



KEYnote 31

THE WIBU - MAGAZINE

Unleash the Power of CodeMeter

Highlights

- The New Look WebAdmin
- Best Practices: Lending and Borrowing Licenses
- Product Bundles: Bringing Together What Belongs Together

WIBU
SYSTEMS

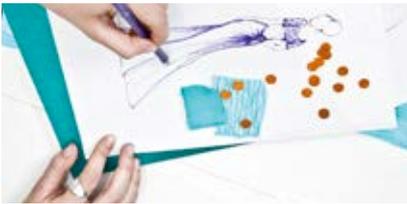
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Dear Clients and Partners!



The Internet of Things and Industrie 4.0: These two terms have become ubiquitous in the mediasphere. Have you already recognized the great benefits that are out there for you and your customers? Have you chosen your strategy? Are you using new mechanisms to speed up development and reduce time-to-market? Can you tailor your products flexibly to match what your customers want? Does new connectivity offer added value in your products? The questions are numerous.

We can help you lay the groundwork to move forward: security, security, security. By this, I mean copy protection to save your products from forgers and pirates; I mean tamper protection, particularly when updating and upgrading software; and I mean introducing new business models for the good of your customers and for a strong revenue stream for you – or monetization in short.

For us, this year is all about showcasing many new solutions: at the IoT Evolution Expo in Florida, the Embedded World in Nuremberg, the Mobile World Congress in Barcelona, the RSA Conference in San Francisco, and the Automation Meet-Up. We are working hard with organizations like VDMA, the OPC Foundation, the Trusted Computing Group, and the Industrial Internet Consortium (now a partner of the Industrie 4.0 Platform) to bring you the solutions you want and need for your work.

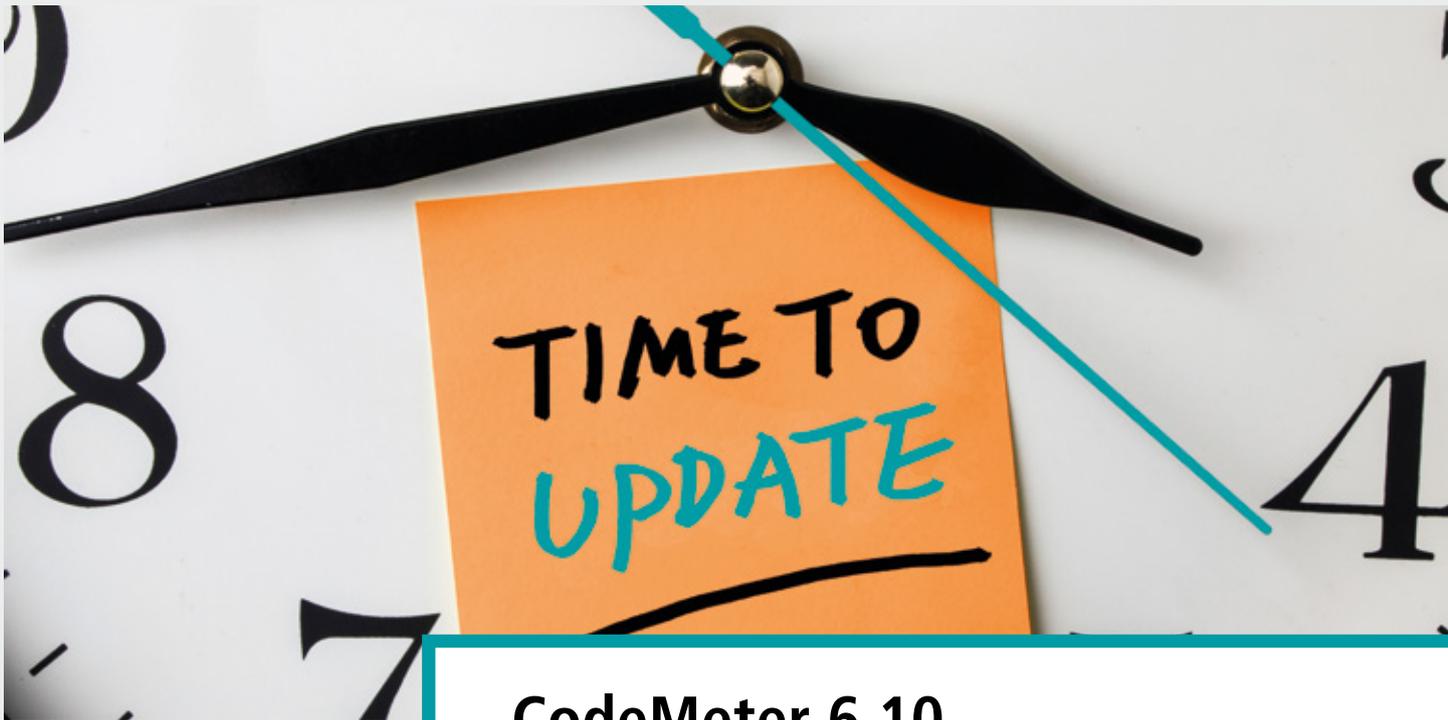
Read this KEYnote Magazine for more news about CodeMeter and the innovative Universal Firm Code, new functions for creating and delivering licenses in our License Central, our high availability hosting services, and an abundance of other news.

