

# WiPoint™ Monitor Receiver – HR1110

Allows wireless biosensors to connect with existing patient monitors maintaining the same wired-class clinical signals.

HMicro's HR1110 Receiver adapts patient monitors to interface with physiologic data wirelessly relayed from wearable biosensors built using HMicro's WiPoint Chip technology.



The HR1110 Monitor Receiver reference product design is specified to receive multi-lead ECG signals and respiration data continuously over days from WiPoint chip-based wireless biosensors. In turn, the HR1110 forwards the patient physiologic data to either a connected patient monitor or another network. Many tens of patients wearing WiPoint based biosensors can co-exist and be reliably paired with respective HR1110 Monitor Receivers – each maintaining a robust wire-class wireless link. The reference design is targeted for volume production by HMicro's world-class contract manufacturer to closely support our OEM customers and reduce time to market.

## Target Applications

The WiPoint Monitor Receiver HR1100 can be deployed in two broad classes of systems:

### Legacy Patient Monitors:

By using its wired ECG port, the HR1100 can be connected by a standard ECG cable and lead-wire assembly to the installed base of patient monitors in hospitals and clinics. In this mode, the HR1100 is designed to handle all the signaling between patient monitors and biosensor patches automatically to maintain the existing functionality of patient monitors for continuous multi-day patient monitoring.

### Cloud Based Monitoring:

The above benefits can also be achieved when the patient monitor is replaced with cloud-based applications for data analysis, diagnostics, and alerts. The WiPoint Monitor Receiver supports this with network connectivity via its Ethernet and USB ports. In this scenario, a cloud-connected thin-client device can display to the care providers the diagnostic information that is derived from the wireless biosensor via the cloud.

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## Key Features

- Receives multi-lead ECG and respiration data wirelessly from a patient-worn biosensor utilizing WiPoint technology.
- Multi-band/multi-radio wireless support via 2.4GHz 802.11b Wi-Fi transceiver and 2.36-2.4GHz medical-band transceiver. A 3.1-10.6GHz 802.15.6 PHY-based UWB radio will be available in a future release.
- Advanced encryption (AES) and key-exchange (ECDH) with a simple and robust pairing mechanism
- Quick two touch pairing scheme with simple WiPoint Biosensor Patch disconnection, reconnection and turn off features
- AC power and battery operation along with LED indicators for power-on and wireless link status