



# MESI

Simplifying Diagnostics

All diagnostic measurements.  
All patient records.  
**One system.**

## MESI mTABLET



# Table of Contents

---

<b>Overview</b>	<b>2</b>
<b>Products</b>	<b>4</b>
MESI mTABLET ECG	6
MESI mTABLET ABI	8
MESI mTABLET TBI	10
MESI mTABLET BP	12
MESI mTABLET SPO2	14
<b>Software App Extensions</b>	<b>16</b>
Protocol	18
6-minute Walk Test	20
Averaging Blood Pressure	21
Dual Blood Pressure	21
Worklist	22
Photo	22
<b>Accessories</b>	<b>24</b>
<b>360° Solution</b>	<b>28</b>
mRECORDS	30
mSTORE	32
Examples of use	34
<b>Technical Specifications</b>	<b>36</b>
<b>Configurator</b>	<b>46</b>
<b>Presentation Videos</b>	<b>48</b>

# Completely new concept of a medical device

**MESI mTABLET** is designed and produced for healthcare professionals with a modern practice in mind.

Our **certified medical tablet** is a unique healthcare solution, integrating **wireless diagnostic modules**, patient records and medical apps in one system.

All measurements and patient data are automatically stored and synchronized with the **built-in electronic medical record – MESI mRECORDS** that is available on the MESI mTABLET and from any web-enabled device, simply and securely.

Performance and functionality can be enhanced with numerous software and diagnostic tools available in the **medical marketplace – MESI mSTORE**.

**12-Lead ECG**

**Blood pressure**

**Ankle-Brachial Index**

**Pulse oximetry**

**Toe-Brachial Index**

**Spirometry**



## ALL IN ONE SYSTEM

Wireless and portable hand-held system provides boundless freedom in a modern healthcare facility. Modular system allows you to add modules according to your practice's needs. New ones can be added to the system whenever necessary.



**reddot design award**  
winner 2018

\* This image is for demonstration purposes only.

# MEDICAL DEVICE FOR A MODERN PRACTICE

Choose diagnostic  
modules according  
to your practice's  
needs

## MESI mTABLET ECG

# First completely digital Electrocardiogram

- From wireless ECG directly to the **patient record**
- **Sharing results** for immediate second opinion
- Expanding the medical grade tablet with **additional measurements and apps**



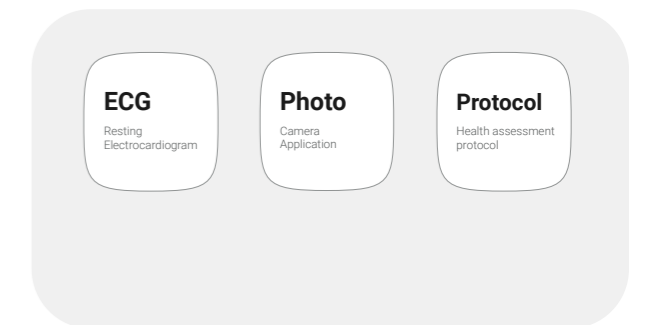
## Why MESI mTABLET ECG



- 12-lead Wireless ECG
- Glasgow Interpretation Algorithm included
- ECG signal filters (high-pass, low-pass, baseline, mains, myogram)
- 8 advanced view options
- Recording speed and sensitivity settings
- Simple zoom-in, comment adding and advanced analysis
- Printout directly from the tablet

## Application extensions

The **MESI mTABLET ECG** is not only an advanced electrocardiogram. By adding new smart applications, you can extend the use and make it your real lifetime associate. This makes it a truly new concept of a medical device.



MESI mTABLET ABI

# The smartest wireless Ankle-Brachial Index

- PADsense™ algorithm for detection of severe Peripheral Arterial Disease
- 3CUFF™ technology allowing simultaneous measurement
- Quick and reliable ABI measurement with pulse waveform interpretation

SHARE FOR A SECOND OPINION



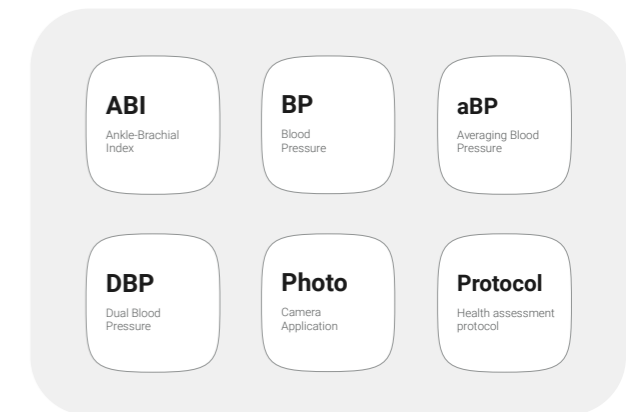
Why MESI mTABLET ABI

- SmartArm™ detection – to determine the higher blood pressure of the two
- Automated, 3-cuff simultaneous measurement
- Multiple cuff sizes and ability to mix-and-match different size cuffs during one measurement
- Pulse waveforms and oscillation graphs
- Advanced review and alerts, thanks to PADsense™ algorithm



Application extensions

The MESI mTABLET ABI is not only an advanced Ankle-Brachial Index measuring device. By adding smart applications, you can extend the use and make it your real lifetime associate. This makes it a truly new concept of a medical device.



## MESI mTABLET TBI

# The simplest wireless Toe-Brachial Index

- Quick and reliable TBI measurement with pulse waveform interpretation
- Simple 1-step automated TBI measurement performed in 1 minute
- Adaptive LED™ PPG probe detects skin thickness for increased accuracy

SHARE FOR A SECOND OPINION



DIRECT STORAGE INTO EHR



SMARTARM™ DETECTION ALGORITHM



COLOR CODED CUFF SYSTEM



INTEGRATED SKIN TEMPERATURE SENSOR



ADAPTIVE LED™ PPG

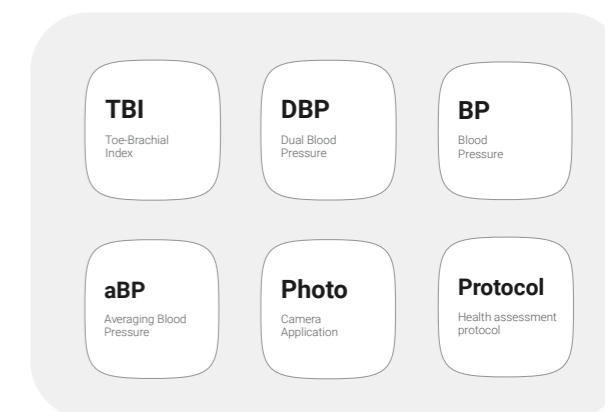


## Why MESI mTABLET TBI

- Safe, simultaneous measurements in both arms and toes, with adaptive, infrared LED™ PPG light, detecting toe skin temperature and thickness
- PADsense™ algorithm for detection of severe Peripheral Arterial Disease
- Comprehensive and reliable TBI report with Pulse waveforms and oscillation graphs for the arms and PPG pulse waveforms for the toes
- Availability of single-use (disposable) toe cuffs.

## Application extensions

The MESI mTABLET TBI is not only an advanced Toe-Brachial Index measuring device. By adding smart applications, you can extend the use and make it your real lifetime associate. This makes it a truly new concept of a medical device.



## MESI mTABLET BP

# Revolutionized office Blood Pressure

- First wireless BP cuff supporting 3 cuff sizes
- One BP cuff, multiple operating modes
- Advanced analysis options with pulse waveforms

DIRECT STORAGE INTO EHR



SMART SIZE DETECTION



WIRELESS & PORTABLE



ADDITIONAL MEASUREMENTS AND APPS



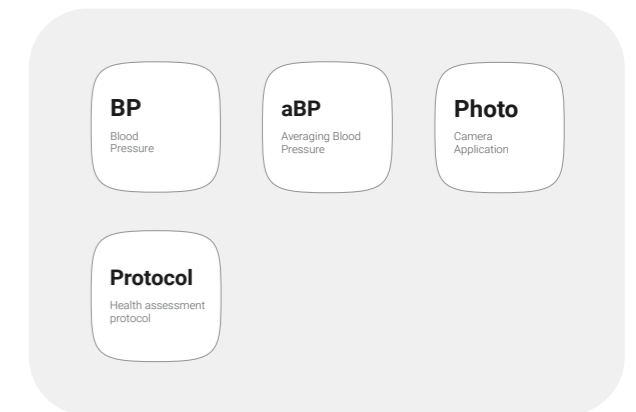
## Why MESI mTABLET BP



**MESI mTABLET BP** brings high precision to the healthcare environment. It is a portable blood pressure monitor for fast and accurate readings. With the help of digital filters, the pulse waveforms are isolated and shown on the screen.

## Application extensions

The **MESI mTABLET BP** is not only an advanced Blood Pressure monitor. By adding new smart applications, you can extend the use and make it your real lifetime associate. This makes it a truly new concept of a medical device.



## MESI mTABLET SPO2

# The most flexible Pulse Oximeter

- An intuitive user interface with quickly adjustable operating modes
- Large screen with high visibility of SpO<sub>2</sub> levels
- Motion artefact detection and high performance even in low perfusion.

