Stainless Steel Touchscreen Computers

From dirty deeds to hygienic needs, more diverse industrial settings demand the automation, control and IoT versatility of advanced computing. Ancient, earthen labors like agriculture and mining find new efficiencies and safety through Industry 4.0. More contemporary sectors like intricate electronics manufacturing and virology studies are on the leading edge of IoT applications. This wide range of markets is best served by compute technology local to the data sources and reliant devices. All-in-one touchscreen computers function as responsive HMIs and rich displays that grant exceptional control and automation capabilities.

Stainless steel and ingress protection (IP) watertight sealing technologies safely deliver powerful processing and IoT connectivity into a variety of wet, rugged environments. Premio provides two series of stainless steel touchscreen computers, each purpose-built for numerous demanding deployment conditions. The WIO Waterproof Touchscreen Computer is hardened for harsh, rigorous environments with considerable liquid and dust exposure. The SIO Washdown Touchscreen Computer series are IP66/IP69K rated to withstand high-pressure, high-temperature cleanings in hygienic workspaces.

The WIO and SIO Series are ruggedized against myriad punishing factors and optimized for advanced IoT operations. Fanless architecture eliminates a prominent computing failure point while avoiding ventilation vulnerabilities. Both are available with highly-receptive PCAP multi-touch technology for natural, responsive interaction with bare and gloved hands. Wireless and cellular LTE technologies reduce deployment wiring complexity while enabling remote system management and automation capabilities.

The low-profile stainless steel solutions offer reliable structural durability and corrosion resistance suited to their exposure. The industrial touchscreen computers are designed for advanced HMI, IoT applications and interactive display objectives in various wet, compromising settings.

Stainless Steel: Durable Simplicity

Stainless steel's wide utility includes:

Corrosion Resistance: Stainless steel staves off the destructive effects of many corrosive substances.

Lightweight Strength: Stainless steel has an ideal strength-to-weight balance, forgoing unnecessary material heft.

Wide Temperature Threshold: Extremes of heat and cold do not diminish stainless steel's formidable strength.

Hygienic Simplicity: Stainless steel is low-maintenance, non-absorbent and withstands intense cleaning.

Sleek Presentation: Stainless steel adds modern sophistication and a smart appearance to Smart industrial systems.

Recipe for Reliability

The WIO and SIO Series share Premio's blend of rugged features.

Fanless Design: Eliminating a chief failure point forgoes vulnerable ventilation openings.

Industrial-Grade I/O: Locking M12 connectors provide secure, intrusion-resistant peripheral unions.

Resilience & Stability: Shock, vibration, temperature and variable voltage tolerances allow integration in volatile settings.

TPM 2.0: Trusted platform modules support powerful cybersecurity safeguards.

Scratch Resistance: 7H hardness glass prevents display blemishes from sharp object or gritty glove contact.

Optical Bonding: Optional feature preserves clarity throughout extended humid or foggy deployments.

HMI

Automation

Industrial Control

Remote Operation

KEY APPLICATIONS

WIO Series

Waterproof Touchscreen Computer

The WIO Series are engineered to provide versatile IoT interface and display capabilities in dirty, dynamic settings. Sturdy, high-utility Type 304 stainless steel lends unyielding strength and exceptional corrosion resistance against a range of caustic and alkaline substances. Full IP66-rated enclosure resists dust and water penetration, permitting suitable high-pressure cleaning. Integrated aluminum alloy heatsink technology and anterior heat-dispersion fins neutralize thermal concerns.

Mining, agriculture and livestock management have a powerful new tool for reaping Industry 4.0 efficiencies despite challenging hardware environments. The WIO is the down-to-earth solution for HMI performance, interactive display applications, and remote operation management in soaking, rough or treacherous settings.

IP66 Penetration Resistance

IP66-rated technology withstands aggressive exposure to water and fine pollutants in environments where these conditions are commonplace. The sealed dust-tight enclosure is designed to resist powerful water jets from any direction, preserving the sensitive components within. IP66 protection shields hardware deployed to drenched and dusty conditions.

High Performance 7th Gen Intel® Core™ Mobile-U Processors

Concentrated power yields better application performance for heavier workloads. Edge deployments needing increased computing capabilities benefit from the higher output and optimization that Mobile-U processors provide.

- Dual-Core CPU with 2.60 to 3.50GHz Frequency Range
- 15W Thermal Design Power
- Intel HD Graphics 620 for Ultra HD quality
- PCIe 3.0 Expansion support

Sleek Simplicity

Tremendous processing power and high-resolution interface pack into the low-profile all-in-one solution. The slim 74mm thickness easily accommodates space-constrained conditions without sacrificing enclosure strength.

74mm

Agriculture

Growing and processing centers rely heavily on data to better tend crops and automate operations. Deploying a waterproof touchscreen computer in the farming environment provides workers a dependable compute solution without concern for heavy water, chemical and dirt exposure.

