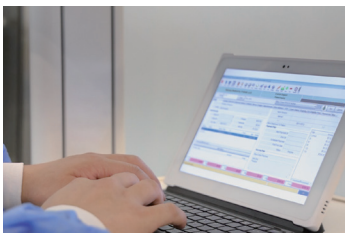
Medical Industry

EM-T195 rugged tablet PC assists in the paperless mobile rescue



Challenge

Time is as precious as life in the medical rescue mission, and the golden rescue time from the ambulance to the hospital can not be missed, so the paramedics and medical equipment need to maintain high agility and high reliability to timely respond to the critical patient situation. However, relying on the paperwork to record the patient's physical signs is time-consuming, inefficient, and error-prone, and the backstage system can not read the on-site data for timely and effective diagnosis and treatment, which greatly endangers the life safety of patients. To solve this problem, it is urgent to introduce a safe and reliable mobile intelligent device with a wireless communication function in the ambulance.

Solution

The EM-T195 rugged tablet PC of Emdoor Information integrates 5G communication technology and data acquisition modules. With the extensibility of the peripheral interface and compatibility of the Android 11 operating system, it supports professional medical software. Paramedics measure patient's physical signs through medical equipment, use the built-in NFC module of EM-T195 to input the corresponding patient information, view the integrated chart data through EM-T195' s high-definition 10.1-inch screen, and then the comprehensive physical data is transmitted to the hospital backstage system in real-time through the 5G network, which is convenient for the hospital to monitor patient conditions and real-time diagnosis.

Benefits

After equipping hundreds of ambulances with EM-T195 rugged tablet PCs, paramedics no longer need to worry about the accuracy of the data and the durability of the equipment. EM-T195 rugged tablet PC is lightweight and easy to carry with the built-in low-delay and high-stability 5G network. In addition, its IP65-grade waterproof, dustproof, and shock-proof performance makes it easy for medical cleaning and disinfection, and can adapt to the bumpy road on the way to rescue, always maintaining a stable display and rapid real-time transmission of patients' physical signs without the time-space restrictions of rescue, to avoid mistiming in rescue.

EM-T195 (Medical Tablet PC)

Rugged Tablet PC

Challenge

With the improvement of national health awareness and the growth of demand for medical care, accelerating the construction and popularization of intelligent medical equipment has become an important direction for the development of the medical industry and people's livelihood. Therefore, it is necessary to accelerate the integration of information technology into medical equipment and processes to replace the previous inefficient way of recording physical signs and data manually, to achieve efficient, paperless, mobile, and smart healthcare.

When racing against time and death in the rescue mission, the handwritten record is time-consuming, inefficient, and error-prone. If there is no reliable assistance from the mobile terminal, paramedics can not transmit patient data in real-time, or request assistance to the hospital background at the scene for timely diagnosis and rescue. However, the ordinary consumer mobile tablet on the market does not have excellent performance in waterproof, dustproof, and shock-proof, and can not stably cope with various conditions on the way to hospital. And they are not easy to clean and disinfect, and are very prone to failure caused by water, collision, and vibration, resulting in data loss, transmission interruption, equipment loss, and other situations, and affecting rescue missions; The peripheral interface of consumer tablets is limited, so they cannot connect multiple sets of medical testing equipment at the same time, which is inefficient for the measurement of patient's physical signs. Moreover, the battery life of consumer tablets is not enough to meet intense and continuous rescue missions. Therefore, a rugged tablet computer with security, flexibility, and extensibility is vital device support for intelligent medical care.

Solution

The client is a hospital in an area. According to the actual medical rescue scenario and the comparative use tests of the rugged tablet devices of several manufacturers, the client finally selected and equipped hundreds of ambulances with Emdoor Information' s EM-T195 rugged tablet PCs to serve as the mobile terminals of intelligent medical care.

Solution of EM-T195

As an information collection and display terminal connecting patients, hospitals, and paramedics in the ambulance, EM-T195 rugged tablet PC greatly assists the completion of medical emergency rescue with its stability and safety performance, and is not interrupted by external factors such as bumps. It is lightweight and portable, which can be fixed to the ambulance or firmly held in the hand through a hand-strap. Paramedics use the peripheral interface of EM-T195 to connect the ECG monitor and other professional medical diagnostic equipment, measure the physical signs of patients in the ambulance, such as temperature, pulse, blood pressure, respiration, heart rate, and other information, and use the built-in NFC module to identify and input the corresponding patient information, and the system automatically calculates and analyzes the data. The EM-T195's 10.1-inch high-resolution screen displays integrated graphic data such as electrocardiogram and ultrasound images, which is clear and intuitive. The patient's comprehensive physical information can be transmitted to the hospital in real-time through the stable and fast 5G/WiFi network, so the doctors in the hospital can monitor the patient's signs at any time, possess the information in advance for diagnosis, and remotely guide the paramedics in the ambulance to take appropriate rescue measures. Once patients show signs of danger, they can also get timely targeted intervention treatment, to achieve remote coordination between on-site paramedics and hospital emergency doctors, and break the dilemma of "single combat" faced by on-site medical personnel in complex situations.

Benefits

5G mobile emergency room

EM-T195 rugged tablet PC supports multiple communication modules such as the faster, low-latency, and high-stability dual-mode 5G, dual-band WiFi 5, and low-power Bluetooth 5.1. After the patient is in the ambulance, it is no longer just the on-site emergency doctor who participates in medical rescue. Through the 5G network, the on-site emergency doctor can treat the patient in real time with the hospital specialist. Other medical devices support the 5G network as well, so the patient's ECG, blood pressure, blood sugar, and other information will also be transmitted and unloaded in real time. For patients who are in critical condition, this can help save valuable time on the road, break the restrictions of time and space, and move the treatment time forward.

Security for medical treatment

EM-T195 rugged tablet PC has passed serial independent tests, in line with IP65 standards, and is fall-resistant by 1 meter. Relying on its excellent waterproof, dustproof, and shock-proof performance, it can adapt to the changeable conditions of frequent transport, meet the daily medical cleaning and disinfection, and not be interrupted by the accidental fall during mobile work, to maintain the safety of patient data transmission, reduce the cost of equipment loss, and ensure that first aid is not interrupted by equipment.

Visual management of diagnosis and treatment

EM-T195 rugged tablet PC is equipped with an ARM octa-core processor and Android 11 operating system, which is compatible with medical systems and professional medical equipment, and can be operating in multi-task for real-time collection and upload of the facilities and patient data to the system background instead of paper recording, greatly reducing data errors caused by handwriting and secondary input, enabling the collaboration between paramedics and hospital doctors, streamline workflows, and accessing patient information anywhere.

In addition, EM-T195 supports multi-satellite navigation systems of GPS, Beidou, GLONASS, and Galileo, and is coupled with high-definition dual cameras, so that hospital doctors can know the ambulance location, estimated arrival time, prepare the operating room in advance, and treat in video consultation according to the basic signs of patients, to realize the visual management of patient diagnosis and treatment process.