



CHILL BAND

The Chill Band is a wearable wireless band able to sense multiple parameters from the user's wrist. Galvanic skin response (GSR) with high dynamic range and accuracy, and the skin temperature and movement are all sensed at configurable rates from the user's wrist.

The Chill Band has an unmatched low-power performance providing autonomies beyond one week of continuous monitoring. The Chill Band is battery operated and it can connect to a PC or a cellphone via standard Bluetooth® profile. All raw data collected by the wristband are also accessible via USB, through a driverless Hi-speed (480 Mbps) transfer.

The Chill Band is a demonstrator that can be used for data collection in research and clinical environments across multiple applications. One of such application scenario where it is ideal for use is stress research. GSR and temperature have been proven to be important physiological indicators of stress. The Chill Band can be used for the development of stress algorithms both in controlled settings and ambulant environments. The combination of physiological sensing with acceleration measurement gives a complete user profile on which stress detection models can be built. The Chill Band is one of multiple examples of imec technology. The Chill Band is not a product and does not have certifications or testing to be marketed and sold to the public.



Chill Band

KEY FEATURES

- Galvanic Skin Response (GSR)/Electro Dermal Activity (EDA) with high dynamic range (0.05 – 20µS) at the lower side of the wrist
- Skin temperature at the upper side of the wrist
- Wrist movement (3-axis accelerometer)
- Bluetooth-enabled (cellphone communication)
- USB-accessible (data) and rechargeable battery
- Long autonomy: 7+ days
- High storage capacity (30+ days of data)
- Storage of signals in raw format. Raw data is accessible as a drive in PCs over USB (MSD profile)
- Ergonomic and user-friendly design available in three sizes (S/M/L)
- Made with hypoallergenic materials

APPLICATION FIELDS

- Galvanic skin response /Electro dermal activity monitoring
- Wrist motion tracking
- Attention monitoring
- Stress detection and analysis
- Wearable technology
- Quantified self
- Conscious wellbeing
- Corporate health
- Big data

POTENTIAL USERS AND CUSTOMERS

- Original Equipment Manufacturers (OEM)
- Wearable technology device makers (smartwatches, smart glasses, smart eyewear, smartphones)
- Health and lifestyle (smartphone) application developers
- Corporate health providers
- Healthcare providers (doctor's office, hospitals)
- Insurance companies
- Research professionals (data collection, clinical trials, algorithm development)

KEY BENEFITS

- Long-term monitoring
- Quality data from subjects acquired in a natural form factor
- Integration with other sensors and sensor data
- Multi-parameter acquisition
- High-level understanding of user's data over long periods of time
- Adding functionality to existing wearables
- Adding functionality to existing applications and services
- Enabler for corporate health tracking
- Tracking of population at risk of stress or burnout
- Development of next-generation tools for health and lifestyle technologies

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