NASAN SIMPLE. RELIABLE.	**Title: Website Catalog & specification Document**	**Document no: NASAN-D&D-D-007**
		Rev no: 0
		Date: 22-04-2025
		Details of change: new format

M-Cardia is a resting ECG machine. It acquires ECG and prints it on A4 paper. It has e-mail option to send ECG report.

Technical Specifications

1. **Performance –**

   Display   : Android mobile_android 13 and 14

   Language   : English

   Printout   : on A4 Paper

   Email   : Yes

2. **Power supply**

   USB powered

3. **Dimension and Weight**

   Dimension (in mm) (L x B x H) : 105X65X40 mm

   Weight (in Kg)   : 150gm

4. **Environmental**

   Operating Temp   : -5 ºC to +50 ºC

   Operating & Storage : up to 95 % non-condensing

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Humidity

5. ECG

Frequency response   : 0.05 to 100 Hz with notch at 50 Hz

Input impedance   : 10 M ohm

Time constant   : > 3.2 sec

A/D conversion   : 12 bit

Noise   : < 20 μV_{p-p}

Leakage current   : < 10 µA

CMRR   : > 120 dB

Patient isolation   : Optical isolation.

Lead selection   : standard 12 leads

Gain   : 5, 10 & 20 mm/mV

Sweep speed   : 25.0, 50.0 mm/S.

Detailed Feature

➢ **Main screen display**

     o **Patient** –To go to patient search page
- Search old patients
- Register new patient
- Edit medical history
- Edit patient detail
- Link emergency
- Conduct ECG test

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- ▪ View log of patient
  - o **Review tests** – To view list of all conducted tests.
    - ▪ view report or check the status of the patient with date and time of the test
    - ▪ Facility to Print A4
    - ▪ Facility to send email
    - ▪ Preview ECG
  - o **Emergency** –To take emergency ECG
  - o **Configuration**
- ➢ **Details of Configuration**
  - o Screen configuration (Default screen)
    - ▪ ECG screen
    - ▪ Median screen
  - o Report Configuration
    - ▪ Resting ECG with Measurement
    - ▪ Resting ECG with Measurement and Interpretation
  - o Short details check box
  - o Grid/Graph/No grid option
  - o Color, Borders check box
  - o Long lead selection from dropdown for A4 report
  - o Select emergencies number from dropdown
  - o Select sleep time from dropdown
  - o Facility to enter hospital name
  - o Facility to enter send to mail ID
  - o Facility to enter doctor name
  - o Cancel & OK button
- ➢ **Acquisition display (ECG screen)–From emergency & new ECG button**
  - o Simultaneous acquisition of 12 Leads of ECG @ 250 samples per second per channel with ADC resolution of 12-bit.
  - o Frequency Response – DSP filter of 0.05 to 150Hz with notch at 50Hz
  - o Display of 4 seconds of ECG traces of 12 leads in 6 X 2 with standardization pulse
  - o Acquisition screen button
    - ▪ Exit button
    - ▪ Gain button
    - ▪ speed button
    - ▪ QRS lead button
    - ▪ Save button
  - o **Gain button-** allows you to choose desired recording sensitivity (5, l0, 20mm/mv).
    - ▪ the choice of changing the gain of the Electrocardiogram from acquisition

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- o **Speed button-** asaan allows you to choose desired recording sensitivity (12.5, 25, 50mm/s).
  - allows the choice of changing the sweep speed of the Electrocardiogram from acquisition
- o **QRS lead button-**
  - To change QRS lead and change lead displayed in magenta color
- o **Save button-**
  - This button will get enable after 10 sec.
- o **Exit button-**
  - Exit from the acquisition screen

- ➢ **Median Screen display-**
  - ▪ **Zoom selected median**
    1. Facility to change P+ start, P+ end, P – end, Q start, R Start, R end, S end, r' end, s' end, T Start, T End, U start, U end points.
  - ▪ **Displays following Measurement**
    1. Amplitude (in V)
    2. Duration of P.Q,R ,S,T in ms
    3. Interval of PQ,PR,QRS,QTC in ms
    4. Axis of P,QRS and T measurement in degree
    5. Heart rate
  - ▪ **Displays following ECG interpretation**
    1. Rhythm statements
       a. Sinus Rhythm / Junctional or NonSinus Rhythm suspected / Sinus Bradycardia / Sinus Tachycardia
    2. PR interval statements
       b. PR is normal / PR is long / PR is short
    3. QRS interval statements
       c. Normal QRS Width / Wide QRS
    4. QT interval statements
       d. Normal QT interval / QT Interval is prolonged / QT Interval - Little clinical significance
    5. QRS Axis statements
       e. QRS Axis is normal / Right axis deviation / Left axis deviation / QRS Axis is indeterminate
    6. ST abnormalities statements
       f. Normal ST level / ST Elevation / ST Depression
    7. T wave inversion
       g. Lead names of leads showing T wave inversion
  - ▪ **Edit Measurement & Interpretation facility**
  - ▪ **Facility to Enter comment**

*Due to our continuous product development program, the specification may change without prior notice.