

# Cardiac Design Labs

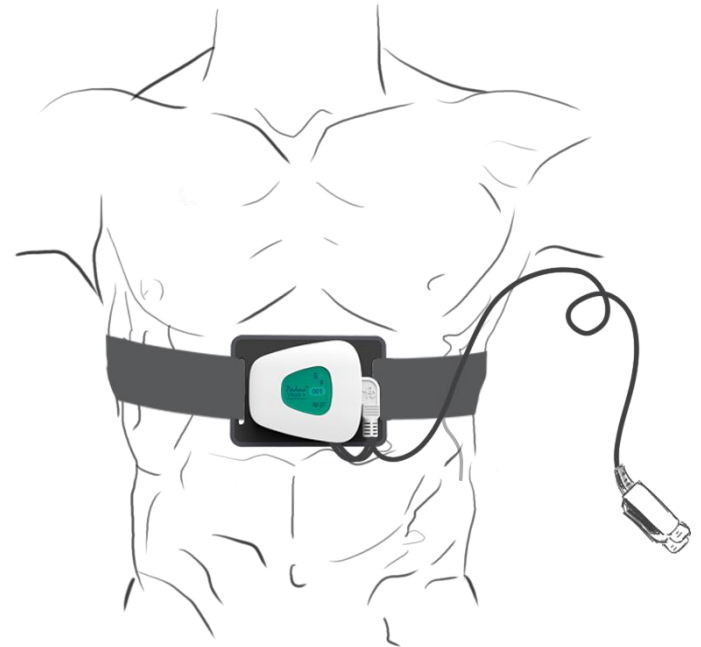
Padma<sup>®</sup>

Vitals +



# Telemetric Patient Monitoring

Nominated by



## The System

The Padma<sup>®</sup> Vitals Telemetric Patient Monitoring System is a centralized vitals monitoring system with all vitals such as ECG, respiration rate, SpO<sub>2</sub>, body temperature and blood pressure being measured continuously for analysis and monitoring enabled through telemetry. This gives monitoring capabilities from a central location where multiple patients can be simultaneously monitored. This central location could be a nursing desk monitoring in a ward or a remote monitoring centre/hospital.

### Key features :

- Monitors ECG, respiration rate, SpO<sub>2</sub>, body temperature and Blood pressure
- Records the signals and analyses the data real-time.
- Generates a trend analysis of the vitals signals on a chart for review.
- Allows for reviewing of recorded events and alarms that are automatically generated.
- Allows for the patients to be monitored remotely.



Competent for patient monitoring in hospitals.



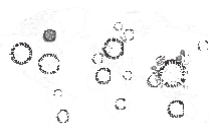
Remote monitoring for patients at home when paired with a tab/mobile.



Can be paired with a mobile display device to make it portable for patient monitoring during displacement of the patient



Can easily re-purpose alternate infrastructures like hotels, schools and railway coaches to be equipped to give intensive care in times of emergencies



Quickly scalable product that can provide for the increasing number of patients during emergencies, while giving them monitoring and analysis equivalent/better to any other existing system

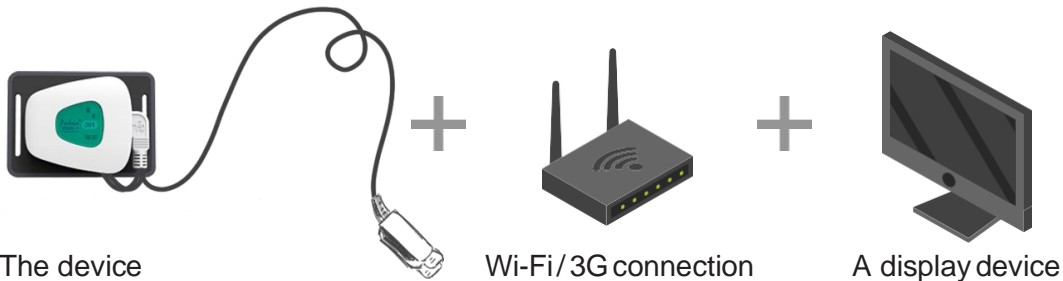


Reduces unnecessary exposure of healthcare staff to infections and cross contamination