MONITOR FUNCTION



TONE AND VISUAL ALARMS



WIRELESS & PORTABLE



DIRECT STORAGE INTO EHR



SHARE FOR A SECOND OPINION



ADDITIONAL MEASUREMENTS AND APPS



## Why MESI mTABLET SPO2

- Real-time tone and visual alarms
- Motion artefact detection and high performance even in low perfusion
- Trend analysis
- Option to wirelessly monitor several patients at the same time



## Application extensions

The **MESI mTABLET SPO2** is not only an advanced Pulse Oximeter. By adding new smart applications, you can extend the use and make it your real lifetime associate. This makes it a truly new concept of a medical device.

**SpO2**

Pulse Oximetry

**6MWT**

6-minute Walk Test

**Photo**

Camera Application

**Protocol**

Health assessment protocol



# APPLICATIONS TAILORED TO YOUR PRACTICE'S NEEDS

Add measurements  
and applications  
whenever necessary

# Create and follow clinical protocols with the Protocol app

- Standardized patient assessment, implemented into the practice completely hassle-free
- Improved patient outcomes
- Clear audit trail and real-time insight

## Protocol

Health assessment protocol

SIMPLE EDITING AND CUSTOMIZATION



EASY SHARING AND PRINTING

WIDE RANGE OF INPUTS



### Choose among various fully-customizable formats:

- Measurements (SpO2, Ankle-Brachial Index...)
- Parameters (temperature, height, weight...)
- Check-boxes
- Drop-down options
- Open ended questions



### Use the flexibility the app offers:

- Create as many protocols as you like directly on the MESI mRECORDS platform.
- Sort the protocols using several parameters.
- Set the sequences of protocol procedures according to your requirements.
- You can update the protocols according to latest guidelines/best practices.



### Implement the protocol in your practice:

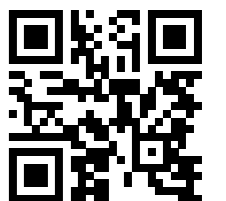
- Publish the protocol you want to implement.
- All members of the working group can access the protocols on the MESI mTABLET.
- Select the appropriate protocol and follow the step-by step guidance.
- You can skip individual steps if they're not applicable.



### Review and use the results:

- All data, including the measurements, is automatically stored in the patient record (MESI mRECORDS) and is always available.
- Review all data obtained through the protocol on the MESI mTABLET and MESI mRECORDS.
- After reviewing the data, create a comprehensive report.
- You can print, share, or save the report at any time.

See how it works:



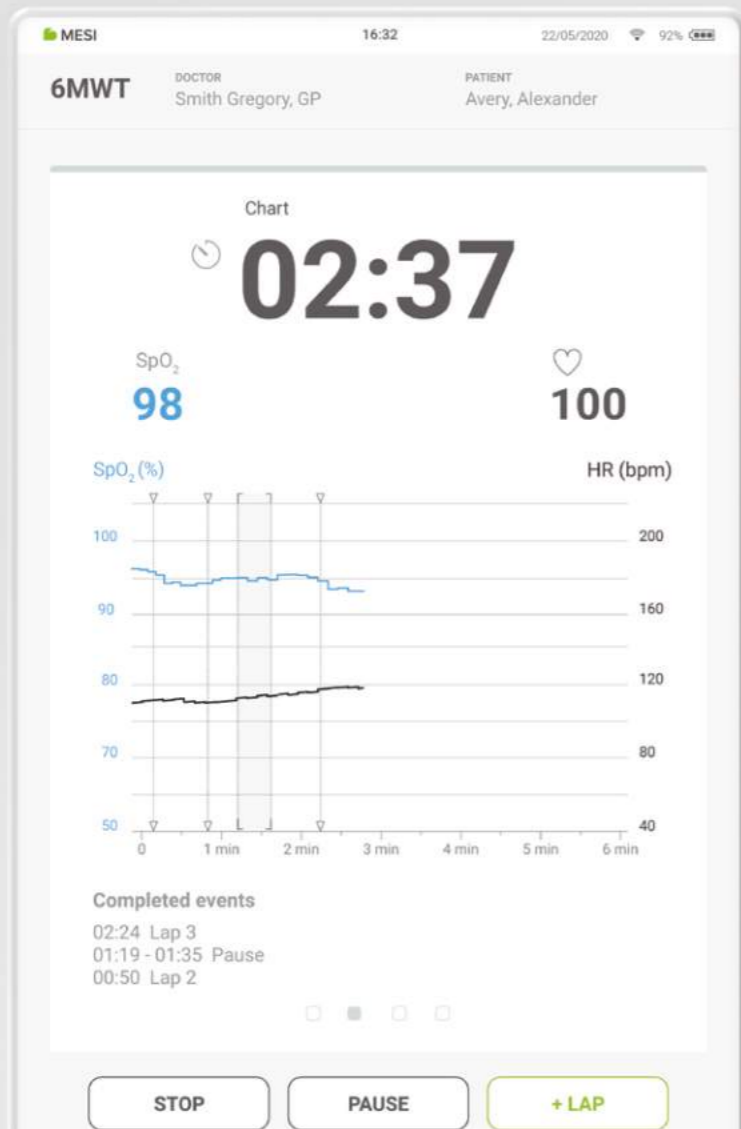
# Simplified cardiopulmonary assessment with the 6MWT app

- An optimised way of performing an exercise test
- Step-by-step protocol for an easily performed test with accurate and repeatable results
- Standardized test providing an extensive report

**6MWT**  
6-minute Walk Test

OPTION OF ENABLING A POST-TEST RECOVERY PERIOD

10- OR 15-POINT BORG SCALE



PRE- & POST-TEST PATIENT CONDITION RECORD

AUTOMATIC DISTANCE CALCULATION



## Enhance your diagnostics

The 6-minute walk test is a submaximal exercise test measuring a distance walked in a span of 6 minutes – the distance provides a measure for an integrated global response of multiple cardiopulmonary and musculoskeletal systems involved in the exercise. With the 6MWT app for MESI SPO2 module, this test becomes fully digital, straightforward and easy to perform.



## Gain important insight

The test provides information on the patient's functional capacity, response to therapy and prognosis across a broad range of chronic cardiopulmonary conditions, such as Pulmonary arterial hypertension (PAH), Heart failure (HF), Cardiac rehabilitation/ coronary artery disease (CAD) and Peripheral arterial disease (PAD), in a comprehensive report format.



## Adapt the test to each patient

- Choose between the 10-point Borg scale and 15-point Borg scale evaluation of exertion, dyspnea, chest pain
- Receive the standardized instructions for patients (standard encouragements) during the measurement
- Set the pre-test period and the patient recovery phase
- Switch between different views during the test: Events, Chart, Overview, Rest

See how it works:



## Patient-specific average blood pressure measurement with the aBP app

- Accurate sequential BP measurement with the Wireless Cuff module
- Customizable parameters (number of sequential measurements, initial delay and intervals, etc.)
- Reference scale with gathered results of all readings

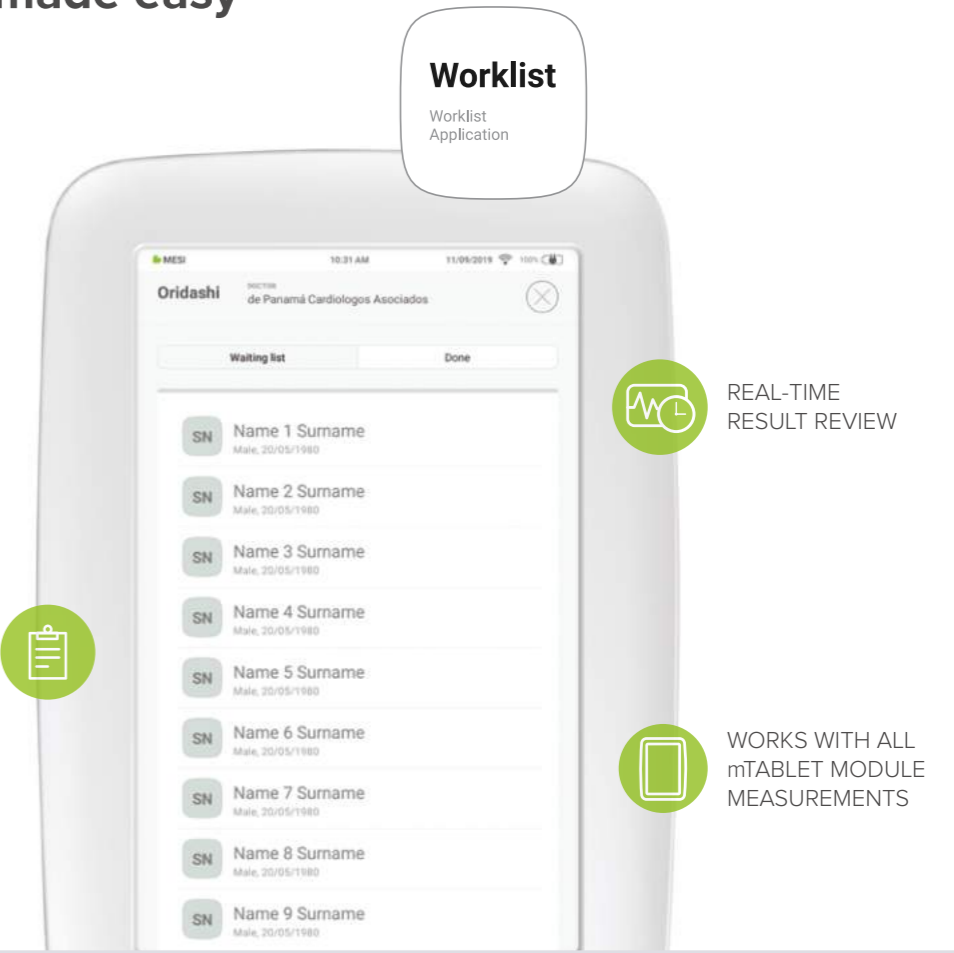


SOUND INDICATORS

AVERAGE SYS, AVERAGE DIA AND MAP

## EMR communication made easy with the Worklist app

- Measurements are ordered directly from the EMR and conducted with the mTABLET
- Supports HL7, DiCOM, GDT protocols and enables communication through .JSON, .XML and API