Come and share your ideas with us at Hannover Messe or one of the upcoming conferences. We can only win by sharing – and I am looking forward to doing so!

Best regards,

Oliver Winzenried

CEO



CodeMeter 6.10

CodeMeter 6 introduced the new type of Firm Code for different CmContainers, which can be stored either in CodeMeter hardware (CmDongle) or in a soft license (CmActLicense). The new Universal Firm Code allows licenses to be transferred, temporarily or permanently, without having to involve the original software vendor in the process. Licenses can also be nested within each other to make it easier to move or borrow multiple licenses in a single step.

Universal Firm Code

In order to transfer licenses between CodeMeter hardware and software license containers, both sides need the same cryptographic capabilities. This is why a new type of Firm Code was developed: The licenses of the Universal Firm Code (Firm Code from 6.000.000 and higher) are produced as certificates modeled after the X.509 standard. All keys are stored with asymmetrical cryptographic keys in the certificate so that they can only be decrypted by the right CmContainer.

Usually, licenses are not transferrable. The software vendor has to allow the transfer explicitly. In order to be able to transfer a license from one CmContainer to another, the option has to be approved in the license by the original vendor. The vendor determines which types of CmContainers can receive the license and whether the key for further transfers down the line is also passed onto the new CmContainer.

Moving and Borrowing

Currently, two types of license transfers are supported: moving and borrowing. When a license is borrowed, it is transferred by a sender to a receiver for a defined period of time. When that time has elapsed, the license automatically becomes invalid for the receiver and reverts back to the original sender.

When moving licenses, they remain permanently with the receiver. If the software vendor allows the option, this can be done several times. The licenses can also be returned back to the sender.

Security

Certificates are also used when transferring licenses. If the transfer is legitimate, the CmContainer with the original license (associated with the sender) will have a private key that confirms to the new recipient of the license (the receiver) that he has transferred the correct license. All keys contained in this process are encrypted for this specific receiver and cannot be read or used by any other CmContainer.

Modular Licenses

In order to transfer all licenses required for an application in one step, Nested Product Items are defined for the Universal Firm Code. Any license (Product Item) can now have several other licenses allocated to it, forming a permanent unit that can only be borrowed or transferred together. The receiver automatically gets all the licenses he needs.

Nested licenses inherit the attributes of their parent licenses. If a time limit is set for the parent license, it applies to all licenses nested in it. The license counter also behaves according to the new system: If a nested license is not given a dedicated license quantity, using it will mark one license from the pool of the parent license as used. 



The New Look of WebAdmin

The information on a CodeMeter license server can be accessed locally or from remote machines via a dedicated web interface. Called WebAdmin, the interface has not changed much over the years, even if many new functionalities and capabilities have been added. The time has come to give WebAdmin a facelift – for a much fresher, younger, and modern CodeMeter 6.10.

Dare to Change

Despite the new design, experienced CodeMeter users will find virtually everything they are looking for in the places they expect. The layout, built to resemble a traditional menu, has not changed.

Only the server search, i.e. the option to switch to the WebAdmin for another CodeMeter license server, has been removed from the front page. This option is now located at the bottom of each page, together with the details of the current server – no further need to look at the navigation bar to see which server you are working with.

All CmContainers on Display

The CmContainer view offers a well-structured list of all available CmContainers, with their firmware versions and activation state. The old WebAdmin was able to show only one CmContainer at a time, but now the licenses for multiple CmContainers can be easily displayed.

By hovering over the menu items, they automatically fold down to show the individual details for the CmContainer in question.

Novel breadcrumb technology enables display of the sub-item currently in use beneath the menubar.

