

MEDICAL INNOVATIONS

CUSTOMIZED TO YOUR NEEDS!

EMB1

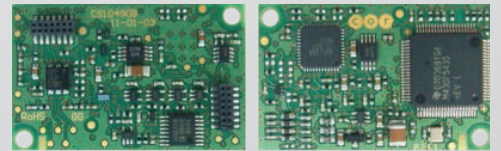
ECG Micro Board

The classical 12-channel ECG forms the corner stone for numerous standard examinations in cardiovascular diagnostics, such as the resting, long-term or exercise ECG. Hereby, the health condition of the heart muscle is extensively determined. In a series of other application fields, such as emergency medicine, patient monitoring in the O.R. or even home monitoring, a 1-channel ECG provides sufficient information, and is optimally suitable due to easy handling.

Here, portable patient monitors or hand-held devices are usually used. Long runtimes and light weight are the decisive features. For this reason, the EMB1 has been specially adapted to these requirements. It captivates with its space-saving size (25 mm x 40 mm) and its very low power consumption of less than 26 mW.

The integrated R-wave detection of the EMB1 delivers a trigger signal, and therefore offers other advantages: In diagnostic imaging processes, such as computer tomography or ultrasound, the image recording can be synchronized with the cardiac cycle. This results in diagnostically conclusive images without motion artifacts. The trigger signal is not only provided via the hardware, but also via the communication protocol. This way, software applications can also process the information about the R-wave time.

Design-to-cost and flexibility are priorities at Corscience. The EMB1 was developed according to these aspects. Therefore, the module is not only available as a 1-channel ECG, but also as a 3-/6-channel version. Moreover, already integrated 1-channel modules can be extended to 3-/6-channels. To do this, the transmission of a simple license key is sufficient. Corscience's intelligent license model not only makes short reaction times to customer wishes possible, but also saves on production costs, resulting in an overall lower price at top-class quality.



Features

- 1 or 3/6 channel ECG acquisition
- Continuous ECG measurement
- R-wave trigger (HW and SW)
- Heart rate calculation
- Pacemaker detection
- Offline electrode contact measurement
- Base line filter

Technical Information

- Dimensions: 25 mm x 40 mm
- Supply voltage: 5 V, 3.3 V
- Power consumption: < 26 mW operating
- Interface: UART
- Resolution: 2.86 μ V/bit ECG
- Sampling rate per channel: 500 Hz, 1000 Hz
- ECG bandwidth of 0.05 Hz – 250 Hz
- Operating temperature: 0 – 50 °C,
Humidity: < 95 % RH non-condensing
- Storage temperature: -20 – 70 °C,
Humidity: < 95 % RH non-condensing
- 2 Samtec connectors (Typ CLM-107-02-L-D)
- RoHS compliant

Supported standards

- EN 60601-1
- EN 60601-2-27
- EN 60601-2-47
- EN 60601-2-25