REAL-TIME RESULT REVIEW

EASILY ACCESSED REPORTS

WORKS WITH ALL mTABLET MODULE MEASUREMENTS

## Determine the interarm difference in one step with the DBP app

- Simultaneous measurement in both arms
- All measurements are automatically stored in MESI mRECORDS
- Multiple cuff sizes for increased accuracy



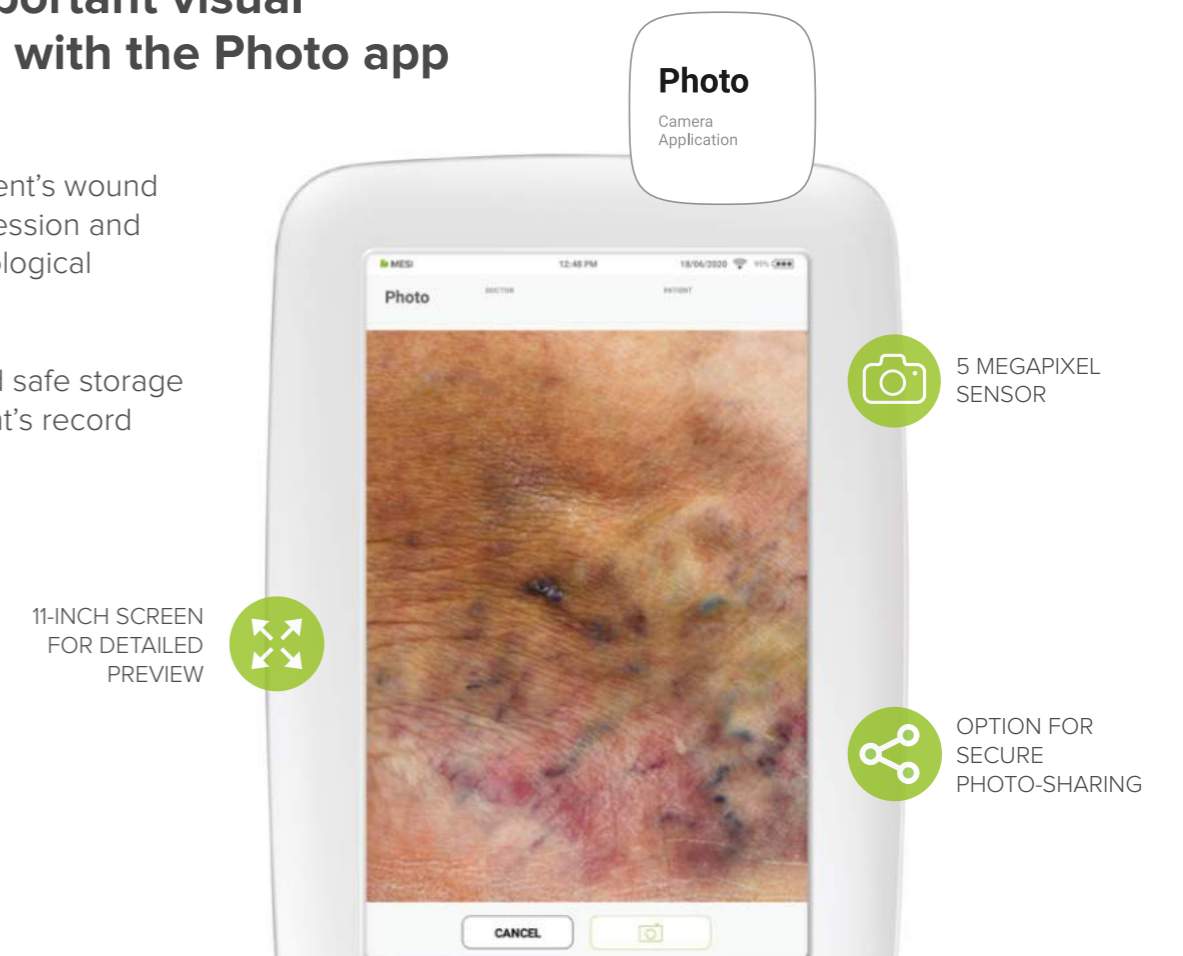
MOTION AND SMART SIZE DETECTION

MOTION AND SMART SIZE DETECTION

ADJUSTABLE OPERATING MODES

## Capture important visual information with the Photo app

- Track the patient's wound healing progression and other dermatological conditions
- Automatic and safe storage into the patient's record



5 MEGAPIXEL SENSOR

11-INCH SCREEN FOR DETAILED PREVIEW

OPTION FOR SECURE PHOTO-SHARING

# ACCESSORIES



## MESI mTABLET ACCESSORIES

**PATIENT CABLE - BANANA ADAPTER**  
ECGMD patient cable - banana connectors (IEC)

ECG



**BANANA ADAPTER - ALIGATOR CLIP**  
ECGMD patient cable - banana adapter - alligator clip (10 pcs)

ECG

**BANANA ADAPTER - CLIP WITH EXTENSION**

ECGMD Patient cable - banana adapter - clip connector with extension (10 pcs)