Revised License List

The license list now includes the following columns:

- Product Code
- Name
- Unit Counter
- Valid Until

- License Quantity
- Feature Map

Note that the “Valid Until” entries display the effective expiration time of the license. Three settings can be used to define the time limits:

- Expiration Time (a set date for the license to expire)
- Usage Period (a defined period of use after the first activation of the license)
- Borrowing Expiration Period (the time



Product Code	Name	Unit Counter	Valid Until	License Quantity	Feature Map
201000	SampleNotePad - Basic Module - Single User	n/a	n/a	1 (local)	0x20000001
201001	SampleNotePad - Change Font Module - Single User	n/a	n/a	1 (local)	0x20000001
201002	SampleNotePad - Hex View Module - Single User	n/a	n/a	1 (local)	0x20000001
100021	WIBU-SYSTEMS AG				
102688	WIBU-SYSTEMS AG - Licensing				
100000	CodeMeter Demo License	n/a	2017-01-31 01:00:00	1	n/a

when a borrowed license automatically reverts to the server).

These three settings are used to calculate the effective expiration date that is shown in the list.

Universal Firm Code

The new Universal Firm Codes now allow licenses to be transferred. This temporary or permanent transfer of licenses is recorded in the license history, which is now included in a new section of the license detail view in WebAdmin. All past transfers are clearly recorded. The view now also includes a section for Nested Product Items. The inheritance rules are displayed and the applicable license options are directly visible.

License Usage at a Glance

The License Monitor reveals more information about how the licenses are being used.

The item "All licenses" displays a list of all licenses and their current usage status, which can be either "used" or "available". Selecting a license provides more details about which user and which device has been using this license for which period of time.

The item "Sessions" presents an overview of all licenses currently in use.

"License tracking" is an optional function that can be activated with a separate registry entry. Once activated, CodeMeter monitors all license usage and borrowing transactions. This section offers a history of how the licenses have been used.

Available Licenses on 'lap-rk8'

Product Code	Name	Feature Map	License Quantity	Used	Available
201000	SampleNotePad - Basic Module - Floating User - Borrow	0x40000001	4	2	2

A simple diagram shows how many licenses were in use, how many were available, and how many license requests were rejected. This can happen when the server has fewer licenses available than are being requested. The feature makes current license usage easy to understand for the user.

Product Item Details
Product Item 6000010:201000 of CmContainer "SmartBind 6000010" (130-534898602)

Product Item Option	Type	Size (Bytes)	Dependencies	Value
Text		53		SampleNotePad - Basic Module - Floating User - Borrow
Feature Map	4	data, serial, counter		0100 0000 0000 0000 0000 0000 0001 (0x40000001)
License Quantity	4			4
Extended Protected Data	136	16	data, serial, counter	0x6c 0x63 0x64 0x63 0x00 0x01 0x61 0x05 0x00 0x00 0x00 0x00 0x00 0x00 0x01 0x00

License Transfer Options

Option	Value
Fulling allowed	No
Returning allowed	Yes
Firm Item at target required	No
Transfer Type	Borrow Local License
Transfer Depth	1

License Transfer History

#	Status	Type	Time	Borrow Expiration Time	Transfer ID	CmContainer	Update Counter
1	0	Borrow Local License	2016-03-18 15:40:23	2016-03-18 16:40:23	f534b269b2c185ad874	130-4024349250	2
2	0	Borrow Local License	2016-03-18 15:41:06	2016-03-18 15:43:06	f9ea0947f6abe8207de	130-4024349250	3

Toolkit

The WebAdmin settings are now arranged in three sections: The Basic section includes all essential settings, such as the configuration of server search lists or the settings for the network proxy.

