS232/422/485 (Default RS232)

Custom configuration



Memory



Storage



BT



WLAN



HDMI

Application



Factory Control System

“FAST SPEED AND STABLE PERFORMANCE”

The multi-touch panel PC offered advanced performance, an intuitive user interface. Being connected to the PLC through an Ethernet cable the operator panel ensures faster and more reliable operations.

7"~15.6" Android HMI Panel PC E Series

Custom configuration



BT



HDMI



WWAN

WWAN



WLAN

WLAN



“ **EASY TO INSTALL.
ERGONOMIC. COMPACT.** ”

Application



Energy Efficiency Systems

“EASE OF USE,
DURABILITY AND
ACCURATE CONTROLS”

Lower operational costs with
HMI operator panels installed
inside intelligent building to
control energy consumption.

- 7"~15.6"; PCAP touchscreen
- 1 x USB ; 1 x RS232 /422/485; 1 x CAN BUS;
1 x Micro SD Slot ; 1 x Micro HDMI

3 GB LPDDR4, 32 GB eMMC, Micro SD Card

Fanless cooling system

Expansion M.2 slot (1 for WWAN)

Two USB 2.0 (Type-A), USB-C

RS-232/422/485 (Default RS-232)

LAN RJ45 connector with PoE (PD, 802.11at)

Panel mount, VESA mount

Front IP65 waterproof and dustproof

7"~15" Windows HMI Panel PC S Series



“ **SMART SOLUTION FOR
OPERATOR CONTROL.** ”

- 7"~15", PCAP touchscreen
- Intel® Celeron® N2930 (2M Cache, up to 2.16 GHz)
Intel® Pentium® N4200 (2M Cache, up to 2.5 GHz)
- Windows 10 IoT Enterprise (Optional)

4 GB SO-DIMM, DDR3L 1600 MHz, 64 GB mSATA
SSD

Fanless cooling system

Expansion mPCIe slot(for half-size Wi-Fi module),
mPCIe slot (for SSD)

USB 3.0 (Type-A), USB 2.0 (Type-A)

RS-232/422/485 (Default RS-232)

RJ 45-10/100/1000 Mbps (LAN), RJ 45 (PoE)

Panel mount, VESA mount, front side wall mount

Front IP65 waterproof and dustproof

Custom configuration



Memory



Storage



2 MP Webcam



BT



WLAN



HR RFID
Reader



HDMI



LED Light Bar

Application



Meeting Room Booking System

“OPTIMIZE MEETING
ROOM UTILIZATION”

Installed at the entrance of the
meeting room, 10.1" S Series

HMI with HF RFID reader
helps to control the access
to the meeting room, book
schedule and check status
from afar.

7"~15" Android HMI Panel PC S Series

Custom configuration



Memory



Storage



2 MP
Webcam



BT



WLAN



HR RFID
Reader



LED Light Bar



“ **KNOW-HOW IN POE AND TOUCH TECHNOLOGY.** ”

Application



Machine Controller

“EASY TO MAINTAIN AND COST EFFECTIVE”

Installed in a packaging zone of a food processing manufacturer S Series HMI operator control panel brings automation to packaging line.

- 7"~15"; PCAP touchscreen
- NXP i.MX6 Dual Core, 1.0GHz
ARM A72 (up to 2.0 GHz) + ARM A53 (up to 1.5 GHz)
Qualcomm® Snapdragon™ 660 (Octa-Core 2.2 GHz)
- Android 9.0

3 GB LPDDR4, 32 GB eMMC, Micro SD Card

Fanless cooling system

Expansion M.2 slot (1 for WWAN)

Two USB 2.0 (Type-A), USB-C

RS-232/422/485 (Default RS-232)

LAN RJ45 connector with PoE (PD, 802.11at)

Panel mount, VESA mount, front side wall mount

Front IP65 waterproof and dustproof

12"~23.8" Windows HMI Panel PC M Series



“ **MODULAR DESIGN.
INCREASED FLEXIBILITY.** ”

- Intel® 11th Generation Tiger Lake UP3 Core™ i5 CPU
- Signature true flat display screen with edge-to-edge design
- Aluminum, anti-corrosion treated housing
- Superior sealing with front IP65 protection against dust and water

Projected Capacitive Multi-Touch Screen (PCAP)

Fanless design

Support wide range 9-29 V DC input

Quick & Easy Removable 2.5" SSD Bay Slot

Support PCIe x4 Card

Class 1 Division 2, Group A-D, T4 Certification

Signature true flat display screen with edge-to-edge design

Superior sealing with front IP65 protection against dust and water

Full aluminum alloy enclosure, compact, low weight design, dxcellent heat dissipation

Custom configuration



Memory



Storage



BT



WLAN



VGA



HDMI

Application



Outdoor Checkpoint

“BRIGHT SUNLIGHT
READABLE DISPLAY”

Total solution for access control with customized enclosure for track drivers to enter the territory without times losses even in extreme weather conditions and temperature changes.



G-WIN SERIES



HMI PANEL PC SERIES



**QUALITY
EXCELLENCE IN
THE AUTOMOTIVE
INDUSTRY**



**IP69K STAINLESS
P SERIES WITH CONDUIT PIPE**



**WINMATE
HYGIENIC PANEL
PCS DESIGNED
TO MEET FOOD
& BEVERAGE
MANUFACTURING
CHALLENGES**



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