



Technical Info

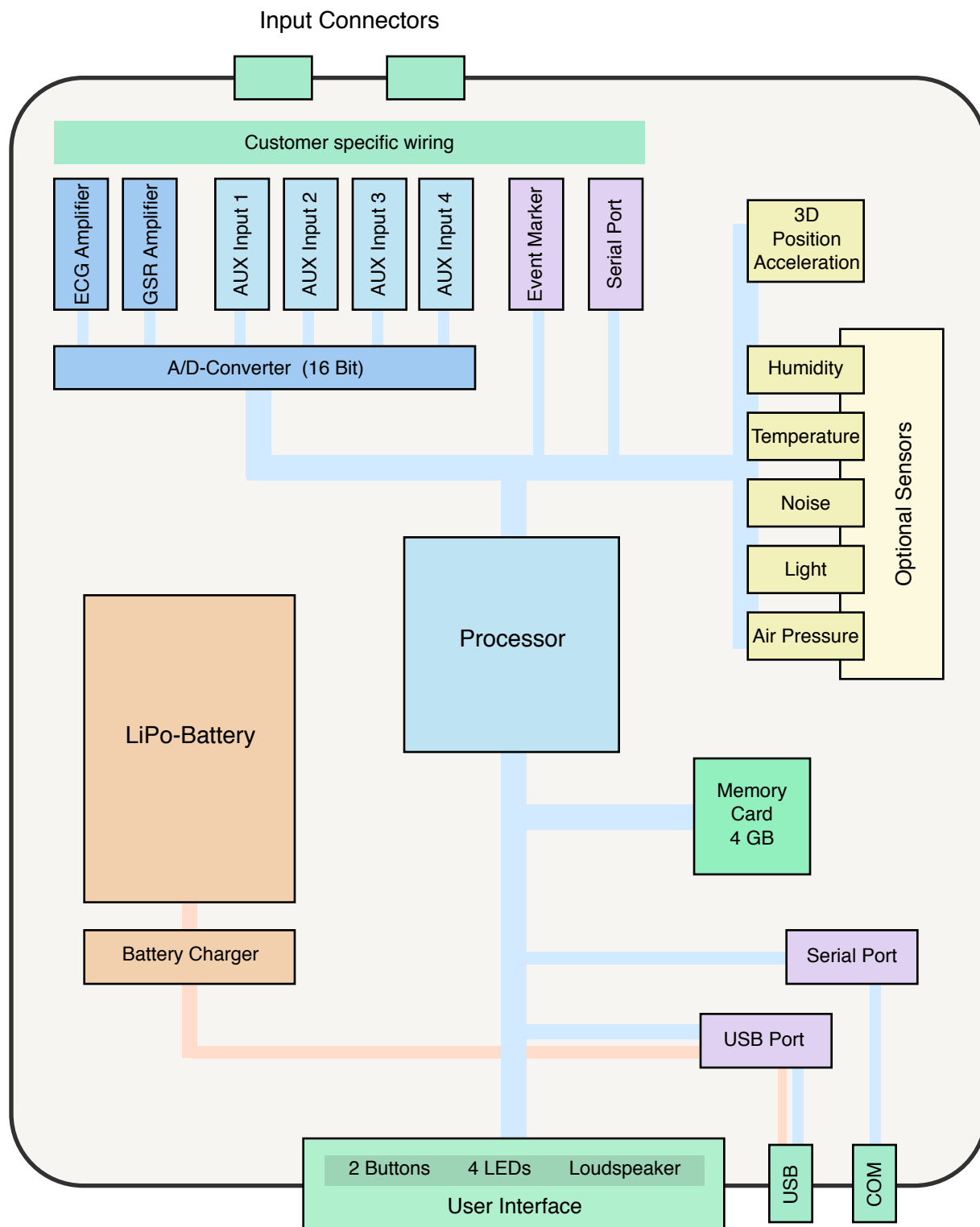
Parameters

- ECG (internal amplifier)
- GSR (internal amplifier)
- 3D position and acceleration (internal sensor)
- Light (optional internal sensor)
- Ambient noise (optional internal microphone)
- Air pressure (optional internal sensor)
- Air humidity (optional internal sensor)
- Temperature (optional internal sensor)
- Four AUX inputs for external amplifiers (EMG, EOG, eyeblink etc.)
or sensors (limb movement, breath, finger pulse, skin temperature etc.)
- Calculated Channels (Heart rate from raw ECG, global activity from 3D sensor etc.)
Software routines can be programmed using SPIL language
- Event marker
- Battery level