The WebAdmin section contains the settings

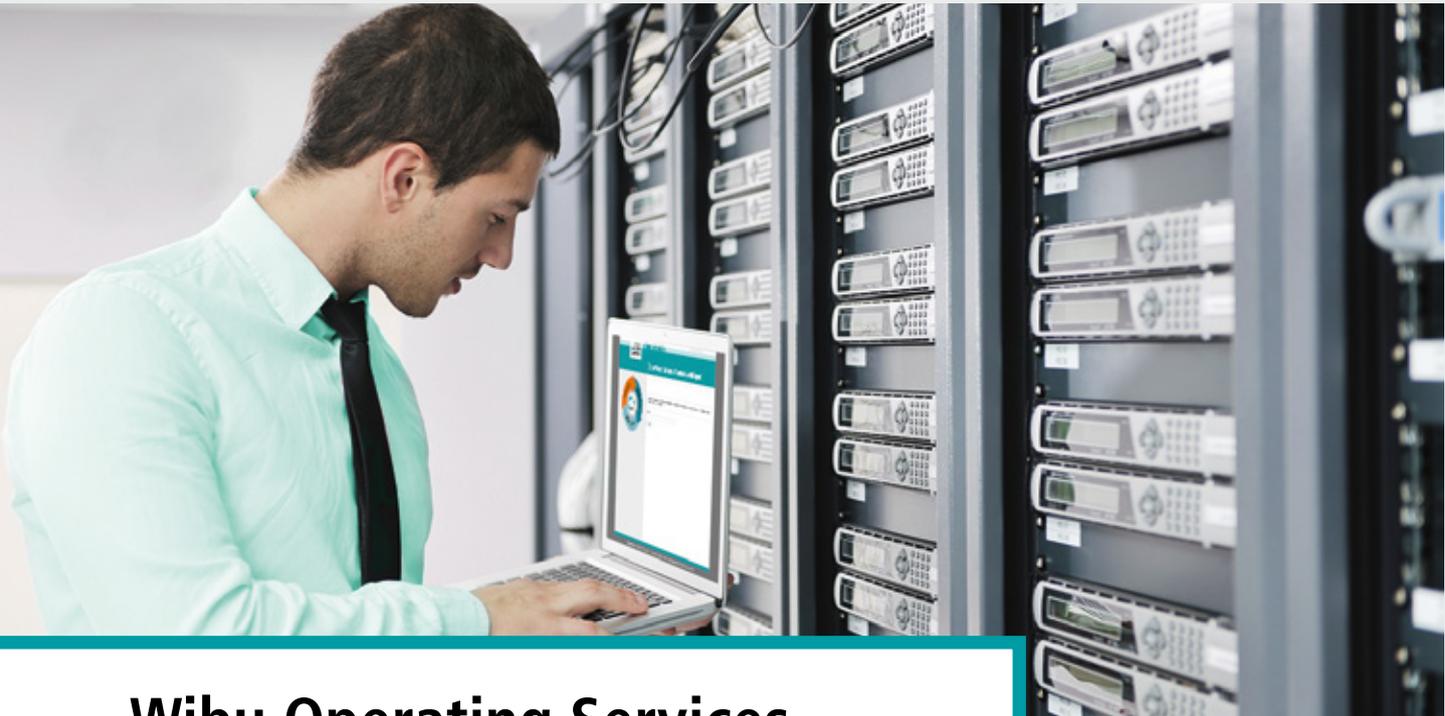
governing the WebAdmin settings themselves. As before, the settings can be changed from purely local access to authorization by user name and password.

The Server section includes the settings for access by other clients. If other clients are allowed to use licenses on this CodeMeter license server, the "next" tab includes options to define the specific access rules. Individual users, for example, can be blocked or licenses only cleared for specific user groups (Active Directory support).

Modern and Flexible

The all new WebAdmin was redesigned with intuitive usability in mind. The engaging light palette, sleek design, and use of leading-edge web technology makes for ease of use – the

viewing dimensions can be smoothly scaled up or down, and all elements automatically adjusted for optimal display. Another much requested feature is now also part of the package: The interface language can be changed dynamically at any time.



Wibu Operating Services

Operating the CodeMeter License Central back office solution over the Internet is not rocket science, but it might require certain activities and specialized know-how that are not necessarily part of the core competencies for regular system administrators. Put CodeMeter License Central operation into the hands of our experienced professionals. The service you will receive is worth every penny – and, you can keep concentrating on what you do best: your business.

Back Office Solution

CodeMeter License Central is the back office solution that helps you efficiently deliver licenses to your users. Here is how it works: A user buys a license for your software, and your web shop, CRM/ERP system, or your sales rep sends a request to CodeMeter License Central. The user's customer ID, an order ID, and the exact licenses are reported, and CodeMeter License Central returns a ticket number. You send this ticket number to the user by email or traditional license entitlement certificate.

With the ticket number, the users can retrieve their licenses from CodeMeter License Central at their convenience. This can be done either by browser via the so-called WebDepot or – if the option is integrated in your software – by an activation wizard. The licenses are then activated.

This mechanism works for both CodeMeter hardware (CmDongles) and for the software option (CmActLicenses). CodeMeter License Central offers many other options, such as deactivating licenses, blacklisting

CmContainers, or reactivating licenses. You also have access to license entitlement reports, e.g. when and which licenses were retrieved.

