



## Navigil 580 Mobile Wellbeing Wristwatch

*Stylish wellbeing tracker and SOS phone in a wristwatch!*



**NAVIGIL 580** wristwatch has been designed for persons who wish to stay active and keep track of their wellbeing. As a by-product of the wellbeing monitoring changes in the daily activity level and vital sign trends can be detected and preventive actions can be taken prior to the deterioration of wearer's condition.

### Detect changes in level of activity and routines

Navigil 580 display shows the level of achievement of the daily activity target and vital sign values to the wearer. Weekly and monthly achievement can be monitored in the Rafael service in a web browser or in an App for iOS and Android. The analysis shows when the wearer is in a very active, active or non-active state in addition to the location data and vital sign trends.

### Activity data analytics


Navigil Suite Service has AI services that can be used to analyse the activity, vital sign and location data. The analysis reports can be used to identify persons whose level of activity or daily routines are changing. Typically short term changes such as poor quality of sleep, gradually later start of the day and dramatical changes in daily level of activity

- **LTE phone in an analog wristwatch**
- **Wearer activity tracking**
- **Vital sign tracking and analysis**
- **Single button SOS call with location**
- **Very long battery life**
- **App for iOS and Android**
- **GNSS location reports**

are clear indicators of change in wearer's wellbeing. Similarly gradual changes for the worse over a longer period of time indicate changes in wellbeing. Early detection of changes enable preventive care actions to be taken maintaining good quality of life while saving billions of euros in social and health care costs. Navigil Suite service includes emergency call and notification routing services in addition to SMS, e-mail and push notifications to App for alarms and warnings.

### Easy to deploy

Navigil 580 comes with a SIM card pre-installed - simply select appropriate wearer profile and define phone numbers and Navigil 580 is ready to go. Navigil 580 has profiles for various type of wearers. Richness of the user interface in each profile is matched to the dexterity and capabilities of the wearer. All profiles are enabled to receive phone calls. Due to advanced power saving modes of the hardware and intelligent power management, Navigil 580 can operate up to four weeks on a single charge while being always registered to the mobile network and sending periodic reports.

|  |                            |   |
|--|----------------------------|---|
| <b>Mobile comms</b>  | Modem type                 | LTE Cat-M1 modem supporting low bands B5/B8/B12/B13/B14/B17/B18/B19/B20/B26/B28 and mid bands B1/B2/B3/B4/B25/B39/B66           |
|  | Communication              | SMS, FTP, HTTP, HTTPS, TCP, VoLTE, VoIP   |
| <b>GNSS</b>  | Receiver type              | GPS/GLONASS/Galileo/BeiDou receiver   |
|  | Sensitivity                | Acquisition -148 dBm, navigation -162 dBm   |
|  | A-GPS                      | A-GPS assistance (up to 28 days)  |
| <b>Short range comms</b>   | BLE                        | Bluetooth Low Energy communication with beacons   |
| <b>MCU</b>   | Processor                  | ARM Cortex-M4, 512 kbytes (total code memory)   |
|  | RAM & flash memory         | 128 kbytes (total RAM), 16 Mbytes (total data flash)  |
| <b>Audio</b>   | Microphone / speaker       | Adjustable gain and volume control  |
| <b>User interface</b>  | Wearer profiles            | Auto, easy, full and tracking profiles  |
|  | Adjustable UI              | Selected profile enables/disables UI features   |
|  | Watch                      | Analog watch, two software controllable hands   |
|  | Buttons                    | Crown, Emergency call, two soft key buttons   |
|  | LEDs                       | 1 user interface / status LED   |
|  | Other                      | Two row OLED display, speaker, vibrator   |
| <b>Sensors</b>   | Onboard                    | 3D accelerometer, optical sensing for HR, HRV, respiration, skin temperature change   |
| <b>Battery</b>   | Li-ion                     | 480 mAh   |
| <b>Operation time</b>  | Phone always on            | Up to four weeks, depending on used profile and conditions  |
|  | Phone on when required     | Up to two months, depending on used profile and conditions  |
| <b>Software features</b>   | Voice communication        | VoLTE and VoIP with secure interconnect to phone networks   |
|  | Data communication         | SMS, TCP, HTTP(S), FTP with message buffering on data flash   |
|  | Over-the-air updates       | Configuration, parameters, safe zone, firmware and boot loader  |
|  | Safe zone functionality    | Polygon or circle safe zones with validity time attributes  |
|  | User initiated phone calls | To alarm receiving centre and up to 8 speed dial numbers  |
|  | Receiving phone calls      | Automatically or by user accepted calls, white list access control  |
|  | Alarms                     | Battery critical, battery low, no movement  |
|  | Activity statistics        | Wearer statistics including duration of very active, active, little movement, beacon area, out of home periods                  |
|  | Vital sign tracking        | HR, HRV and respiration statistics with trend analysis, circadian cycle tracking, go-to-sleep prompts and sleep/stress analysis |
|  | Event reports              | Periodic status, help request call, home beacon, activity statistics, battery status and charging reports, location reports     |
| <b>Temperature range</b>   | Operation                  | Use: -20°C – +60°C, charging 0°C – +45°C  |
| <b>Certifications</b>  |                            | RoHS, CE, 2014/53/EC (RED)  |
| <b>Available versions</b>  | Navigil 580                | EU, US, Asia LTE bands, several wristwatch and strap designs  |
| <b>Enclosure</b>   | Navigil 580                | IP67 and shower proof, standard strap, 22 mm interface  |
| <b>Dimensions</b>  | Navigil 580                | Diameter 46 mm, thickness 13.9 mm, weight 60 gr. (normal strap)   |
| <b>Beacons</b>   | Charging dock              | Easy to use charging dock   |

### Activity



### Key features are:

- Stylish shower proof analog watch
- Activity tracker with mobile call function
- AI activity and vital sign analytics
- Indoor beacon and outdoor GNSS location