Application Fields of Infrared Touch Screens

With core advantages such as strong adaptability, durability, and high cost-effectiveness, infrared touch screens have broken through situational limitations and permeated various fields including commerce, education, industry, and public services. They have become a core carrier of human-computer interaction, silently changing the way we live, work, and learn. From high-frequency self-service terminals to professional industrial control equipment, infrared touch screens, with their unique technical characteristics, cater to the personalized needs of different scenarios and demonstrate broad application prospects.

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I. Commercial Field: Empowering Precise Marketing and Convenient Interaction

Commercial settings are the most popular application areas for infrared touch screens. Their core function is to build an efficient interaction bridge between consumers, products, and services, enhancing user experience and commercial conversion efficiency. In shopping malls, supermarkets, and office buildings, infrared touch screens are widely used in advertising machines and self-service inquiry terminals. Consumers can browse product details, check store locations, and learn about promotional activities through touch operations without manual guidance, achieving autonomous interaction. In exhibitions and showrooms, infrared touch screens (especially large-size splicing screens) serve as interactive display devices, featuring 3D, VR, and interactive games to attract audience participation, intuitively presenting product advantages and brand concepts, and enhancing the fun and influence of the display.

Furthermore, in POS machines for retail stores and convenience stores, infrared touch screens replace traditional button operations, supporting functions such as touch-to-order, payment confirmation, and order inquiries. They are convenient to operate and durable, making them suitable for high-frequency usage scenarios. In automotive 4S stores and home appliance outlets, infrared touch screens are used for product parameter displays and functional demonstrations, allowing consumers to switch content via touch to quickly understand product details and assist in purchase decisions.

II. Education Field: Driving the Upgrade of Interactive Teaching

Infrared touch screens have completely broken the teaching limitations of traditional blackboards and become the core equipment of smart education, widely used in primary and secondary schools, universities, and various training institutions. In classrooms, all-in-one teaching machines and electronic whiteboards (both equipped with infrared touch screens) have replaced traditional blackboards and projectors. Teachers can write, annotate, and drag courseware directly on the screen with their fingers or specialized pens, and perform functions like courseware

switching, video playback, and real-time drawing, eliminating the trouble of chalk dust while enhancing classroom interactivity.

In professional educational settings, the advantages of infrared touch screens are even more prominent. For example, in sports school training, 98-inch large infrared touch screens can clearly display athletes' technical action videos and physiological data curves. Coaches can perform slow-motion analysis and mark key points via touch to assist in scientific training. In vocational skill teaching at training institutions, infrared touch screens are used for practical demonstrations and case explanations, supporting multi-person simultaneous touch operations to improve teaching efficiency and student participation. Additionally, infrared touch screens are compatible with domestic operating systems such as KylinOS and UnionTech UOS, as well as various educational software, building a full-stack localized teaching environment and ensuring the security of educational data.

III. Industrial Field: Adapting to Complex Environments and Ensuring Efficient Production

Industrial scenarios demand extremely high durability and anti-interference capabilities from equipment, and infrared touch screens perfectly meet these requirements, becoming an important support for industrial automation and intelligent transformation. In factory workshops, infrared touch screens are widely used in industrial control terminals, CNC machine control panels, and workshop operation consoles. They can adapt to complex industrial environments such as high temperatures, oil stains, vibration, and dust, offering strong durability and low failure rates. Workers can view production data, adjust equipment parameters, and monitor production processes through touch operations, enhancing production efficiency and operational convenience.

For example, a 24-inch KylinOS industrial control infrared touch terminal, equipped with an industrial-grade processor and adapted to domestic operating systems like KylinOS, can be applied to manufacturing production lines and power system monitoring scenarios to achieve real-time management and control of the production process. In extreme industrial environments such as mines and chemical plants, infrared touch screens support operation with gloves, without the need to worry about oil stains or moisture affecting the touch effect, ensuring the operational safety and efficiency of workers.

IV. Public Service Field: Improving Service Efficiency and Facilitating Public Life

In public service areas such as hospitals, banks, and transportation hubs, the application of infrared touch screens has effectively reduced manual queuing pressure and improved the convenience and efficiency of public services. In hospitals, self-service registration machines, self-service payment machines, and report printing terminals are all equipped with infrared touch screens. Patients can independently complete registration, payment, and check-up report inquiries without waiting in long lines at windows, saving medical treatment time. In banks, ATMs, self-service card issuance machines, and wealth management product inquiry terminals allow for autonomous business processing through infrared touch screens, simplifying procedures and reducing labor costs.

In transportation hubs like subway stations, airports, and train stations, infrared touch screens are used in self-service ticket vending machines and information inquiry machines. Passengers can touch to check train schedules and flight information and purchase tickets independently. The operation is simple and easy to understand, catering to people of different age groups. In community service centers, infrared touch screens can be used for government information inquiries and business appointment processing, allowing residents to enjoy convenient government

services without leaving their communities. Additionally, in traffic monitoring and security systems, infrared touch screens, with their high sensitivity and anti-interference ability, have become the preferred choice for monitoring equipment operation interfaces, ensuring stable responses in complex environments.

V. Outdoor and Other Fields: Expanding Interaction Boundaries

The anti-interference and durable characteristics of infrared touch screens allow them to function stably in outdoor settings as well. Outdoor advertising screens and outdoor self-service terminals (such as outdoor vending machines and scenic area guidance screens) equipped with infrared touch screens can adapt to complex weather conditions like wind, sun, and rain, supporting all-weather touch operations to provide information inquiries and product purchases for passersby. In military command systems, infrared touch screens can be used for command terminals, supporting multi-person touch operations to quickly retrieve and analyze battlefield data, aiding in command decision-making.

In domestic scenarios, infrared touch screens are applied to smart TVs and home touch terminals. Users can switch channels, adjust volume, and browse film and television content via touch, enriching the home entertainment experience. In places like KTVs and gyms, infrared touch screens are used for on-demand systems and fitness course inquiry terminals. They are easy to operate and adapted for high-frequency use, enhancing user experience. As technology continues to upgrade, infrared touch screens will also integrate deeply with AI, big data, and other technologies to play a role in more emerging scenarios.