The Machine Room

CodeMeter License Central uses a Linux virtual machine which operates:

- a web server to provide the interface,
- an application server with the business logic, and
- a database that stores all of the information.

In order for CodeMeter to create licenses, the application server needs access to a CmDongle with special entries, known as the Firm Security Box (FSB).

The connection for retrieving (WebDepot, Gateway) or creating (Connector) licenses works via PHP scripts by default, usually running on a web server in the Demilitarized Zone (DMZ). The DMZ is the area of the network, which is accessible from the outside.

On Premise ...

Wibu-Systems delivers all of these components fully prepared for you to install CodeMeter License Central in your own IT environment. For this on-premise solution, you need a host for your virtual machine (1-2GB RAM, 1vCPU, 20GB file storage) and connection with an FSB (physical machine with an operating system supported by CodeMeter Runtime).

The IT operators will need to understand CodeMeter functionality. For the system to run via the Internet, allowing your users to activate licenses directly on demand, the interfaces (WebDepot, Gateway) are placed behind an initial firewall. The interfaces enable communication via web services directly with the application server of CodeMeter License Central, which should be located behind a second firewall for improved security.

Once the system has been set up for regular operations, security-critical patches need to be installed regularly on the Linux system

of the virtual machine. You will also want to update to newer versions of CodeMeter License Central to enjoy the latest features we release on a regular basis.

... Or as a Service?

Setting up and operating CodeMeter License Central can be a complex task – but one that certainly pays off when it enables you to deliver licenses to your users around the clock. We want you to be able to concentrate on your core business, which is why Wibu-Systems began to offer a hosting service more than five years ago. Our WOPS team (Wibu Operating Services) takes over all of the work for you and provides the services you need 24/7. Your users can reach CodeMeter License Central via the http address on <http://lc.codemeter.com> or, if you wish, via your own subdomain, like <http://license.mybusiness.com>. WebDepot can be tailored to match your corporate branding. Whether hosted or run by yourself, the end product looks the same.

Access to the web interface, for configuring the items, for analyses, or for manual sales, is protected by user name and password as well as an https client certificate to prevent attacks by hackers. You can also use client certificates to access the web services of the application service, with trusted protections against misuse.

Professional Data Center

For optimum performance, the right infrastructure needs to be in place. Initially, Wibu-Systems hosted the first CodeMeter License Central installations on site, but increasing demand led us to seek an experienced data center partner who would enable us to operate all the FSBs needed to produce licenses. We found a reliable partner, TechniData IT-Service (www.its-technidata.de), who now keeps the CodeMeter License Central installations hosted by us in a data center near Stuttgart, Germany. The CodeMeter License Centrals running in a "FlexCloud"

can easily be scaled up on short notice whenever we need new installations. Strong firewall protection and the security principles of professional data center operations, like redundant external connections, access control systems, fire protection systems etc., ensure the flawless and reliable operation of your back office solution.

Depending on the number of users and sold licenses, the number of transactions (activations, reactivations and deactivations) will differ widely on any given day. There are some software vendors who need one activation per day, while others average five activations per minute. We have prepared a selection of different versions to fit the specific needs of our clients in terms of price and technology. Your version choice determines how powerful your system is and how many license transactions it can handle.

Datacenter Edition

Clients with no more than 50 activations per day will benefit most from the Datacenter Edition. This option has multiple clients using the same server. Of course, all data is kept strictly separate and stored in individual databases. If your requirements increase, moving up to one of the larger-scale options is possible at any time.

Dedicated Server Edition

If you need direct access to the web services or want to use custom extensions produced by yourself or by Wibu-Systems Professional Service, you will require the Dedicated Server Edition at a minimum. It gives you access to your own virtual machine with allocated memory and CPU.

The Dedicated Server Edition handles up to 100 transactions per day.

High Performance Edition

FSB operations are time-intensive and can only be run in a strict sequence without overlap. If

you require more than 100 transactions per day, you should consider the High Performance Edition, which gives you your own FSB server designed for up to 1,000 transactions per day.