ECG



**STRAESSLE DT 100 TPLUS**  
Automated vacuum electrode system with ECGMD mount

ECG

**DISPOSABLE ELECTRODES**  
ECGMD disposable electrodes - Pediatric package (50 pcs)

ECG



**MEDICAL BAG**  
MESI carry bag with foam insert

ECG, ABI, TBI, BP, SPO2

**TUBELESS CUFF 4 SET - LARGE**  
Set of 4 cuffs for MESI mTABLET ABI - size: large

ABI



**TUBELESS CUFF 2 SET - LARGE**  
Set of 2 cuffs for MESI mTABLET BP - size: large

ABI, TBI, BP

**DIGIT CUFFS PAIR - LARGE**  
Set of 2 digit cuffs for MESI MTABLET TBI/TBP - size: large

TBI, TBP

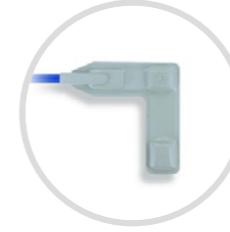


**Y SENSOR CABLE**  
Y sensor cable for MESI mTABLET SPO2

SPO2

**SOFTTIP® SENSOR CABLE**  
SoftTip® Sensor cable for MESI mTABLET SPO2

SPO2



**WRAP SENSOR CABLE**  
Wrap sensor cable for MESI mTABLET SPO2

SPO2

**EARCLIP SENSOR**  
MESI mTABLET SPO2 EarClip sensor

SPO2



# 360° SOLUTION

Medical device  
addressing your  
evolving needs

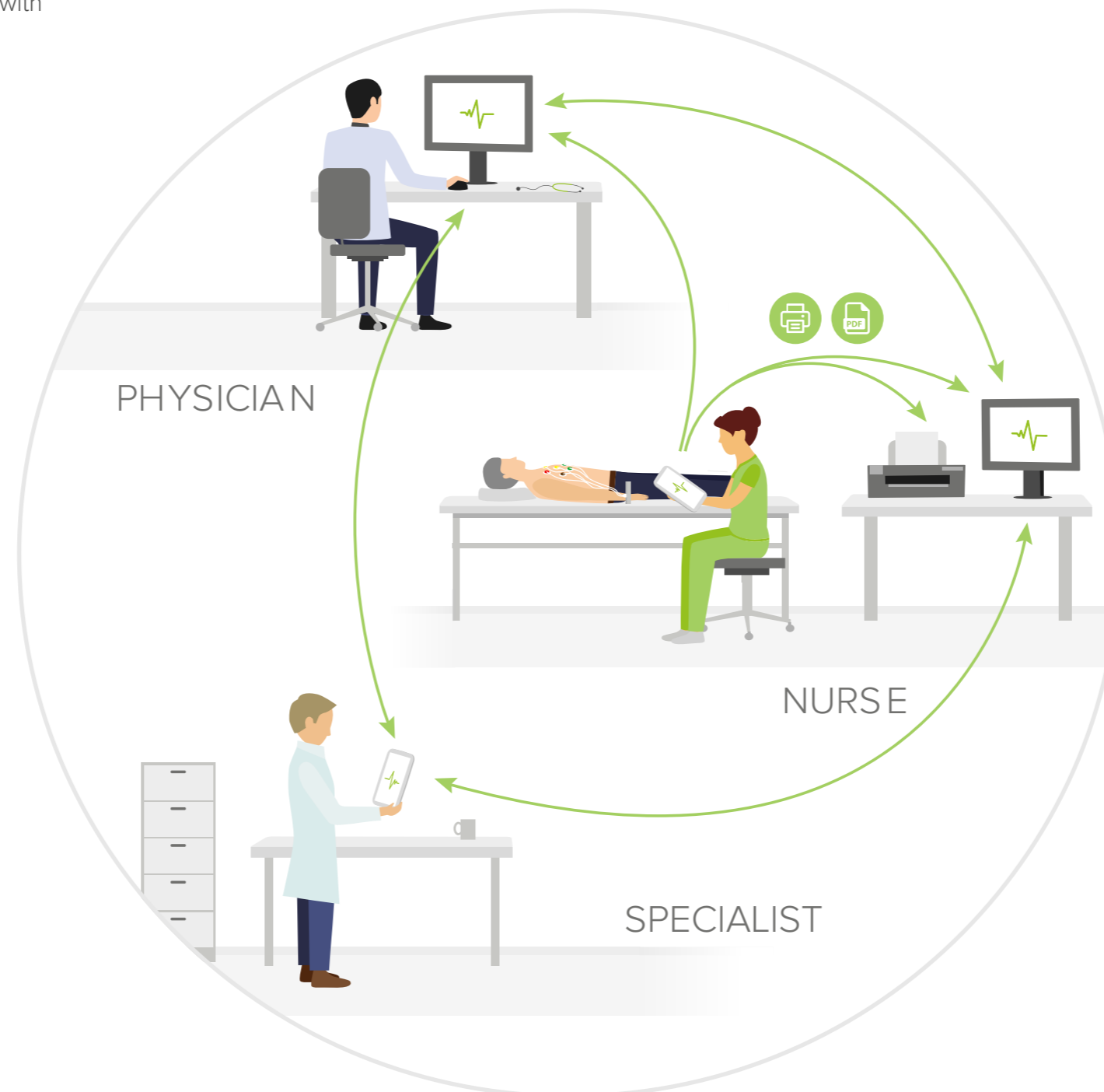
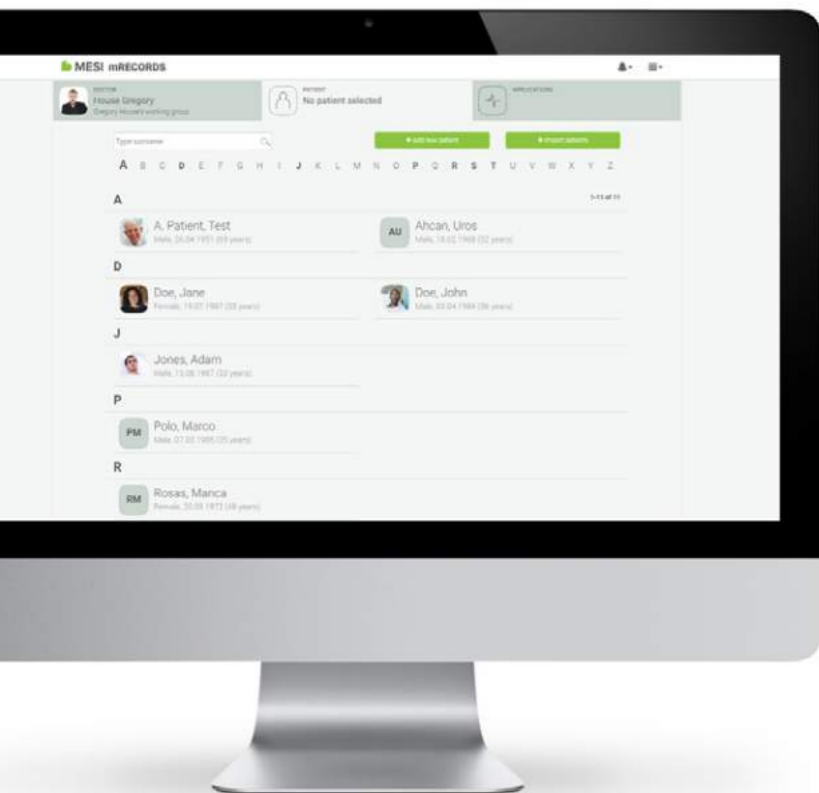
## MESI mRECORDS

# Storing reports **automatically**

**MESI mRECORDS** ensures that all measurements and patient data are automatically stored and synchronized with the built-in electronic medical record.

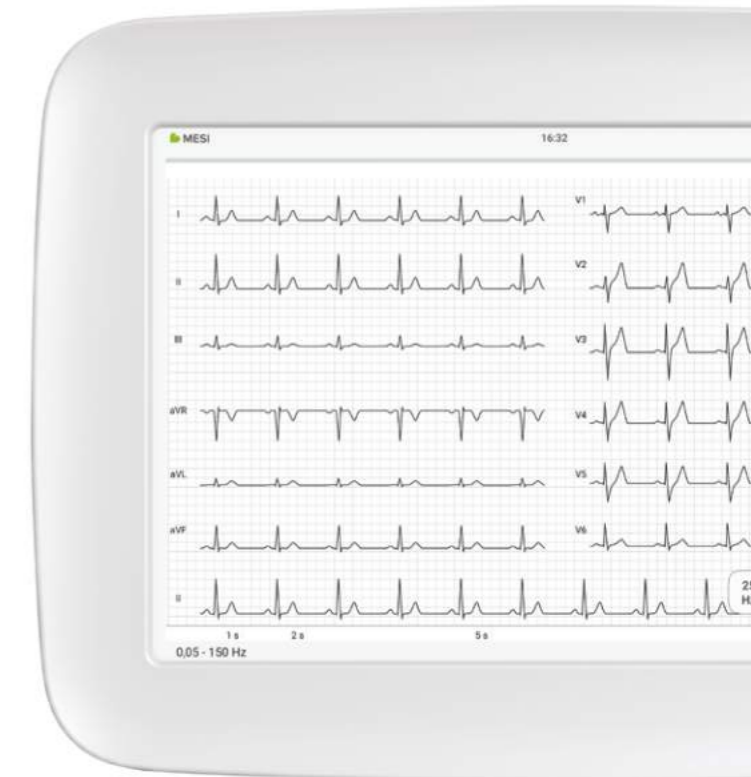
### FOR PHYSICIANS

- Secure access to the mESI mTABLET
- Immediate access to the measurement results
- Result analysis
- Sharing the result for a second opinion
- Adding comment to the report
- Remote review of the measurement results
- Viewing the results of previous measurements
- Confirming the measurement results



### Second opinion made easy

Easy sharing of information between healthcare professionals on PCs, mobile devices and mTABLETs.



### FOR NURSES

#### Automatic PDF storage & print

- Choose to wirelessly print or store the report.
- The report is automatically stored in a pre-set folder on your computer.
- The report can also be uploaded to your practice's software.

## MESI mSTORE

# Everything in one place

Similar to the applications on your mobile phone, both MESI mTABLET and MESI mRECORDS can be enhanced with additional software, combining all measurements and medical software in one device.



- Enhance both the diagnostic modules and the patient records
- Find **all available products** from MESI and 3rd party developers **in one place**
- Temporarily activate **demo applications**, to see how they fit into your practice

## Knowledge at your fingertips

MESI mSTORE holds all the information on how to get even more out of your MESI products. Watch videos of upcoming measurements, review, technical specifications and request demo applications.

## Smart apps for smart work

Find all the software extensions that enhance your existing workflow or help you establish an entirely new way of managing the measurements, your patient reports and follow-ups. Less writing, more diagnostics.

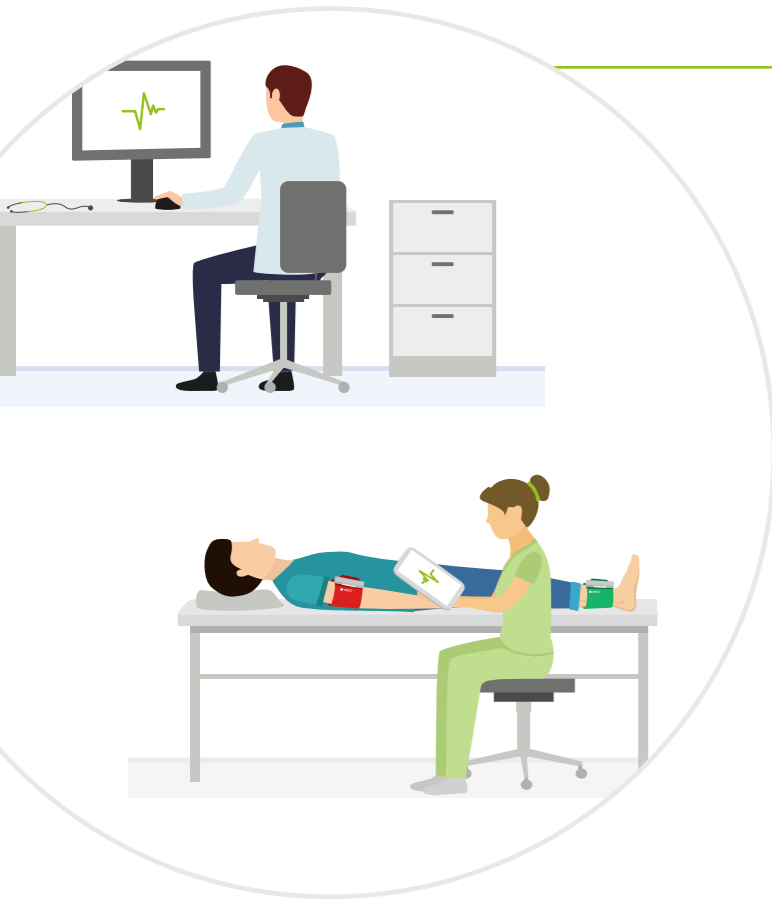
## Unlimited possibilities

Cannot find the app you need? MESI provides custom app development for healthcare providers and industry partners. You can get more information at [mstore@mesimedical.com](mailto:mstore@mesimedical.com).



