



Mission:
“Everywhere” Wireless Sensors

We aim to redesign the concept of wireless networks
sensors solutions for the most innovative approach
to energy management





WirECG

Cardiac Telemetry Monitor
the wearable solution

Made by STE Ksolutions





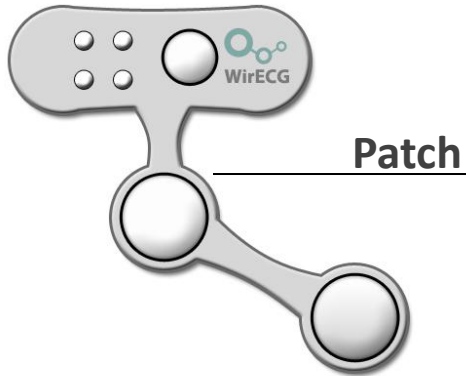
FOCUS :

3 Channels
Proprietary algorithms
Comfortable
Very Low Power Consumption
30 days Continuous monitoring

Wearable Cardiac Telemetry Monitoring Systems

Ks PCT (WirECG) is a wireless 3 channels ECG for remote cardiac arrhythmias monitoring system (Atrial Fibrillation, Atrial Flutter or Atrial Fibrillation/flutter) with proprietary algorithms for data compression/decompression, analysis and storage. Its key features are a proprietary radio module, an ergonomic design, low consumption and easy to use, that enables 24/7 remote patient monitoring.





Patch

Chest Unit



Remote Gateway



The System

Patch: a patch with electrodes applied to the chest of the patient.

Chest unit: an independent unit that samples, elaborates, stores and transmits electrodes data; it's connected to the Patch.

Remote gateway: an external unit linked to the chest unit (via RF radio), exposing a GUI towards the patient. It is needed to communicate with the operation room.

Operation Room: portal to collect data and alarms sent by patient.

Operation Room



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Patch - Transmitter

- Frequency: it operates on several frequencies
- Sampling: 1KHz for each channel
- Storage: up to 1 month of data can be held on the unit memory
- Enables 24/7 remote patient monitoring, elaborating in real-time the signals to individuate every possible anomaly



Gateway Box (optional)

- Gsm / Gprs
- Rx data collector
- Data Compression

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3

Operation Room

The data sent by the Gateway Box can be visualized in the data collection centre, or in the screen of an expressly prearranged terminal (Iphone, Ipad, Blackberry).

The application helps in visualizing in an immediate way the eventual alarms and anomalies.