High Availability Package

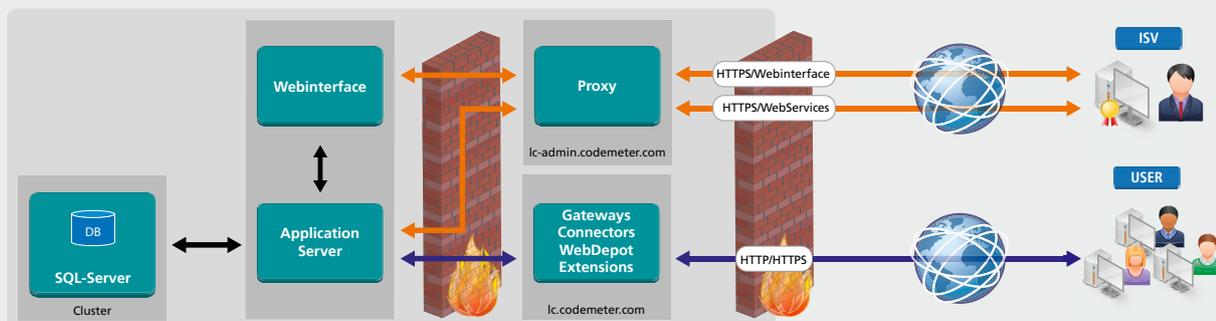
If more than a thousand transactions per day are required, you need to scale up the entire system. The High Availability Package comes with two High Performance Editions with a dedicated load balancer preinstalled, substantially improving performance. Should an unexpected event occur, only one line would typically be affected, and work can go on as usual on your second line. This also allows you to conduct maintenance without interrupting service, as only major version updates will need some scheduled maintenance downtime.

Top Service

All systems, from the hardware to the operating system and the applications, are monitored around the clock. Intelligent self-repairing capabilities are built in to enable the system to fix itself. The professionals on Wibu Operating Services' team are also notified immediately and can intervene whenever the automatic facilities cannot resolve the issue themselves.

All disruptions and incidents are monitored and analyzed. The findings are used to produce automatic scripts to avoid or resolve the issues immediately should they occur again. In this manner, we are constantly improving our already excellent reliability track record and are able to operate many installations of CodeMeter License Central in parallel.

All systems are monitored on the application level, all day, every day. Wibu Operating Services currently hosts over 100 installations of CodeMeter License Central. Ready to join the winning team? 





Best Practices: Lending and Borrowing Licenses

The last edition of KEYnote introduced you to the fundamental concept of the CodeMeter License Transfer function. Today, we will present the best practices for creating transferable licenses with CodeMeter License Central. All you need is CodeMeter License Central 2.20b, CodeMeter 6.10a, and a Universal Firm Code.

The Bigger Picture

As a software developer or vendor, you are using CodeMeter License Central to create licenses. Your users activate those licenses on a networked server, and it is up to you to define whether these licenses can be deactivated again.

On the network, the user can either use the license directly on the server, or the license can be borrowed locally by being transferred into a local CmContainer.

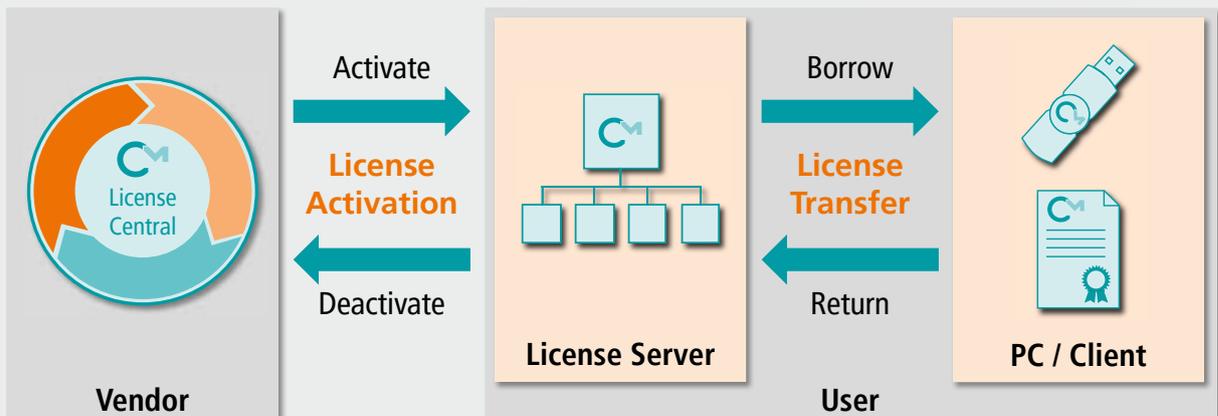
When borrowed, it is flagged as used for a period of time and can be used locally offline without any need for a standing connection with the server. After the prescribed borrowing period has elapsed, the license automatically reverts back to its original state: It has expired locally, but is available again on the server. The user also has the option to return a license earlier. You, the software vendor, define the maximum period of time a license can be borrowed.