## Wherever your work takes you, the **MESI mTABLET** system follows

There is no need to change the way you go about your daily tasks: the MESI mTABLET System adapts to your particular healthcare setting. Whether you are a part of a **smaller practice**, a **multi-level hospital** system, or you provide the patients with **assisted telehealth visits**: MESI mTABLET System supports you throughout your entire day and helps you **work smarter, not harder**.



### In your healthcare practice

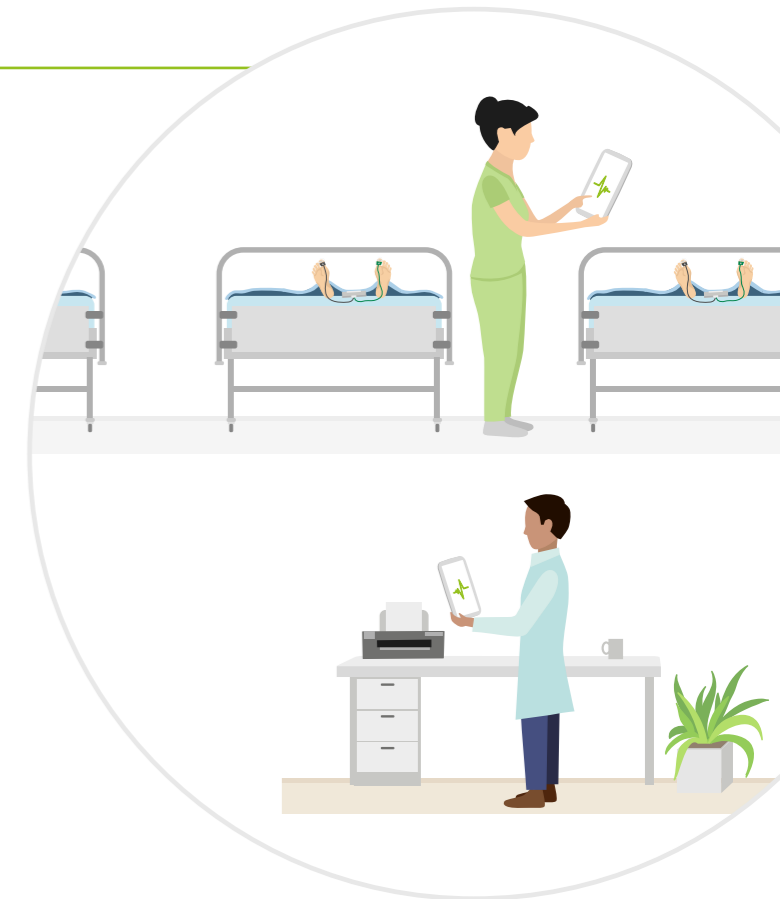
Once you have configured the system that covers all your requirements, it is easily set up with very little further training and with automatic, remote software updates. Any additional modules and application extensions can be added whenever you need them.

You can have a complete overview of all the measurements performed by your team or by yourself in real-time or at any point during your work day, accessible on any web-enabled device. Need a second opinion? The mTABLET's share button ensures the consulting specialist receives the full report without any sensitive information.

### In your hospital

No matter how big or small the hospital is, your patients need your full attention. Make the most of the time you have with them by using the MESI mTABLET system's comprehensive reports, immediate access to all previous measurements and minimizing the paperwork.

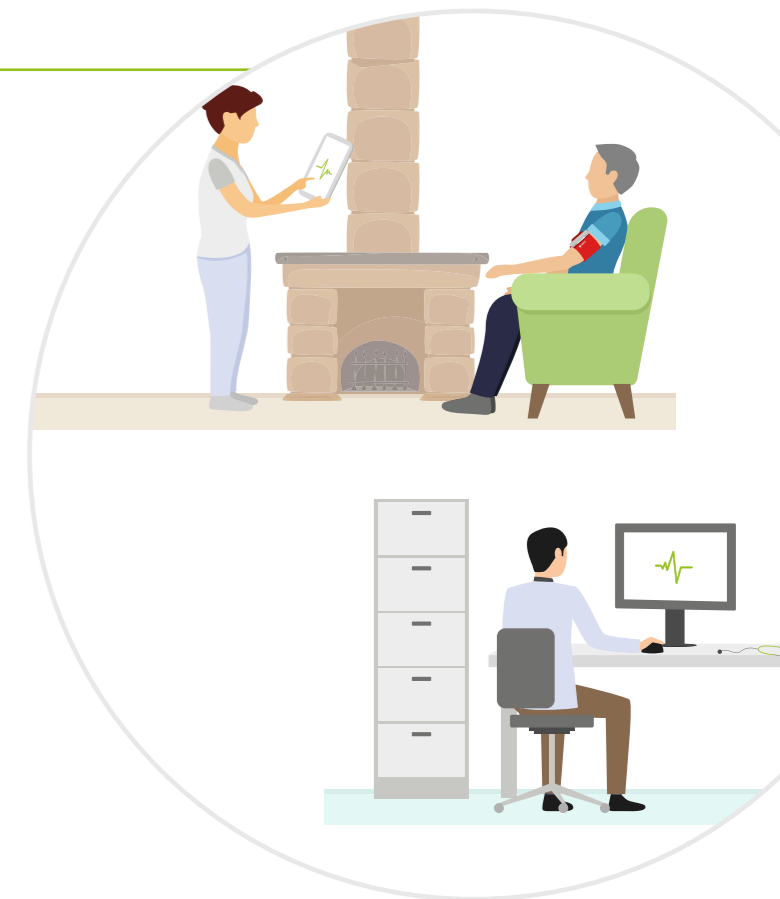
Keep all your team members in the loop through working groups and ensure the same level of care for all your patients by building custom protocols. Fast and objective diagnostics with unified user experience for every single measurement helps strengthen not only your relationships with your patients, but also your coworkers.



### During your homecare visits

After charging them overnight, pack the MESI mTABLET and the modules into your bag and take them along - the battery will last for the whole day. Perform the necessary measurements, take photos of skin conditions to monitor the healing progress and add all relevant comments: all the patient data will be immediately synchronised with the built-in mRECORDS platform.

The lead practitioner can view the reports in real-time, add comments to provide immediate feedback, or review them later by accessing the patient file to decide on the treatment or review the patient's trends – all in a matter of clicks.

