



SIEMENS

Ingenuity for life

Optimized logistics for hospitals

SIATRANS: Siemens Autonomous Transportation

Autonomous guided vehicles from Siemens improve cost-effectiveness

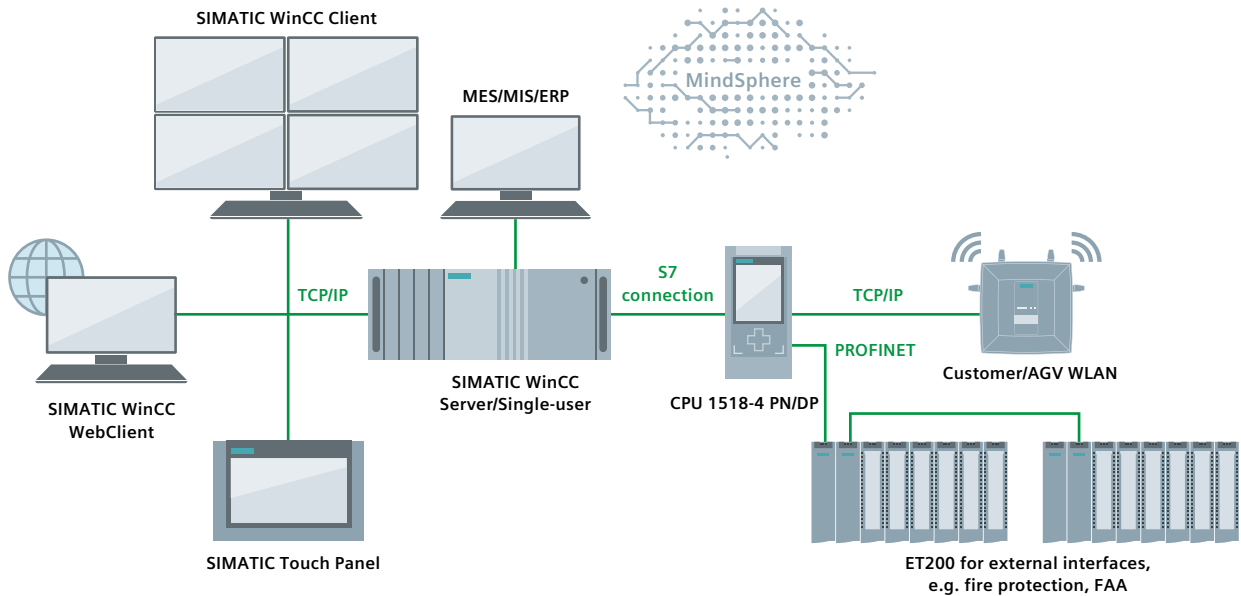
In hospitals with hundreds or thousands of patients, it is essential to have medications, meals, laundry and sterile instruments delivered on time. Meeting these needs at all times of the day and night is thus a major logistical challenge. And that is why autonomous guided vehicles (AGV) can play an important role in both supply and disposal functions in hospitals, by delivering the required items automatically and autonomously and taking away waste materials. In doing so, they take the load off the hospital logistics systems, making them more efficient and cost-effective.

Unique solution for hospitals

Thanks to its proven standard industrial hardware and software, the unique AGV system from Siemens satisfies the tough hygiene requirements and safety regulations imposed by hospitals, delivering all kinds of material transparently and on time. Thanks to the proven SIMATIC controllers and I/O devices, the system can be introduced into new and existing logistics facilities. It can be seamlessly integrated both horizontally (SCADA systems, SAP, MES) and vertically, with interfaces to rack entry and retrieval systems.

Your benefits

- Fail-safe industrial controller in an autonomous AGV
- Autonomous navigation with no additional infrastructure
- Accuracy of target position: $\pm 1 \text{ cm}/\pm 0.2^\circ$
- Drive components can be safely switched off
- Standard solutions to connect to existing production and conveyor systems
- Lifecycle: More than 10 years



The autonomous guided vehicle utilizes the proven, fail-safe industrial hardware and software from Siemens.

Continuous integration of industrial controllers

Totally Integrated Automation (TIA), industrial automation technologies from Siemens, stands for the efficient interoperability of all automation components. This technology makes the first autonomous guided vehicle (AGV) system possible using standard industrial hardware and software, combined with the specially designed autonomous navigation system that enables it to move around freely.

Navigation by laser

Putting the autonomous guided vehicle system in place in hospitals requires no markings and no structural alterations. The route is determined by laser navigation using natural landmarks, and the vehicle is also capable of independently identifying load carriers, which it can pick up on its own.

Flexible systems for versatile applications

The innovative AGV solution for hospitals was developed in cooperation with mechanical engineering firm Bleichert, which is responsible for the design of the vehicle. Bleichert implemented the project using hardware and software from Siemens. Free navigation on both floors and ceilings enables maximum flexibility, and its control level with smart route control helps reduce complexity. The modular system can also be adapted for any conceivable application and to suit existing goods transport solutions.

The autonomous guided vehicle was developed in cooperation with the mechanical engineering firm Bleichert. It navigates by laser and needs no markings within the building.



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Article No.: VRPH-B10012-00-7600
Printed in Germany
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