Firmware 3.0 and CodeMeter 6.20 are required to use a CmDongle with borrowed licenses.

Creating the CmContainer Type

Let us consider the CmContainer types in CodeMeter License Central. There are three pre-defined types for the evaluation of Firm Code 6.000.010:

- CmDongle 6.000.010
- SmartBind 6.000.010
- BorrowClient 6.000.010



Search CmContainer Types

Search criteria

Name

Results 1 of 1

Name	Firm Code	Usable for	Binding mode	
BorrowClient 6000010	6000010 CmContainer 6000010	CmActLicense	smart	
CmDongle 6000010	6000010 CmContainer 6000010	CmDongle		
SmartBind 6000010	6000010 CmContainer 6000010	CmActLicense	smart	

The CmDongle type is used to activate licenses on a CmDongle or allow the user to transfer a license onto a CmDongle. The SmartBind type is meant for licenses on the server or licenses that are activated on a user device directly via CodeMeter License Central. The special CmContainer BorrowClient type is meant for the temporary borrowing of licenses. Distinguishing between two software-based CmContainer types helps keep source and target containers apart. The BorrowClient type also uses SmartBind to link the borrowed licenses with the machine in question.

Create a Transfer Type Template

The template for the transfer types is created in the next step. The evaluation Firm Code 6.000.010 comes with one pre-defined template.

The settings for the transfer type define the period of time a license can be borrowed and which targets are allowed. The example in the image shows a maximum borrowing period of 30 days and the BorrowClient as transfer

target. If you want to include CmDongles as possible targets, simply add another item in the list.

The options "May be pulled" and "May be returned" are kept unchanged, as they are meant for different types of transfers, like moving a license permanently.

Edit Transfer Type Schema

License Transfer Type Schema

Name

Transfer Type

Max. Borrowing Period Days Hours Minutes Seconds

Transfer Parameter

May be pulled

May be returned

FirmItem must exist

Transfer Target

The option "Firm Item must exist" allows to determine whether users can use an empty machine to borrow the license, or whether an activated BorrowClient CmContainer has to be installed on it beforehand. The

activated BorrowClient CmContainer could be created automatically during the online registration of the device via CodeMeter License Central. If the transfer target is a CmDongle, then that CmDongle already has to have the Firm Code in place. The option allows to restrict where users can transfer their licenses. As this also restricts the ease of use and comfort for the user, the option should be used sparingly.

To turn off this option, you need an "Annual Flat License" type from Wibu-Systems, which allows you to create as many licenses as you need within a set annual limit. If the license type is "License per CmContainer", the option cannot be unchecked.

Creating an Item

To finalize the borrowable license, an item needs to be created. In the section CmContainer Type, you set on which CmContainer types the license can be activated; in our example, this is the SmartBind type.

You also define whether and, if so, which license transfer types have to be used.

In our example, the sample item for the evaluation Firm Code 6.000.010 is optimized for using a license on a server on the network. It checks whether the same license is already present and, if it is, adds the new license to the license quantity.

Preparation is finished, and the borrowable license can be created.

Creating Licenses

In order to create a borrowable license, you simply create a ticket under the menu item "Create Order". For this purpose, you use the item you have just created and create five licenses, each with a single user limit. This ticket is sent to the user.

Edit Item

License Details

Item Id

Name

Status

CmContainer Type	Activation Count	
SmartBind 6000010 Firm Code: 6000010	1	

License Transfer Type Schema

License Entries

Product Code	Action	Option	Operation	Value	OS	
201000	UpdateAdd	ProductText	Set	SampleNotePad - Basic Module - Floating User - Borrow	No	
		FeatureMap	Set	0x40000001	No	
		LicenseQuantity	Add	1	Yes	