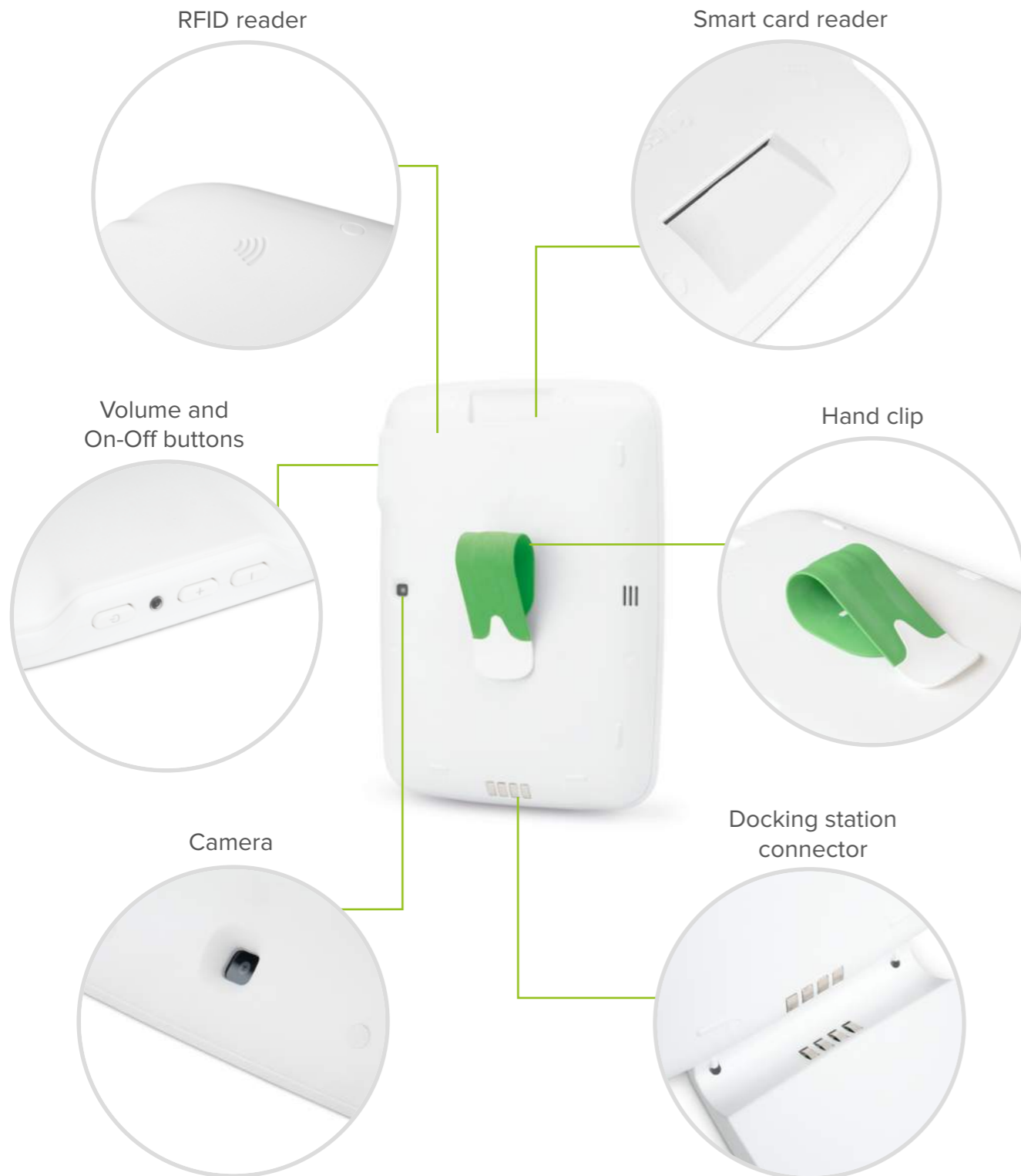


# TECHICAL SPECIFICATIONS

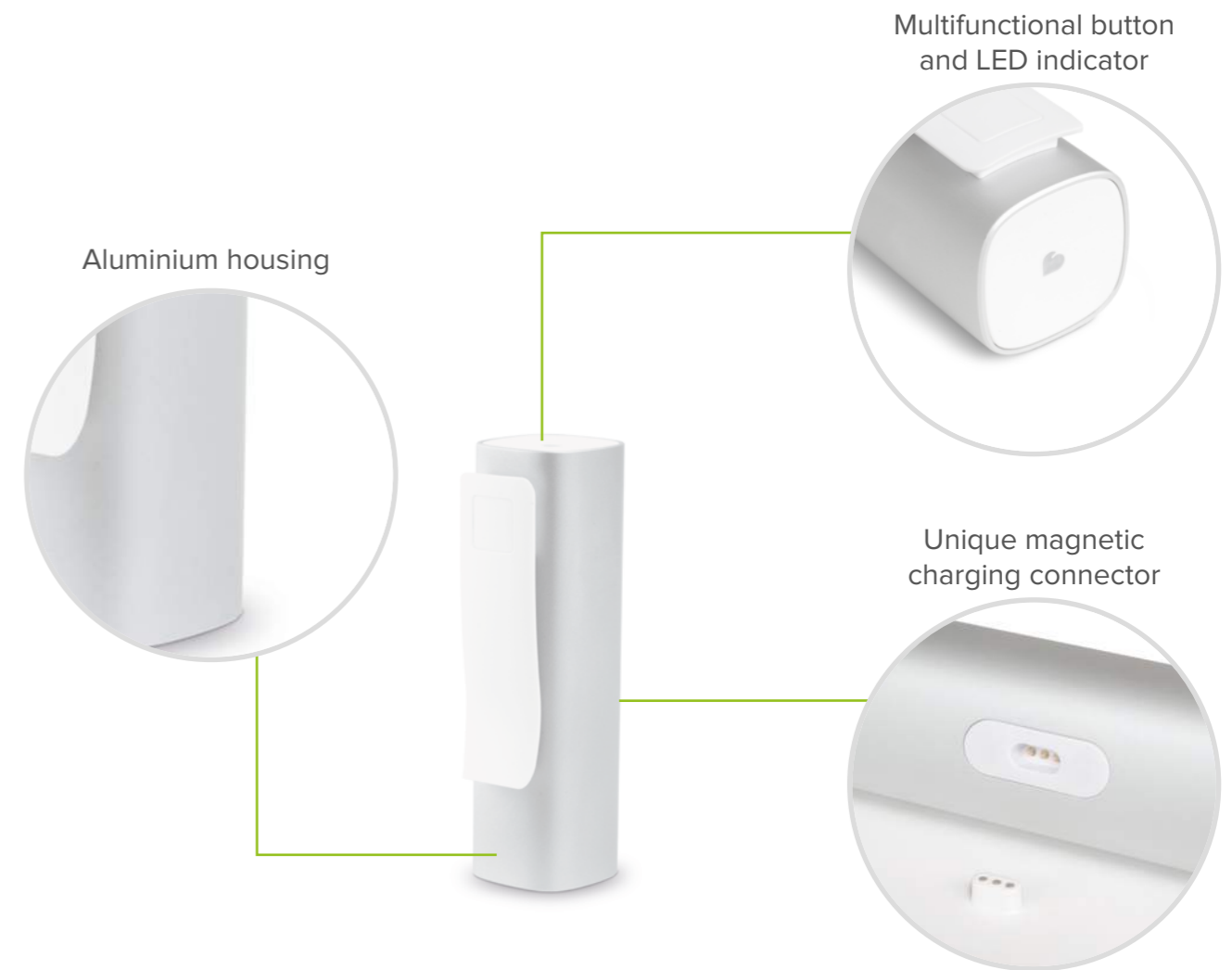


# Certified medical tablet designed for use in medical environments

## MESI mTABLET



## Wireless diagnostic modules



## Charging plate

Universal charger and holder for modules



## MESI mTABLET ECG Technical specifications

### Measurement specifications

Electrode placement detection  
Pacemaker detection:  $> \pm 2\text{mv}/0.1\text{ms}$   
Patient input circuitry: Fully floating and isolated, defibrillation protected (using original MESI or approved patient cable)

### Accuracy

CMRR:  $>110\text{dB}$   
Sampling rate: 32K samples/second/channel (sampling frequency is done internally, output sampling frequency from module to tablet is 1kHz)  
Resolution: 2.5  $\mu\text{V}/19\text{bit}$   
ECG analysis frequency: 1000 samples/second  
Pacemaker detection:  $\geq \pm 2 \text{ mV} / \geq \pm 0.1 \text{ ms}$

### Processing

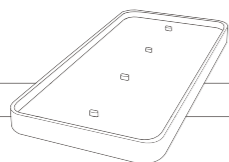
Interpretation: University of Glasgow Analysis Software  
Patient data: name, date of birth, race  
Measurement data is always first 10 seconds of data at 500Hz rate per channel (5000 samples)  
Low-pass filter: 150 Hz, 250 Hz  
High-pass (baseline) filter: 0.05 Hz, 0.2 Hz, 0.5 Hz  
Myogram (muscle tremor) filter:  
25 Hz (40 dB/dec) or 35 Hz (20 dB/dec)  
Mains filter: Distortion-free suppression of superimposed 50 or 60 Hz sinusoidal interferences by means of an adaptive digital filter  
Lead display: 6:6+1, 6:6, 3:3 main,  
3:3 aux, 6 main, 6 aux, 3:4, 12, 3:4+II  
Sensitivity: 5mm/mV, 10mm/mV, 20mm/mV  
Recording speed: 12.5mm/s, 25mm/s, 50mm/s

### Power & Battery

High-power rechargeable Lithium-Polymer battery  
Capacity: 1240 mAh  
Examinations per battery charge:  $>2000$   
Continuous use:  $>5.5\text{h}$   
Charge time for depleted battery:  
Approximately 2 hours (minimum charge time for 1 automatic mode ECG: 10 minutes)  
Input: 100-240V AC/50-60Hz/350mA  
Output: 5V DC/5.0A

### Charging station

Dual purpose of the charging station: safe storage of the module between measurements and fully charged device at all times.  
Width: 400 mm  
Depth: 200 mm  
Height: 38 mm  
Weight: 675 grams  
Positioning types:  
Desk, wall mount or trolley



### Module dimensions

Width: 40mm (1.57 inches)  
Depth: 48mm (1.89 inches)  
Height: 135mm (5.31 inches)  
Weight: 220 grams



### Smart data management

Secure report access with the out-of-the-box platform - MESI mRECORDS  
MESI mPRINT service for secure printout through the internal network, direct .pdf storage on a local computer  
Worklist integration for: DICOM, HL7, XML, GDT, JSON  
Full custom integration upon request

### Protection classification

Type of protection against electric shock: Class II  
Medical device classification: Class IIa  
Applied parts: CF  
RF emissions (CIPSR 11): Group 1, Class B  
Ingress protection: IP44

### Applied standards

EN 60601-1 General requirements for Safety  
EN 60601-1-2 Electromagnetic compatibility - Requirements and tests  
EN 60601-2-25 Particular requirements for basic safety and essential performance of electrocardiographs

### Operating conditions

Temperature, operating:  $10^{\circ}$  to  $40^{\circ}\text{C}$   
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### Transport & Storage Conditions

Temperature:  
 $-15^{\circ}$  to  $50^{\circ}\text{C}$  (<1 month)  
 $-15^{\circ}$  to  $40^{\circ}\text{C}$  (<3 month)  
 $-15^{\circ}$  to  $25^{\circ}\text{C}$  (<12 month)  
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### MESI mTABLET technical specifications

Operating System: MESI OS  
Processor: CPU Quad ARM Cortex A53  
@ up to 1.2GHz per core  
Barcode reader: 1D/2D barcode imager  
Screen: 1280 x 800 px IPS  
Storage: 8 GB  
RAM: 1 GB  
Connectivity: Wi-Fi 802.11b/g/n  
and 2.4 GHz single band Bluetooth 4.1  
Camera: 5 MP  
Environment: IP2x, 90 cm drop resistant  
Audio: Mono speaker  
Security: 2 step authentication, user password or PIN  
Battery operation: more than 8 hours of continuous use



## MESI mTABLET ABI Technical specifications

### Measurements

Ankle-Brachial Pressure Index using improved oscillometric method and plethysmography, with PADSense™ algorithm  
Heart rate and systolic, diastolic and mean blood pressure using improved oscillometric method and plethysmography

