Wireless bed sensor

New possibilities for elderly care and assisted living

Global locations

For details please visit www.murata.com

⚠Note

1 Export Control

For customers outside Japan:

No Murata products should be used or sold, through any channels, for use in the design, development, production, utilization, maintenance or operation of, or otherwise contribution to (1) any weapons (Weapons of Mass Destruction [nuclear, chemical or biological weapons or missiles] or conventional weapons) or (2) goods or systems specially designed or intended for military end-use or utilization by military end-users.

For customers in Japan:

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

Local reseller:

2 Please contact our sales representatives or product engineers before using the products in this catalog for the applications listed below, which require especially high reliability for the prevention of defects which might directly damage a third party's life, body or property, or when one of our products is intended for use in applications other than those specified in this catalog.

① *Aircraft equipment*

② *Aerospace equipment*

③ *Undersea equipment*

④ *Power plant equipment*

⑤ *Medical equipment*

⑥ *Transportation equipment (vehicles, trains, ships, etc.)*

⑦ *Traffic signal equipment*

⑧ *Disaster prevention / crime prevention equipment*

⑨ *Data-processing equipment*

⑩ *Application of similar complexity and/or reliability requirements to the applications listed above*

3 Product specifications in this catalog are as of March 2014. They are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering. If there are any questions, please contact our sales representatives or product engineers.

4 Please read rating and ⚠CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.

5 This catalog has only typical specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

6 Please note that unless otherwise specified, we shall assume no responsibility whatsoever for any conflict or dispute that may occur in connection with the effect of our and/or a third party's intellectual property rights and other related rights in consideration of your use of our products and/or information described or contained in our catalogs. In this connection, no representation shall be made to the effect that any third parties are authorized to use the rights mentioned above under licenses without our consent.

7 No ozone depleting substances (ODS) under the Montreal Protocol are used in our manufacturing process.

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Ballistocardiography (BCG) technology

When our blood circulates and our heart beats, the moving blood causes a tiny recoil in a longitudinal direction, this recoil couples to the bed causing periodic vibrations. Murata's ultra-low noise accelerometers and sophisticated proprietary signal processors, detect these subtle vibrations and provide data for bio-signals like heart and respiration rate.

Applications:

Non critical long term monitoring of patients with no loss of privacy

- Care centers
- Hospitals
- Homes

SCA11H technical specs:

- WiFi IEEE 802.11 b/g/n
- Output (ODR: 1Hz):
  - HR (1/min)
  - RR (1/min)
  - SV (a.u.)
  - HRV (ms)
  - signal strength (a.u.)
  - bed occupancy
  - B2B (ms)
- Pulse detection range 40~120 BPM
- IP65 according to IEC 60529
- Remote OTA FW upgrade
- Size: 84 x 41 x 18 mm

Sensor node SCA11H *is not a complete system, but only the sensing component that has not been medically approved.*
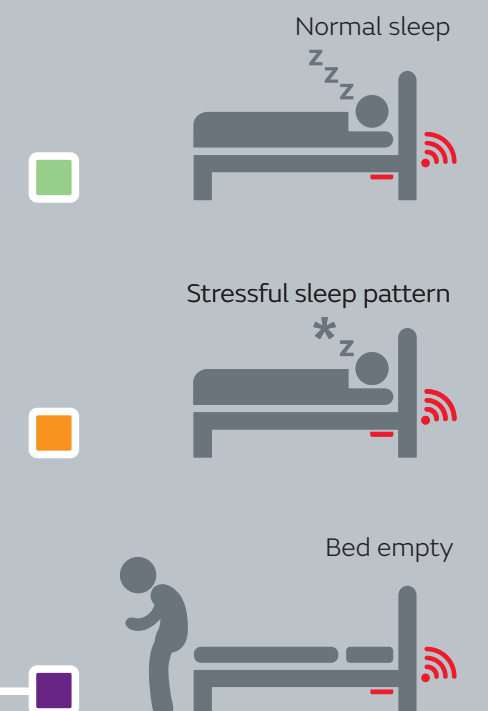
Possible applications

Murata's wireless sensor can be easily and descretely attached to a bed for instant data on a resident's:

- **Heart rate**
- **Bed occupancy**
- **Sleep quality**
- **Breathing**

Frank Johanssen
Room number 45
Ave 80 | Ave 16 | Current | 0-5 5
ⓘ More information
Volessit, con reperae lacesuta this lacesutationsequo voluptasi, omnit quatior atissimint plandae. Hicienimi, occus siminvelitat quo odis eos qui.

Dorris McCafferty
Room number 20
Ave 80 | Ave 16 | Current | 0-5 2
ⓘ More information
Volessit, con reperae lacesuta this lacesutationsequo voluptasi, omnit quatior atissimint plandae. Hicienimi, occus siminvelitat quo odis eos qui.

Rosemary Kennedy
Room number 13
Ave 80 | Ave 16 | Current | 0-5 4
ⓘ More information
Volessit, con reperae lacesuta this lacesutationsequo voluptasi, omnit quatior atissimint plandae. Hicienimi, occus siminvelitat quo odis eos qui.

Donald Smith
Room number 37
Ave 80 | Ave 16 | Current | 0-5 1
ⓘ More information
Volessit, con reperae lacesuta this lacesutationsequo voluptasi, omnit quatior atissimint plandae. Hicienimi, occus siminvelitat quo odis eos qui.

Key:

- Normal sleep
- Stressful sleep pattern
- Bed empty

🔔 ATTENTION!

Rosemary Kennedy
Room number 13

Out of bed

ⓘ More information

Enables improved response & analysis of:

- Recovery
- Bed occupancy
- Sleep quality
- Anomalous HR/RR