

TECHNOLOGY

SENSORS AND ALGORITHMS

Using a 3D sensor, ISA enables a detailed analysis of the patient's behaviour by integrating the notion of depth. It uses movement-tracking algorithms to recompose the image that has been captured.

- ✓ As the data is processed in the sensor, there is little impact on the institution's IT facilities.
- ✓ The algorithm calibrates the scene on its own and takes account of the bed and other objects being moved around.
- ✓ The algorithm segments the scene.
- ✓ The algorithm recognises postures and actions susceptible to trigger alerts.

ARCHITECTURE

The system's architecture is based on the cloud. The sensors that have been installed in the facility communicate with tools provided to the team of carers via the Internet. This protects the facility's own IT resources and guarantees the best possible data security.

ISA consists of:



- 1 a sensor;
- 2 a device for transmitting the alert: DECT, smartphones;
- 3 the dashboard, a device which enables alerts to be configured, statistics to be checked and previous falls to be viewed;
- 4 a back-end in the cloud which guarantees accessibility, efficiency and data protection.

INTEROPERABILITY

- ✓ **ISA** nteroperable with digitalised medical files and is therefore compatible with IHE standards.
- ✓ **ISA** has a WEB messaging system which also guarantees its interoperability with most DECT-type portable terminals or smartphones.
- ✓ As a result, it is easy to integrate **ISA** into every alert management platform. The alerts can therefore be relayed to third parties (governed by conventions which guarantee good practice with regard to the respect for privacy) or to family caregivers.

SECURITY

MintT attaches particular importance to **respecting the patient's privacy**.

For **MintT**, it is vital to take account of privacy considerations when it develops its applications ("privacy by design").

- ✓ The images are preserved and processed in the sensor. They can only be accessed in very specific cases (for example, the patient has been identified as being at risk or there is proof of a fall).
- ✓ We collect only the minimum amount of data necessary to provide a quality service.
- ✓ All of the data transferred is encrypted via HTTPS protocols and TLS 1.2. technology.

MintT also demonstrates its concern for privacy in the tools which it provides to its customers when the system is installed.

- ✓ **MintT** demonstrates total transparency towards its clients when it provides its service and follows the GDPR directives, both with regard to its subcontractors and the persons benefiting from its fall detection service.
- ✓ **MintT** helps the people benefiting from the solution to understand the system and their privacy protection rights by providing them with suitable information tools.



SUPPORT

- ✓ **MintT** ensures that there is no interruption in the provision of the service. The back-end monitors the system's state of health continually by informing our services of any infrastructure alerts and sensor disconnections.
- ✓ The algorithm's updates are integrated automatically and do not require any on-site intervention.
- ✓ The sensors have a two-year constructor's guarantee.

INSTALLATION

INSTALLATION PREREQUISITES

The technical prerequisites are as follows:

The sensor must be connected via Ethernet to a network which supports DHCP and offers access to the Internet, in particular the 443 and 5044 ports.

A 220V power socket and an RJ45 connector must be close to the sensor.

If your internet access has any restrictions, we will communicate the range of necessary IP addresses to you. The contacted domain is ***.mintt.app**.

INSTALLING THE SYSTEM

If the room has a false ceiling, the cables can be placed there. If not, provide a cable tray towards the plugs above or close to the bed.

Before fixing and directing the sensor, connect it to the power and to the network.

Start the **ISA** Dashboard application by using the credentials communicated by **MintT**.

View the real-time 3D data in order to find the best position by following the recommendations below; then mark the positions of the screws and disconnect the sensor.

Where should the sensor be fixed?

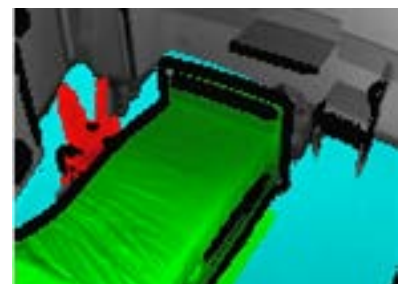


The sensor must cover the largest possible area around the bed. It therefore makes sense to position it on the wall at the head of the bed, in line with the bed or off-centre by one metre towards either the left or the right, and as close as possible to the ceiling.

How should the sensor be oriented?

Orient the sensor so that it covers the bed and an area of 1.50m around the bed. It is less important to cover the top of the bed than the lower half of the bed.

If possible, also direct the sensor so that it covers the entry to the entrance hall and the bathroom door.



The sensor can be turned 90° around its optical axis in order to ensure the broadest possible visual range on the horizontal axis.

How should the sensor be fixed?

Use the ball-and-socket joint provided with screws and plugs that are suitable for the backing. The ball-and-socket joint allows the sensor to be fixed to the wall or to the ceiling. Finally, connect the network and the electricity.

How should the sensor be calibrated?

In the Administration section of the ISA Dashboard application, check if the orientation is still optimal and click on the bed or the ground.

INSTALL THE INTERACTIVE CONSOLE **ISA** DASHBOARD

Minimum conditions for installation:

Power 220 V, Ethernet socket, internet access.

Where should the console be placed?

The **ISA** Dashboard provides access to information relating to alerts and, depending on your access level, the handling of alerts and the reassurance function.

It is therefore important to place it somewhere where carers can easily access it but not visitors.

How should the console be fixed?

Using a VESA wall-mount or a screen support.

First connection:

Use Kiosk credentials provided by IT Manager.

INTERFACE PORTABLE ALERT MODULES

If you use DECT-type devices, please let us know the model and the description of the telephone system's interoperability capabilities. **ISA** can transmit alert messages or make them available to the institution's server via its API.

If you use a smartphone, please install the ISA application provided by MintT.

INFORM PATIENTS AND CARERS

MintT provides a series of training tools on the use of the system and of materials enabling carers to understand how to process the data that has been collected. We offer models of explanatory notes about privacy protection.

INFORMATION TO BE COMMUNICATED TO **MintT**

Email of the person responsible for the project

Email of the IT Manager to pass on the Administrator credentials

Email of the Technical Service Manager to pass on the Technical Service credentials

List of rooms where system is to be installed (optional)

Model and description of the telephone system's interoperability capabilities (optional)

Internet access restriction so as to communicate the IP range assigned to the site (if relevant)

isa@mintt.care