### Measurement extensions\*

Blood Pressure  
Averaging Blood Pressure  
Dual Blood Pressure

\*Available with upgrade

### Measurement range

Pressure: 0 to 299 mmHg  
Pulse rate: 30 to 199 bpm

### Accuracy

Pressure: Within  $\pm 5 \text{ mmHg}$   
Heart rate: Within  $\pm 5 \%$  of readings  
ABPI: Within  $\pm 0.1$

### Power & Battery

High-power rechargeable Lithium-Polymer battery  
Capacity: 1240 mAh  
Examinations per battery charge:  $>200$   
Charge time for depleted battery (for each unit):  
approximately 1.5 hours  
Input: 100-240V AC / 50-60Hz / 350mA  
Output: 5V DC / 5.0A

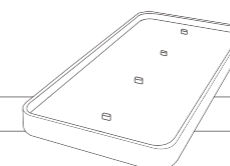
### Module dimensions

Width: 40mm (1.57 inches)  
Depth: 40mm (1.57 inches)  
Height: 150mm (5.91 inches)  
Weight: 286 grams



### Charging station

Dual purpose of the charging station: safe storage of the module between measurements and fully charged device at all times.  
Width: 400 mm  
Depth: 200 mm  
Height: 38 mm  
Weight: 675 grams  
Positioning types:  
Desk, wall mount or trolley



### Smart data management

Secure report access with the out-of-the-box platform - MESI mRECORDS  
MESI mPRINT service for secure printout through the internal network, direct .pdf storage on a local computer  
Worklist integration for: DICOM, HL7, XML, GDT, JSON  
Full custom integration upon request

### Connectivity

Data connectivity with MTABMD (Bluetooth 2.1 + EDR)  
Receiving section  
Frequency range: 2401.3 MHz – 2480.7 MHz  
Bandwidth: 0.930MHz  
Automatic remote updates of software and hardware

### Protection classification

Protection against electric shock: Class II  
Medical device classification: Class IIa  
Applied parts: Type BF Applied part  
RF emissions (CIPSR 11): Group 1, Class B  
Ingress protection: IP42

### Applied standards

EN 60601-1 General requirements for Safety  
EN 60601-1-2 Electromagnetic compatibility - Requirements and tests  
EN 80601-2-30 Particular requirements for the basic safety and essential performance of automated, non-invasive sphygmomanometers

### Operating conditions

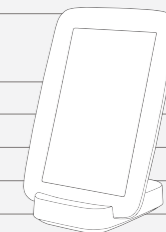
Temperature, operating:  $10^{\circ}$  to  $40^{\circ}\text{C}$   
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### Transport & Storage Conditions

Temperature:  
 $-15^{\circ}$  to  $50^{\circ}\text{C}$  (<1 month)  
 $-15^{\circ}$  to  $40^{\circ}\text{C}$  (<3 month)  
 $-15^{\circ}$  to  $25^{\circ}\text{C}$  (<12 month)  
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### MESI mTABLET technical specifications

Operating System: MESI OS  
Processor: CPU Quad ARM Cortex A53  
@ up to 1.2GHz per core  
Barcode reader: 1D/2D barcode imager  
Screen: 1280 x 800 px IPS  
Storage: 8 GB  
RAM: 1 GB  
Connectivity: Wi-Fi 802.11b/g/n  
and 2.4 GHz single band Bluetooth 4.1  
Camera: 5 MP  
Environment: IP2x, 90 cm drop resistant  
Audio: Mono speaker  
Security: 2 step authentication, user password or PIN  
Battery operation: more than 8 hours of continuous use



## MESI mTABLET TBI Technical specifications

### Measurements

Toe-Brachial Pressure index combining plethysmography-oscillometric and photoplethysmographic methods.

Systolic toe blood pressure, systolic and diastolic brachial blood pressure, heart rate using plethysmography-oscillometric and photoplethysmographic methods.

### Measurement extensions\*

Blood Pressure  
Averaging Blood Pressure  
Dual Blood Pressure  
Toe Blood Pressure

\*Available with upgrade

### Measurement range

Pressure: 0 to 299 mmHg (arms)  
Pressure: 20 to 250 mmHg (toes)  
Pulse rate: 30 to 199 bpm

### Accuracy

Pressure: Within  $\pm 5$  mmHg  
Heart rate: Within  $\pm 5$  % of readings  
TBI: Within  $\pm 0.1$

### Power & Battery

High-power rechargeable Lithium-Polymer battery  
Capacity: 1240 mAh  
Examinations per battery charge: >200  
Charge time for depleted battery (for each unit): approximately 1.5 hours  
Input: 100-240V AC / 50-60Hz / 350mA  
Output: 5V DC/5.0A

### Module dimensions (TBPM D)

Width: 40mm (1.57 inches)  
Depth: 40mm (1.57 inches)  
Height: 150mm (5.91 inches)  
Weight: 244 grams



### Module dimensions (CUFFMD)

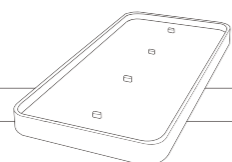
Width: 40mm (1.57 inches)  
Depth: 40mm (1.57 inches)  
Height: 150mm (5.91 inches)  
Weight: 286 grams



### Charging station

Dual purpose of the charging station: safe storage of the modules between measurements and fully charged device at all times

Width: 400 mm  
Depth: 200 mm  
Height: 38 mm  
Weight: 675 grams  
Positioning types:  
Desk, wall mount or trolley



### Smart data management

Secure report access with the out-of-the-box platform - MESI mRECORDS

MESI mPRINT service for secure printout through the internal network, direct .pdf storage on a local computer  
Worklist integration for: DICOM, HL7, XML, GDT, JSON  
Full custom integration upon request

### Connectivity

Data connectivity with MTABMD (Bluetooth 2.1 + EDR)  
Receiving section  
Frequency range: 2401.3 MHz – 2480.7 MHz  
Bandwidth: 0.930MHz  
Automatic remote updates of software and hardware

### Applied standards:

EN 60601-1 General requirements for Safety  
EN 60601-1-2 Electromagnetic compatibility - Requirements and tests  
EN 80601-2-30 Particular requirements for the basic safety and essential performance of automated, non-invasive sphygmomanometers

### Protection classification

Protection against electric shock: Class II  
Medical device classification: Class IIa  
Applied parts: Type BF Applied part  
RF emissions (CIPSR 11): Group 1. Class B  
Ingress protection: IP42

### Operating conditions

Temperature, operating: 10° to 40°C  
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### Transport & Storage Conditions

Temperature:  
-15° to 50°C (<1 month)  
-15° to 40°C (<3 month)  
-15° to 25°C (<12 month)  
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### MESI mTABLET technical specifications

Operating System: MESI OS  
Processor: CPU Quad ARM Cortex A53 @ up to 1.2GHz per core  
Barcode reader: 1D/2D barcode imager  
Screen: 1280 x 800 px IPS  
Storage: 8 GB  
RAM: 1 GB  
Connectivity: Wi-Fi 802.11b/g/n and 2.4 GHz single band Bluetooth 4.1  
Camera: 5 MP  
Environment: IP2x, 90 cm drop resistant  
Audio: Mono speaker  
Security: 2 step authentication, user password or PIN  
Battery operation: more than 8 hours of continuous use



## MESI mTABLET BP Technical specifications

### Measurements

Heart rate and systolic, diastolic and mean blood pressure using improved oscillometric method and plethysmography

### Measurement extensions\*

Averaging Blood Pressure  
Dual Blood Pressure

\*Available with upgrade

### Measurement range

Pressure: 0 to 299 mmHg  
Pulse rate: 30 to 199 bpm

### Accuracy

Pressure: Within  $\pm 5$  mmHg  
Heart rate: Within  $\pm 5$  % of readings

### Power & Battery

High-power rechargeable Lithium-Polymer battery  
Capacity: 1240 mAh  
Examinations per battery charge: >200  
Charge time for depleted battery (for each unit): approximately 1.5 hours  
Input: 100-240V AC / 50-60Hz / 350mA  
Output: 5V DC / 5.0A

### Module dimensions

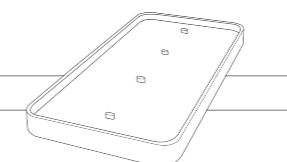
Width: 40mm (1.57 inches)  
Depth: 40mm (1.57 inches)  
Height: 150mm (5.91 inches)  
Weight: 286 grams



### Charging station

Dual purpose of the charging station: safe storage of the module between measurements and fully charged device at all times

Width: 400 mm  
Depth: 200 mm  
Height: 38 mm  
Weight: 675 grams  
Positioning types:  
Desk, wall mount or trolley



### Smart data management

Secure report access with the out-of-the-box platform - MESI mRECORDS  
MESI mPRINT service for secure printout through the internal network, direct .pdf storage on a local computer  
Worklist integration for: DICOM, HL7, XML, GDT, JSON  
Full custom integration upon request

### Connectivity

Data connectivity with MTABMD (Bluetooth 2.1 + EDR)  
Receiving section  
Frequency range: 2401.3 MHz – 2480.7 MHz  
Bandwidth: 0.930MHz  
Automatic remote updates of software and hardware

### Protection classification

Protection against electric shock: Class II  
Medical device classification: Class IIa  
Applied parts: Type BF Applied part  
RF emissions (CIPSR 11): Group 1. Class B  
Ingress protection: IP42\*

