USE CASE SPOTLIGHT

Mobile EEG Neurological Monitoring in the ICU

Electroencephalography (EEG) is an essential diagnostic modality for neurological assessment and continuous brain monitoring in critically ill patients in intensive care units (ICUs). Conventional EEG systems are often constrained by fixed installations, complex cabling, and limited mobility, which can affect workflow efficiency, patient comfort, and continuity of monitoring. To overcome these challenges, a medical device manufacturer deployed the WMP-22P medical-grade panel PC as a mobile computing platform for EEG neurological monitoring in ICU environments.

Solution

The WMP-22P medical-grade panel PC serves as the embedded computing and display platform for mobile EEG monitoring systems. Designed in compliance with UL/cUL 60601-1 and IEC 60601-1-2 medical safety standards, it supports safe operation in direct patient-care environments. A fanless architecture minimizes acoustic noise and reduces dust ingress, while an IP65-rated front panel supports routine cleaning and disinfection. Hot-swappable batteries enable uninterrupted EEG monitoring, and Intel® processors with vPro® technology deliver reliable performance and support secure remote device management. The panel PC form factor allows integration into mobile medical carts or bedside mounting solutions, supporting transport between patient locations while maintaining a consistent user interface and clinical workflow.

Key Benefits

- Uninterrupted EEG monitoring through hot-swappable battery support
- Flexible deployment via mobile cart and bedside mounting configurations
- Medical-grade safety compliance (UL/cUL 60601-1 & IEC 60601-1-2)
- Infection-control-friendly fanless design with IP65 front panel
- High system reliability for continuous ICU operation
- Centralized system management using Intel vPro® technology