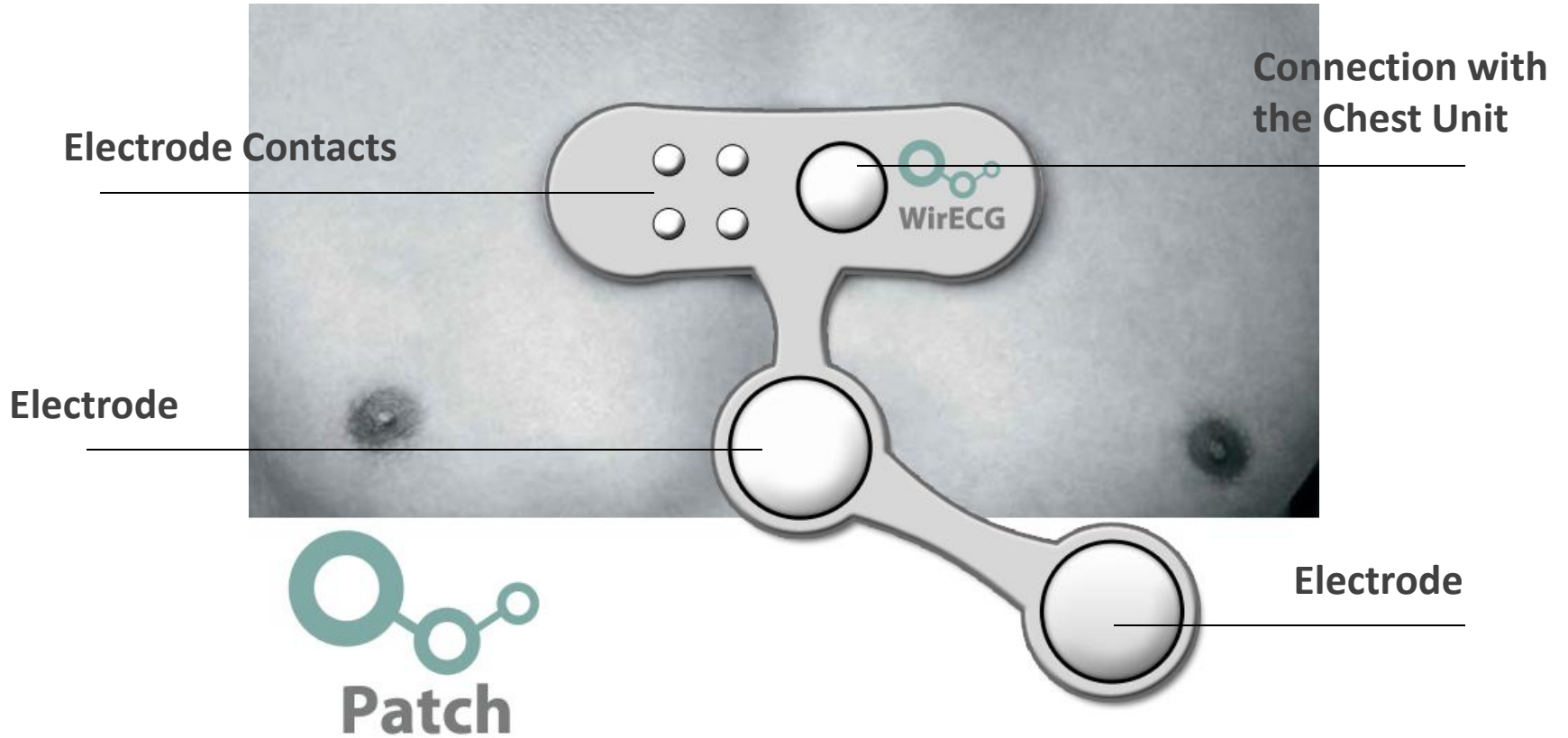


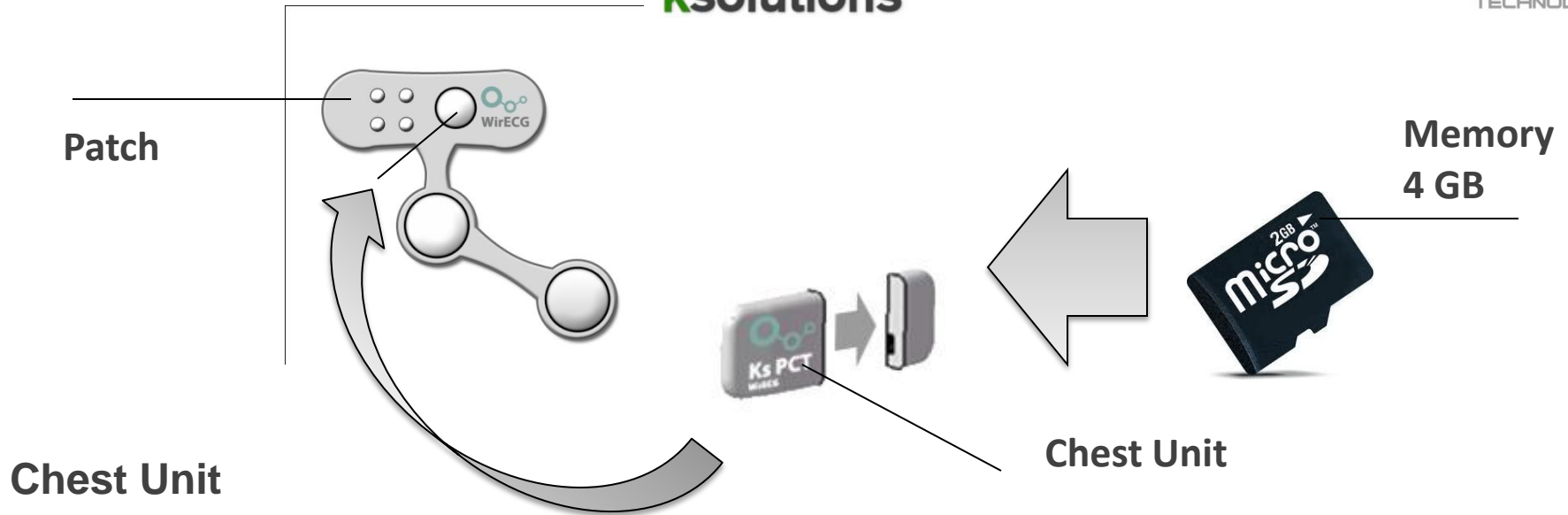
Patch - Transmitter

The patch holds 4 electrodes, one used as reference and three dedicated to signals, from which are extracted the three differential ECG traces.

It contains the electrodes, the concerning cables, the wrist pins of connection with chest unit and the RF communication antenna of the chest unit.







- Self powered.
- Up to 30gg of analysis can be held on the unit (4 GB of flash memory).
- Every track is sampled at up to 1 KHz, and dynamically compressed with owner algorithms in order to minimize storage requirements.
- A fully independent unit that can be supplied as a separate product.
- Processes and sends anomalous events in real time.
- The chest-unit is separated into two parts, in order to guarantee a comfortable batteries disposing.
- The anchorage to the patch has been designed to guarantee an easy and immediate connection.
- The chest unit makes an immediate self-diagnosis, informing the customer if the electrodes had not been correctly placed
- It is supplied with a panic button that it allows to send an immediate alarm to the operation room.



2

Gateway Box

Gateway Unit receives alarms and events from the chest unit, the real-time data streaming, and forwards all to the operation room, via GSM/GPRS.

It can receive messages from the operation room and it deals with the customer/patient's GUI.

Receiver Box is a compact system of reception. The receiver box receives the data, compresses it and sends it to the remote control system through a communication strategy previously established.

The Box is equipped with a display where it is possible to visualize the local messages sent by the remote control station. The Rx-Box is equipped with a low consumption GSM/GPRS system.



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