### Applied standards

EN 60601-1 General requirements for Safety  
EN 60601-1-2 Electromagnetic compatibility - Requirements and tests  
EN 80601-2-30 Particular requirements for the basic safety and essential performance of automated, non-invasive sphygmomanometers

### Operating conditions

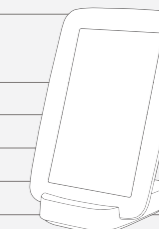
Temperature, operating: 10° to 40°C  
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### Transport & Storage Conditions

Temperature:  
-15° to 50°C (<1 month)  
-15° to 40°C (<3 month)  
-15° to 25°C (<12 month)  
Relative humidity: 25 to 85% (no condensation)  
Pressure during operation: 700 to 1060 hPa

### MESI mTABLET technical specifications

Operating System: MESI OS  
Processor: CPU Quad ARM Cortex A53 @ up to 1.2GHz per core  
Barcode reader: 1D/2D barcode imager  
Screen: 1280 x 800 px IPS  
Storage: 8 GB  
RAM: 1 GB  
Connectivity: Wi-Fi 802.11b/g/n and 2.4 GHz single band Bluetooth 4.1  
Camera: 5 MP  
Environment: IP2x, 90 cm drop resistant  
Audio: Mono speaker  
Security: 2 step authentication, user password or PIN  
Battery operation: more than 8 hours of continuous use



## MESI mTABLET SPO2 Technical specifications

### Measurements:

Pulse oximetry and heart rate

### Measurement extensions\*

6-minute walk test

\*Available with upgrade

### Measurement range

SpO2 measurement: 45 – 100 %

Pulse frequency measurement: 20 – 300 bpm

### Accuracy

Plethysmogram: 0 – 28 LSB

Raw plethysmogram: 0 – 224 LSB

Signal quality: 0 – 100 %

### Power & Battery

High-power rechargeable Lithium-Polymer battery

Capacity: 1240 mAh

Examinations per battery charge: >8000

Continuous use: >56h

Charge time for depleted battery:

Approximately 2 hours

Input: 100-240V AC/50-60Hz/350mA

Output: 5V DC/5.0A

### Charging station

Dual purpose of the charging station: safe storage of the module between measurements and fully charged device at all times.

Width: 400 mm

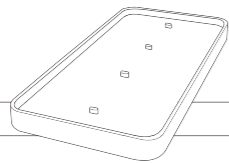
Depth: 200 mm

Height: 38 mm

Weight: 675 grams

Positioning types:

Desk, wall mount or trolley



### Module dimensions

Width: 40mm (1.57 inches)

Depth: 48mm (1.89 inches)

Height: 135mm (5.31 inches)

Weight: 210 grams



### Smart data management

Secure report access with the out-of-the-box platform - MESI mRECORDS

MESI mPRINT service for secure printout through the internal network, direct .pdf storage on a local computer

Worklist integration for: DICOM, HL7, XML, GDT, JSON

Full custom integration upon request

### Protection classification

Type of protection against electric shock: Class II

Medical device classification: Class IIa

Applied parts: CF

RF emissions (CIPSR 11): Group 1, Class B"

Ingress protection: IP44

### Applied standards

EN 60601-1 General requirements for Safety

EN 60601-1-2 Electromagnetic compatibility - Requirements and tests

EN 80601-2-61 Particular requirements for basic safety and essential performance of pulse oximeter equipment

### Operating conditions

Temperature, operating: 10° to 40°C

Relative humidity: 25 to 85% (no condensation)

Pressure during operation: 700 to 1060 hPa

### Transport & Storage Conditions

Temperature:

-15° to 50°C (<1 month)

-15° to 40°C (<3 month)

-15° to 25°C (<12 month)

Relative humidity: 25 to 85% (no condensation)

Pressure during operation: 700 to 1060 hPa

### MESI mTABLET technical specifications

Operating System: MESI OS

Processor: CPU Quad ARM Cortex A53

@ up to 1.2GHz per core

Barcode reader: 1D/2D barcode imager

Screen: 1280 x 800 px IPS

Storage: 8 GB

RAM: 1 GB

Connectivity: Wi-Fi 802.11b/g/n

and 2.4 GHz single band Bluetooth 4.1

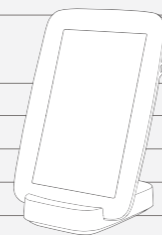
Camera: 5 MP

Environment: IP2x, 90 cm drop resistant

Audio: Mono speaker

Security: 2 step authentication, user password or PIN

Battery operation: more than 8 hours of continuous use



“

We certainly will recommend MESI mTABLET. In our opinion, many medical and physiotherapeutic clinics, as well as hospitals would benefit from this kind of a device, because of its complex performance. It can be adjusted to our individual needs depending on the type of patient we are dealing with.

**Anna Sobolewska**  
Owner of Lymphoedema  
Treatment Clinic

“

I discovered MESI mTABLET on the internet and fell in love instantly. It is perfect for telemedicine – lightweight, easy to use, without tubes, enabling cloud-based data storage and easy shareable reports. I enjoy using modern technology that saves me a lot of time and money!

**Dr. Robert Farmasi**  
Family doctor

## MESI CONFIGURATOR

# Build the **perfect MESI mTABLET system** for your practice

### 1st STEP

## CHOOSE YOUR STARTING SYSTEM

Select a starting system that fits your practice's needs.



**ECG**



**ABI**



**TBI**

### 2nd STEP

## ADD EXTENSIONS AND MODULES

You can add any combination of extensions and modules to your system, depending on what measurements you wish to perform.



**ECG**



**ABI**



**TBI**



**BP**

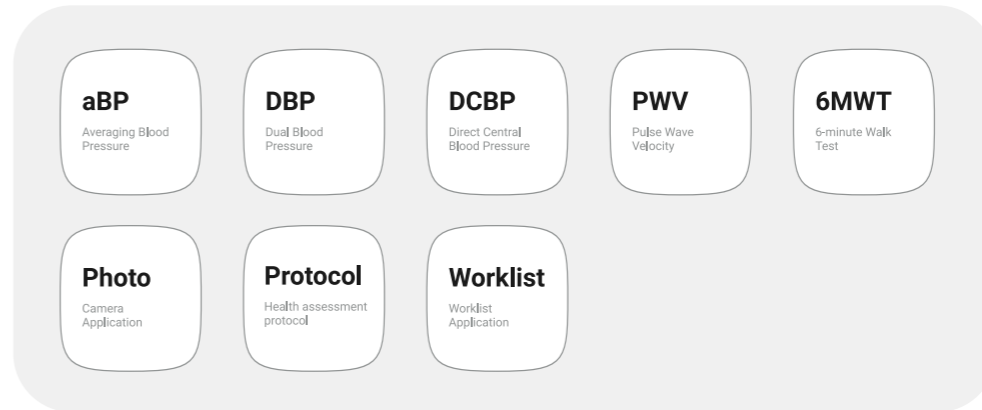


**SPO2**

### 3rd STEP

## ADD SMART APPLICATIONS

Add smart applications that expand the use of your existing device.



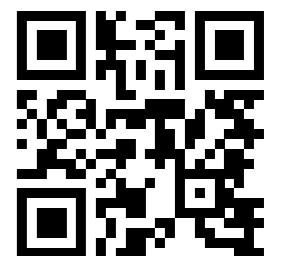
### 4th STEP

## ADD ACCESSORIES

Select any accessories that you want, to enhance the usability of the system you built.



Build your own system using our configurator app accessible through this **QR code**



## DEMONSTRATION VIDEOS

Observe the **extensions in action**  
by watching these videos

Use the QR code next to each MESI mTALET extension listed below, to gain access to a video showing how to perform a measurement with that extension.



### MESI mTABLET ECG



### MESI mTABLET ABI



### MESI mTABLET TBI



### MESI mTABLET BP



### MESI mTABLET SPO2



# A solution of unlimited possibilities



## Addressing the Big Data Revolution

The way the MESI mTABLET handles information is unique. Objective results from diagnostic measurements, triage, specialist opinions, consultations and any other data are all stored in one place. This combination enables progressive analytics now, and anytime in the future.



## Always up-to-date

MESI mTABLET is constantly upgraded with additional diagnostic tools and medical apps. This boosts its functionality and gives users access to the information and tools they need.



## Improving information flow between healthcare professionals

Communication between the primary care physician, nurse, and specialist is crucial for the patient's outcome.

With the MESI mTABLET, all the stakeholders access healthcare information in the same format. This prevents misunderstandings in communication, inconsistencies in reporting and therefore reduces time spent on diagnosis and treatment.



# MESI

Simplifying Diagnostics

MESI, development of  
medical devices, Ltd  
Leskoškova cesta 11a  
1000 Ljubljana, Slovenia, EU

E: [info@mesimedical.com](mailto:info@mesimedical.com)  
T: +386 1 620 34 87  
[www.mesimedical.com](http://www.mesimedical.com)

You can also find us on:

Facebook / [MESIdoo](#)

Twitter / [MESImedical](#)

LinkedIn / [MESI](#)

**No.1** Leading provider of Ankle-Brachial  
Index measuring technology



Worldwide presence



European production and  
development



CE 1304, ISO 9001  
and ISO 13485  
certified

**CE 1304**

MESI Ltd. reserves the rights to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences from the use of this publication.

October 2020

DISTRIBUTOR