

PATIENT MONITORING: CHALLENGES & THE FUTURE

Addressing tough technical challenges early in the design stage is essential for reducing costs, improving product quality, mitigating risks, and accelerating time-to-market.

Top 4 challenges of patient monitoring device development:

1. **Software:** Faulty device software directly impacts reliability. User interface and information presentation must be intuitive and requires careful design.
2. **Hardware:** Component reliability, embedded systems, and miniaturization (size/weight) prove major development challenges.
3. **Alerting Capabilities:** Sensor design and integration can be difficult, especially for patient monitoring devices where alerts to both patient and healthcare providers are critical.
4. **Data Management:** Patient monitoring devices generate large amounts of data that must be formatted to integrate with other systems, and must also be stored properly.

The global patient monitoring device market was valued at

\$47BN

in 2021.

It is expected to grow at a compound annual growth rate (CAGR) of 7.8% from 2022 to 2030.

Top three patient monitoring device segments:

Vital sign monitors

34% of the market

Cardiac monitoring devices

50% of the market

Respiratory monitoring devices

16% of the market



Technology Trend:

The patient monitoring market is a rapidly evolving space, with several emerging technology trends that are driving growth and innovation. One of these trends is Internet of Things (IoT). IoT devices such as sensors, wearables, and medical equipment can be connected to a network and communicate with each other, providing real-time data to healthcare providers. This technology presents opportunities for healthcare providers to monitor devices outside of healthcare environments. There is a growing demand for these devices in non-hospital settings.

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