In the healthcare field, access to the right data and the right solutions at the right time can literally mean the difference between life and death. Healthcare providers and facilities are in the business of promoting wellness, healing afflictions, and saving lives. Developers of medical technology have to meet the highest standards of performance and safety as well as regulatory compliance.

The Internet of Things (IoT) presents hundreds of opportunities for improving treatment and services in hospitals, doctors’ offices, and homes, as well as through mobile applications. The connected hospital is on the horizon and promises significant benefits to patients and providers alike:

• Hospitals and doctors will be able to share patient data and lab results seamlessly in real time.
• Professionals will be able to consult with specialists and colleagues in remote locations at any point during the course of treatment.
• Smart devices will enable healthcare professionals to better understand patients’ conditions and make accurate, timely, and realistic recommendations.
• Machines will manage medication dosages and X-ray radiation levels.
• Drug dispensaries can be better secured from unauthorized access, and drug distribution more accurately tracked.
• Hospitals will be able to leverage the data generated by CT scanners, X-ray machines, and other equipment to monitor and audit their usage, protecting patient safety while meeting FDA compliance requirements.

ADDRESSING CHALLENGES

Realizing the potential of IoT in healthcare means confronting some significant challenges, including:

• **Interoperability:** Hospitals are among the most complex technology ecosystems in existence, with multiple devices, manufacturers, and standards. Information must be able to flow seamlessly for optimal treatment and patient care.
• **Compliance:** Device manufacturers need to meet stringent regulatory requirements while facing aggressive competition and cost pressures.
• **Security:** With more and more devices communicating with each other over the IoT, security from hacking is critical.
• **Patient safety:** When lives and health are at stake, the margin for error is virtually nil.

WIND RIVER SOLUTIONS

Wind River® has a long history of working with medical technology providers and IT departments to ensure that networked medical devices can be trusted for safe and reliable performance. Leveraging the Wind River Linux operating system, Wind River Intelligent Device Platform enables medical IoT device developers and manufacturers to address the issues of interoperability, compliance, security, and safety at the design stage. It’s a comprehensive software development platform that accelerates device time-to-market without compromising safety. Intelligent systems powered by Wind River will enable hospitals to better manage patient safety while compiling data for compliance.