



Success Story | custo med

Excellence in medical diagnostics powered by CodeMeter

The Challenge

custo med medical platform custo diagnostic consists of different software packages and devices in order to acquire the ECG, blood pressure profiles, and lung function data from patients. The products are integrated in clinical IT networks and need therefore to offer full modularity and scalability in terms of performance and usability. Furthermore, medical regulations require the after sales traceability and a protection against technological manipulation of the products.

The Solution

The various functionalities of custo med modular diagnostic platform are enabled by so-called protection bits or licenses in the source code of the embedded software. The transfer of the licenses is realized with customer specific license files, namely remote update files, created with a tool used by the sales department. The update file can only be applied to a specific CodeMeter dongle. Physicians and hospitals use a variety of internal or external CmDongles and CmCards, depending on the PC hardware. In large hospital IT networks, the trend is to use CmActLicense, the software-based protection solution.

The Success

CodeMeter allows for easy handling of complex and dynamic licensing models, even in demanding clinical environments, for a custom and straightforward license distribution over many locations. Furthermore, the licensing procedure can be efficiently managed when projects are realized in cooperation with authorized distributors. At any moment in time, custo med medical systems can be traced according to legal requirements. In case of technical problems, the specific release and license status of the user will be identified, allowing for a quick and safe after sales support.



Hans-Joerg Hoffmann, Sales & Marketing Manager at custo med

The brand name custo med stands for a diagnostic cardio-respiratory acquisition and reporting system. A professional software design, combined with the convenient handling of the devices, provides smooth workflows in clinical wards. Thanks to CodeMeter, we have an unlimited range of action when it comes to offer individual license models – from single-user applications in medical practices to large hospital projects.



The Customer

custo med is a leading brand in the medical diagnostic field. ECG, blood pressure, and spirometry data are acquired and integrated in hospital information systems. Perfectly tuned workflows for medical staff, dedicated software solutions, and highest standards concerning patient safety and comfort are the drivers of our product portfolio.

custo med was founded in 1982 and is located in Ottobrunn (Germany). Over 50 employees design, produce, and sell professional diagnostic software and hardware. The main markets are in Germany, Western Europe, Russia, Turkey, and Asia. All projects are realized in cooperation with qualified distributors.

The medical diagnostic system from custo med enhances logistics of physicians and nurses, technical service departments and IT administrators of hospitals, clinics and surgery rooms across the globe. The installation array is incredibly diversified and ranges from remote locations of single doctors connected to the service over the Internet to large infrastructures involving multiple hospitals in different cities. The system is set to acquire ECG, blood pressure, and lung function data while the patient is wearing portable recorders or is connected to medical devices.

The software platform custo diagnostic is the core of this modular system, and includes a main patient database containing all existing custo med examinations. Hundreds of complex operations take place every day with custo med products in a hospital. The procedures, like recorder programming and downloading, patient data management, reporting, archiving, trend analysis, Health Level 7 operations, data import, export and integration, need therefore to be extremely reliable and have to be organized in suitable workflows, which differ from project to project. A central CodeMeter device, in the form factor of a USB stick, protects the confidentiality of such sensitive records from tampering and misuse.

In order to ensure a constant local availability of custo med products in emergency areas, should the main server fail, a fallback server is present. Similarly to the main configuration, this machine is protected with CodeMeter technology. For scenarios exposed to mishandling threats, custo med opts for CodeMeter on a printed circuit board; the device is mounted directly on the mother board and thus cannot be removed intentionally or accidentally. Extra CodeMeter units are also used on custo med trolleys; they re-synchronize with the main database as soon as they return to their WLAN hotspot.

The number of users, devices, and workstations for each of our running sites determines the licensing model. This is where CodeMeter shows its additional value in assisting our project managers to define and roll out all the necessary licensing schemes.

The efficient management of all custo med licenses in a hospital IT network is a crucial aspect. Software licensing must remain flexible over the lifetime of the system. Whenever the organization is restructured or enlarged, custo med must adapt to the new situation.



CodeMeter bolsters the upgrade process and offers additional management functions, e.g. splitting existing networks, adding new users, or generating special access rights.

Large IT networks, or locations that have no USB access, usually prefer to adopt a software-based protection for their clients. CmActLicense features a proprietary technology, SmartBind®, that associates the encrypted computer fingerprint to the license file and prevents license manipulation or moving. The level of safety also depends on selectable parameters of the server and requires a more accurate modus operandi during planning, installation and after sales service.

Beyond protection and licensing, CodeMeter is used to regulate users' access rights. Custo med qualified technical staff possess specific units, giving access to restricted service areas of the software, for a limited period of time. This ensures that only authorized personnel carries out maintenance. For ease of use and to reduce the risk of device losses, technicians are mainly provided with CmStick/ME. The flash memory on board the stick hosts the service tools the technician is licensed for. When the customers' wish is to have no object protruding from the computer, CmCard is the alternative. This comes as a micro SD card, embedding the same smart card and security technology of the other form factors.

From time to time it may occur that a CodeMeter unit has been lost at the customer's site. It is then replaced immediately for a small fee.

"custo med has been on the market for decades: while all our recent installations incorporate CodeMeter directly from the start, past generations of our software are still in use; the compatibility of the legacy product from Wibu-Systems, WibuBox, with CodeMeter allows us to transition seamlessly from one technology to the other without abrupt service interruptions or any specific rush in the migration process. All stakeholders handling custo med products are fully satisfied with CodeMeter solutions: our customers, software engineers, sales and service staff, and our distributors. A premium medical product should not compromise on the quality of its software protection."

Hans-Joerg Hoffmann,
Sales & Marketing Manager at custo med

About Wibu-Systems:

WIBU-SYSTEMS AG (WIBU®), a privately held company founded by Oliver Winzenried and Marcellus Buchheit in 1989, is an innovative security technology leader in the global software licensing market. Wibu-Systems' comprehensive and award winning solutions offer

unique and internationally patented processes for protection, licensing and security of digital assets and know-how to software publishers and industrial manufacturers who distribute their applications through PC-, embedded-, mobile- and cloud-based models.

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