



# Application Notes

Smart EMR EHR Enabler Wincomm

Medical Cart Panel PC G Series

## Smart EMR EHR Enabler Wincomm Medical Cart

### Panel PC G Series

- ENHANCING EMRS FOR THE SMART HOSPITAL
- MORE EFFECTIVE, MORE EFFICIENT CARE
- PRODUCT INSIGHT – WMP G SERIES



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### Cart Panel PC G Series

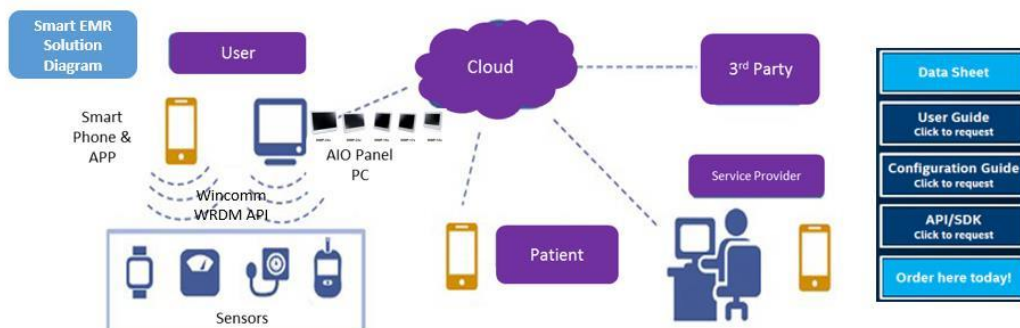
*Enter electronic medical records (EMRs), sometimes called electronic health records (EHRs). They embody a high-level mechanism for communicating general patient information among healthcare providers like general practitioners, specialists, and pharmacies.*

*While this is a good start towards increasing efficiency, EMRs could be far more effective if they were more detailed, more dynamic, and could be updated in real-time.*

#### ENHANCING EMRS FOR THE SMART HOSPITAL

Today, EMRs provide a historical profile of patients. But with increased transparency, portability, and accessibility, doctors and nurses can use EMRs as real-time snapshots of a patient's status. This requires that EMRs integrate with the Internet of Medical Things (IoMT).

With the right IoT of security and communications infrastructure, patient location, vitals, and even MRIs or ultrasound images can be streamed wirelessly to mobile panel PCs or monitors used by nurses and doctors (Figure 1). In this connected hospital scenario, healthcare staff can use dynamic EMRs to access the information they need when they need it as patients move from intake to hospital rooms to operating rooms to recovery centers and eventually discharge (Figure 2). This can dramatically improve hospital efficiency.



*Figure 1. Smart hospital architectures allow data from sensors, lab systems, and other monitoring and measurement devices to be transmitted instantaneously over secure wireless networks.*



*Figure 2. Dynamic electronic medical records (EMRs) can function as real-time documentation covering a patient’s lab results, status, and other pertinent information about their stay.*

## **MORE EFFECTIVE, MORE EFFICIENT CARE**

Imagine a smart hospital where MRIs or ultrasound images can be streamed wirelessly to mobile panel PCs or monitors used by nurses and doctors. And that these images or videos could be decoded and processed by AI algorithms in real-time to detect abnormalities and assist in diagnosis. Or, that neural network algorithms could be applied to live surgical video feeds to immediately identify cancerous tissues or other details of interest and render them on full-HD screens inside operating rooms. Furthermore, that this comprehensive data could be appended to EMRs for future treatment.

Thanks to building block smart EMR solutions for e-Healthcare, this type of precision care is possible today. Advanced medical-class panel PC solutions and device management software allow healthcare providers to seamlessly and securely drop these capabilities into hospital networks. These high-performance, mobile platforms

integrate a wide range of wireless technologies, enabling them to serve as both endpoint sensors and gateway controllers for healthcare IoT deployments that make staff more productive and care more cost-effective.

## PRODUCT INSIGHT – WMP G SERIES

G Series medical cart panel PCs are based on 7<sup>th</sup> generation Intel® Core® processors and designed to meet the mobility, connectivity, and processing requirements of healthcare IoT edge networks. Given the significant amount of compute performance, memory, 128 GB SSD, and expansive wireless connectivity options, G Series PCs are perfectly suited as sensor hubs that can integrate data from nearby medical devices, perform AI-based image or streaming data analysis, and render EMRs for nearby healthcare professionals.



*Figure 3. The integration of hot-swappable batteries makes the G series panel PCs highly suitable for mobile EMR applications.*

But a unique feature of G series panel PCs is the presence of three hot-swappable Li-ion batteries, which translates into a possible 24/7 runtime and non-stop operation (Figure 3). The hot-swappable battery design also makes them highly suitable for mobile EMR access, mobile surgery units, and patient record updating on nurse carts.

Meanwhile, the fanless design contributes to a quite medical environment that keeps patients rested and calm.

If you have any product or customization requirements, please contact Wincomm sales (mail: [sales\\_support@wincomm.com.tw](mailto:sales_support@wincomm.com.tw)). For more product information, please visit the Wincomm website at <http://www.wincomm.com.tw/>