## Key Benefits:

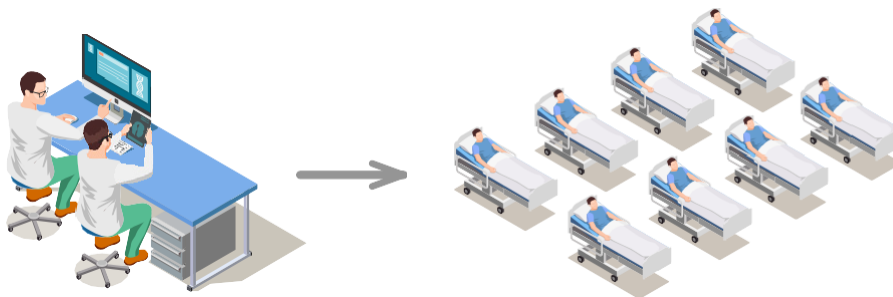
### a. Asset light infrastructure

- Light hardware for efficient patient monitoring.
- Ease of installation.
- Proprietary hardware and software makes the system work seamlessly.



### b. Minimal intervention of nurse/medical staff

- Centralized monitoring reduces the number of nursing staff required to monitor the patients.
- The nurses attention is diverted to the right patient hence improving operational efficiency.
- Additionally the automated data capture and processing eliminates the data entry errors that occurs due to manual entries.



### c. High fidelity of body signal/waveforms

- Ideal for detecting the signs of abnormality before significant symptoms develop.
- Detects early signs of the patient getting worse especially during the night when there is a lack of attention.



### d. Affordable solution

- Minimal infrastructure requirements.
- Ideal for emergencies when there is a sudden surge in monitoring requirements.
- If required a tab can be used for bedside display of parameters

### e. Comfortable for the patient

- Increasing the chances of longer use by the patient.
- Remote monitoring that eliminates unnecessary exposure to infections while ensuring safety of the patient.
- Also provides independence to the patient to carry out personal hygiene without much assistance if their health allows it.



<b>Technical Specifications</b>	
<b>Device</b>	In-ward, Ambulance or Home care
Use Scenario	Android tab/ mobile or a gateway
Duration	48 hours(full 24/7 use) with 1 AAA( Alkaline or rechargeable Duracell Ultra or 900 mah)
Size	81x77x15mm
Weight	75 gms
<b>Vitals Sensors</b>	
ECG	6 Lead ECG
Arrhythmias Analysis, ST Segment Analysis, QT Analysis	Yes
Temperature	IR temperature sensor
SpO2	Reflective Photoplethysmography
Blood Pressure	Cuff-Less PPG based continuous Blood Pressure
Respiration Rate	Impedance based, chest movement
<b>Central Monitoring Station</b>	
Display PC	I3 Processor with Graphics Acceleration, 4GB RAM
Display Capacity	40 Patients Simultaneous
Features	Monitor patients live, View trends and alarms, Generate reports
Server PC	I5 Processor with 8GB RAM (for simultaneous monitoring up to 100 patients)
<b>Networking</b>	
Connectivity	BLE 3G (Phone or Tab running the app) / Wi-Fi (any standard router)
Network Bandwidth	1 MBPS ( For 20 devices simultaneously)
<b>Remote access</b>	Yes if enabled with internet Live monitoring, trend analysis, browse alarms and reporting
<b>Central monitoring</b>	Yes
	Yes Live monitoring, trend analysis, browse alarms and reporting
<b>Alarms</b>	
Technical Alarms	Alarms for Battery Low, Lead Off, Device Off
Clinical Alarms	Alarms for vitals crossing the low and high thresholds and arrhythmias detected from the ECG
<b>Software and reports</b>	
Alarm Review	Yes
MEW Score	Yes
MEWS trigger to the out reach	Yes
Trend Analysis	Yes
Data Storage waveforms	Yes, Episodes and events



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