

MESI mTABLET ECG Technical Specifications

Measurement Specifications

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

Accuracy

CMRR: >110dB
 Sampling rate: 32K samples/second/channel (sampling frequency is done internally, output sampling frequency from module to tablet is 1kHz)
 Resolution: 2.5 uV/19bit
 ECG analysis frequency: 1000 samples/second
 Pacemaker detection: ± 2 mV / ± 0.1 ms

Processing

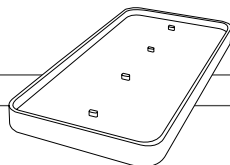
Interpretation: University of Glasgow Analysis Software
 Patient data: name, date of birth, race
 Measurement data is always first 10 seconds of data at 500Hz rate per channel (5000 samples)
 Low-pass filter: 150 Hz, 250 Hz
 High-pass (baseline) filter: 0.05 Hz, 0.2 Hz, 0.5 Hz
 Myogram (muscle tremor) 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: >5,5h
 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

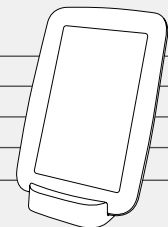
Temperature, operating: 10° to 40°C
 Relative humidity: 25 to 85% (no condensation)
 Pressure during operation: 700 to 1060 hPa

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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European production and development



Worldwide presence



Cleared



EU Medical Device Regulations (MDR) compliant



ISO 9001 Q-1664
 ISO 13485 M-049



CE 1304