

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: $\pm 2\text{ mV} / \pm 0.1\text{ ms}$

Processing

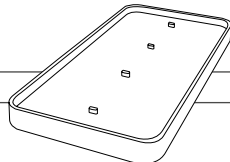
Interpretation: University of Glasgow Analysis Software
Patient data: name, date of birth, race
Measurement data is always first 10 seconds of data at 500Hz rate per channel (5000 samples)
Low-pass filter: 150 Hz, 250 Hz
High-pass (baseline) filter: 0.05 Hz, 0.2 Hz, 0.5 Hz
Myogram (muscle tremor):
25 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 (CISPR 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

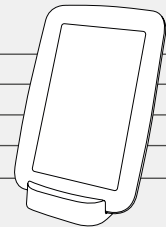
Temperature, operating: 10° to 40°C
Relative humidity: 25 to 85% (no condensation)
Pressure during operation: 700 to 1060 hPa

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

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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



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🐦 MESImedical

in MESI



European production
and development



Worldwide presence

FDA

Cleared



EU Medical Device
Regulations (MDR)
compliant



ISO 9001 Q-1664
ISO 13485 M-049
CE 1304, ISO 9001
and ISO 13485
certified



CE 1304