

Cardiovascular Innovations  
CUSTOMIZED FOR YOUR NEEDS

# Medical Platform (MP10)

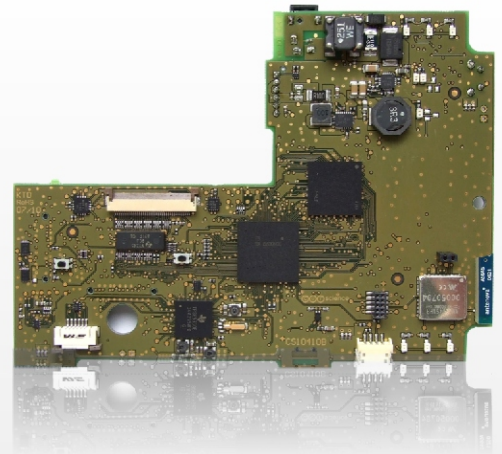
**Our Medical Platform (MP10) offers you a low-cost and efficient basis for the development of your medical product. With the modular system concept and the use of standard components we can guarantee you a fast and lean development and manufacturing process.**

Benefit from our experience and use the MP10 as basis for your next device. You will profit from the following advantages:

- Linux board support package
- Consistent low-power concept
- Touch screen interface
- Compliance to medical standards and guides
- Flexible adaption to your needs
- Various interfaces for data transmission (e.g. UART, SPI, USB, I<sup>2</sup>C)
- Bluetooth onboard

Ready sensor platforms for ECG, SpO<sub>2</sub>, NIBP and Defibrillation are also available at Corscience.

We are looking forward to demonstrate the system to you or adapt it to your requirements. Please contact us for further information!



## TECHNICAL DATA:

### **CPU:**

- Texas Instruments OMAP35xx
- 600 MHz-720 MHz ARM Cortex-A8 Core
- NEON SIMD Coprocessor

### **MEMORY:**

- 128 MB RAM
- 256 MB Flash
- Micro SD card slot

### **DISPLAY:**

- LCD interface - parallel RGB supporting 8/16/24bpp, resolutions up to 2048x2048
- Interface to EDT family concept TFT Displays (3,5", 5", 5.7" and 7")
- 4-wire touch screen interface

### **AUDIO:**

- 16-bit linear audio mono DAC

## TECHNICAL DATA:

### **SENSOR:**

- Integrated 3D acceleration sensor

### **INTERFACES:**

- 2 x SPI
- 2 x I<sup>2</sup>C
- 1 x Wire/HDQ
- 3 x UART ports
- Bluetooth
- HS USB 2.0 OTG
- 12-bit input supporting several formats (i.e ITU)

### **POWER:**

- 4.2 V DC-IN power supply (one Lithium-Ion battery)
- Typical power consumption: 3 W

### **MECHANICAL SPECIFICATIONS:**

- Dimensions: 100 mm x 130 mm x 15 mm
- Temperature (operation and charge): 5 – 40 °C
- Temperature (storage): -5 – 60 °C
- Humidity: < 95 % RH non-condensing

## CONSIDERED STANDARDS:

- Council Directive 93/42/EEC
- IEC 60601-1: 3rd edition
- IEC 62304
- DIN EN 60601-1-2:2007-12
- DIN EN 60601-1-4:2001-04
- DIN EN 60601-1-6:2008-02
- DIN EN 60601-1-8:2008-02



## DESIGN EXAMPLES:

### Cardiovascular Monitoring Device

Corscience mobile cardiovascular monitoring device is based on the MP10 platform. This device records the vital parameters SpO<sub>2</sub>, ECG and NIBP. The SpO<sub>2</sub> and ECG units are based on Corscience in-house technologies, the NIBP module is from Corscience partner Suntech medical. The device offers a 5" touch screen as user interface. Due to the flexible platform MP10 Corscience can adapt the device to your needs and integrate further vital parameter recording modules.



### Cardiovascular Stimulation Device

This medical device from Cardiola AG is used for treatment of acute and chronic heart failure by counter pulsation. Here, synchron to the cardiac cycle, electrical pulses will be given which causes improved blood flow. The control unit of the System is based on the MP10. With its touch screen monitor (5.7") the relevant stimulation parameters (timing, energy, etc.) can get adjusted and stored on a patient specific "patient card". The adjusted control parameter is transmitted via the integrated Bluetooth Interface to the stimulation unit.



### Professional Defibrillator Platform

The MP10 can be also used as control unit for Professional Defibrillators. With its various interfaces and its powerful controller plus the design according to the IEC 60601-1 medical standard it is predestinated for the use in Defibrillators. The integrated Bluetooth interface gives the possibility to connect the Defibrillator within a telemedicine system.