Technical Data

Dimensions	65 x 43 x 17 mm
Weight	50 grams (including battery)
Data Conversion	16 Bit (65536 steps) Individual sampling rate for each channel
Data Storage	Micro SD card (2GB measuring data / 2GB auxiliary data)
User Interface	Two buttons and four LEDs
Power Supply	Integrated Lithium battery (3,7V / 600 mAh)
Power Consumption	60µA (standby) to 1,6mA (max. duty)
Time of Operation	up to 7 days in standard mode up to 30 days (only some sensors running)
Interfaces	Serial port and optional Bluetooth (Remote functions and online data transfer) USB (battery charging + data readout from memorycard)

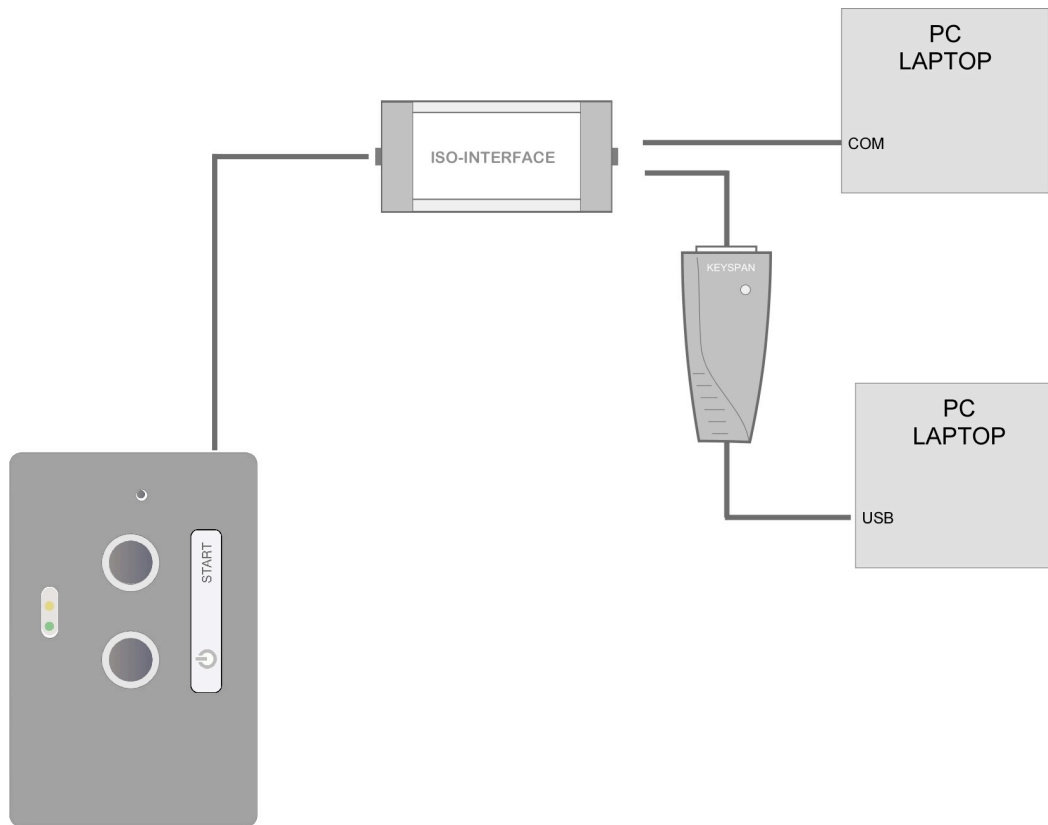
Block Scheme



Channels

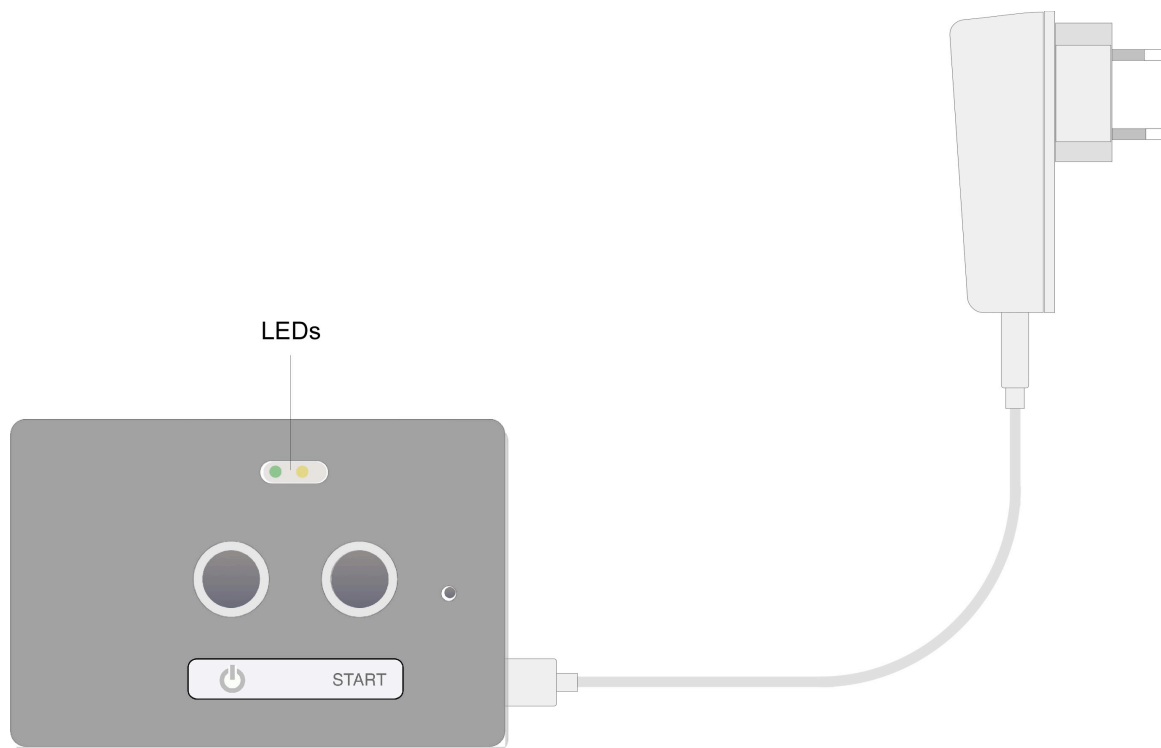
ECG
GSR
AUX-1
AUX-2
AUX-3
AUX-4
HEARTRATE (calculated from raw ECG signal)
POSITION / MOVEMENT X-AXIS
POSITION / MOVEMENT Y-AXIS
POSITION / MOVEMENT Z-AXIS
TEMPERATURE optional
AIR HUMIDITY optional
AIR PRESSURE optional
LIGHT INTENSITY optional
NOISE (Raw signal) optional
NOISE (Integrated signal) optional
EVENT MARKER
BATTERY VOLTAGE

Connecting recorder to PC



- Connect the COM-Port of the recorder to the "varioport" input of the ISO-Interface (use the cable with the 4-pole connectors). The green LED at the interface must light up now.
- Connect the other side of the ISO-Interface to the COM-Port of a PC or laptop, if this exists. If not connect it to the KEYSpan USB-Serial-Adapter.
- Connect the KEYSpan adapter to a USB port of the PC or laptop. The green LED at the KEYSpan adapter must blink now.
- Start the VARIOGRAF software. If the KEYSpan driver is properly installed and the settings in the VARIOGRAF software are correct, the green LEDs at the KEYSpan adapter and on the PC-side of the ISO-Interface will light constantly. If not you will have to adjust the VARIOGRAF setup (see instructions in MAIN SETUP).

Charging battery



- 1 Plug the USB cable to the power supply and the varioport
- 2 Plug the power supply to an outlet
- 3 Varioport will switch on automatically after some seconds and will make a short beep
- 4 The LEDs will begin to blink green and yellow alternatively
 - fast blink (1 per second) until the battery is below 80% of full charge
 - slow blink (1 per three seconds) if battery is above 80% of full charge
- 5 Battery is full after about 4 hours of charging (please note: LED blinking will not stop then)