Mining

Connected, automated mining better protects operators, the environment and stakeholders' ROI. Waterproof touchscreen computers bring advanced compute power deep into the earth to enable remote mining operations and automate processes from groundbreaking to site closure.

Livestock

Livestock farmers require IoT technology for better record keeping, organizing and analyzing herd data, and RFID scanning. Waterproof touchscreen computers can sustain repeated impacts, temperature extremes, feed dust exposure, animal waste contact and heavy water sprays.

WASHDOWN TOUCHSCREEN COMPUTERS

While capable of deployments in more rigorous settings, the SIO Series are further engineered for the unique demands on hardware in hygienic and aseptic settings. IP66/IP69K-rated sealing provides uncompromising water protection, withstanding high-pressure, high-temperature washdowns essential to sanitary assurance. Low-maintenance Type 316 stainless steel guarantees corrosion resistance against a vast range of caustic media. Five-wire resistive-touch configurability enables high-precision single-point interaction.

The SIO's remarkable suitability to hygienic environments simplifies integrations while enabling intuitive HMI, process automation and workload consolidation. The SIO Series are ideal Industry 4.0 solutions for food and beverage processing, pharmaceutical manufacturing and cleanroom settings.

IP69K Sealed for Severe Washdowns

The SIO Series meet IP66/IP69K ratings to sustain high-pressure, high-temperature system washdowns required for hygienic and aseptic environments.

Embedded System On Chip Design for Low Power Processing and Performance

Expanded compute, graphic and media capabilities for industrial IoT applications. The robust SoC enables agile I/O connectivity and device security at low power consumption perfect for in line HMI and Industrial Panel PCs.Panel PCs.

- Intel® Celeron® J1900 Quad Core Processor
- Intel® 8th Gen Mobile U (8365UE) Quad Core Processor

Sustained Operation During Washdowns

The SIO Series feature native touchscreen enable/disable controls allowing the devices to remain powered throughout intense high-pressure washdowns. The SIO maintains automation, monitoring and critical control functions, allowing operations to continue during cleanings.

High-Brightness Display Option

The SIO Series are available with 1,000+ nit high-brightness panels to aid visibility in glaring environments.

Mounting Flexibility Yields Integration Options

The SIO may be situated on yoke or VESA mounts, or within recessed panel spaces to afford countless deployment options for industrial applications.

Straight AC-in Power Eases Deployment

The SIO Series receive power directly from AC sources via M12 connector, forgoing additional electrical converters with their waterproofed enclosures. The straightforward power design simplifies integration.

Food & Beverage

Food and beverage producers are heavily regulated for health assurance, quality control and sanitation compliance. Easy-to-clean washdown touchscreen computers in the processing environment perform many system management and control functions while withstanding contact with chlorides and corrosives.

Pharmaceutical

Pharmaceutical plants closely monitor system conditions and regularly wash down equipment and workspaces to ensure product purity. Washdown touchscreen computers perform a variety of critical control and automation functions like temperature regulation and quantity measurements in an easily-sterilized all-in-one device.

Cleanrooms

Intricate electronics manufacturers and scientific research facilities demand immaculate cleanliness to control harmful particulate intrusion. Washdown touchscreen computers provide a robust system interface capable of withstanding extreme physical factors and intense decontamination regimens.

	WIO Series	**SIO Series**
PREMIO STAINLESS STEEL PANEL PCS		
STAINLESS STEEL GRADE	**Type 304 Stainless Steel** • Provides exceptional corrosion resistance against most caustic substances. • Optimized to sustain dirtier deployments.	**Type 316 Stainless Steel** • Provides advanced corrosion resistance against a wider range of caustic media. • More resistant to acidic solutions and chlorides.
IP RATING	**IP66 Rated** Resists forceful water and dust penetration.	**IP66/IP69K Rated** Resists high-temperature, high-pressure washdowns.
PROCESSOR	**7th Gen Intel® Core™ Mobile-U** Offers great performance for heavier compute workloads.	**Intel® Celeron® J1900 & Intel 8th Gen Mobile U Quad Core** Provides expanded compute, graphic, and media capabilties to IIoT applications.
TOUCH TECHNOLOGIES	• Multi-Touch PCAP	• Multi-Touch PCAP • 5-Wire Resistive • Touch Enable/Disable Switch
MOUNTING DESIGNS	Standard VESA Mounting Holes	Flexible Mounting Designs: Panel, VESA, Yoke.
OPTIONAL FEATURES	• Optical bonding preserves clarity and vibrancy throughout extended humid deployments.	• Optical bonding • 1,000+ nit high-brightness panels aid visibility in glaring environments.
POWER DESIGN	**DC CONVERTER**	**STRAIGHT AC-IN**