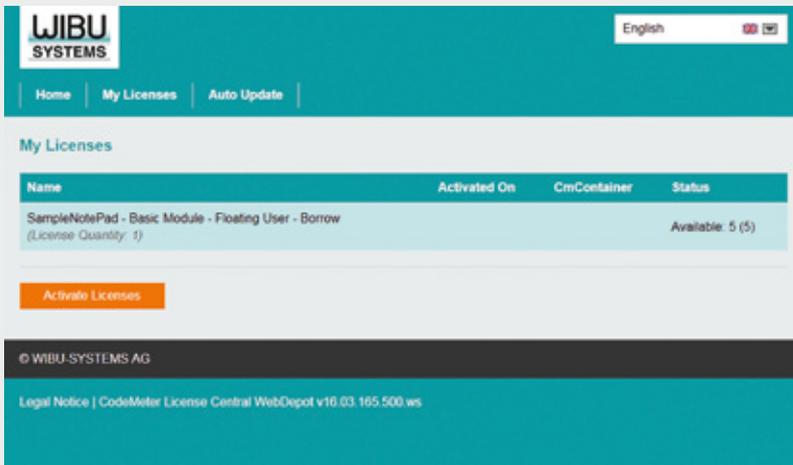
Generate Identifiers automatically

Constraints

Constraint		

Components

Item Id	Name	Component Mode	Order Specific Mode	Activation Mode	



Activating Licenses

The user activates the licenses on the server, e.g. via WebDepot. With the choice of five licenses for each user during the license creation process, the user can employ different servers on the network. For our example, we assume that the user is activating all licenses on a single server.

Borrowing Licenses

Once the licenses have been activated, the user can borrow them for use on different computers, e.g. by using License Manager in our example. License Manager is a sample, included in the CodeMeter SDK as source code and can be freely customized.

In the standard scenario, the license is kept on a server on the network. The user starts License Manager on the client that will receive the license. To find the license on the network, the user selects the "Include Remote Server" option. In our example, this takes him to the local PC that is set up as a server.

The user now selects the license he wants to borrow and clicks on "Borrow License".

The user is then asked to define the period of time he wants to borrow the license. As the maximum period has been set to 30 days, the user can choose any period of time between 1 second and 30 days. License Manager is a sample application; the actual format of the borrowing period can be adjusted to match the needs of the actual target group.

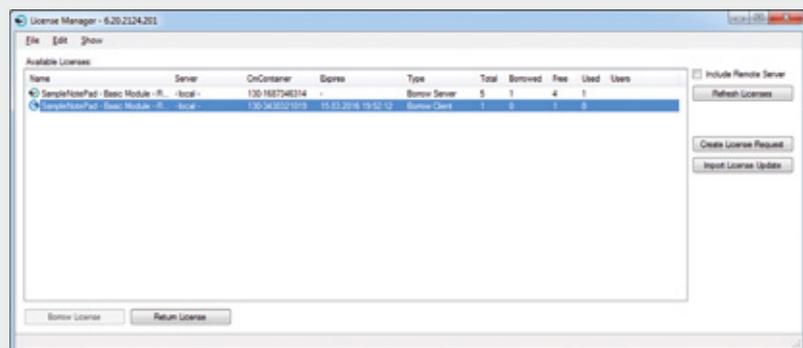
After the borrowing process is complete, the user will see two items:

- the license on the server on the network, with one of the five available licenses now marked as used, and

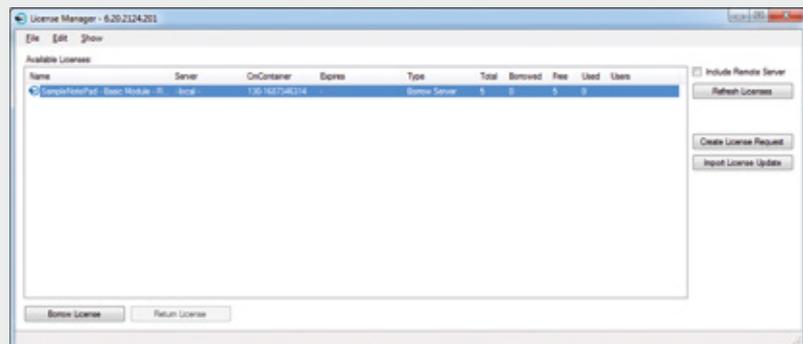
- the freshly borrowed local license, which can only be used on this specific machine.

Deactivating Licenses

Can users deactivate licenses on the server while they have been borrowed? It is simple to do so, as long as enough licenses are available. In our example, the user has five licenses, of which one has been borrowed. After one license has been deactivated, four remain on the server – three readily available, and one currently borrowed.



What happens if the user deactivates more licenses than are available? This would create a temporary negative quantity, but the option has to be allowed, since users



might manoeuvre themselves into a dead end. This can happen in particular if licenses are deactivated offline, which can take some time between the deactivation request and the resulting license update. That is why CodeMeter allows both options:

- Allow a negative quantity, monitor the deactivations as they happen via CodeMeter License Central, and intervene if needed.
- Forbid negative quantities and offer user support where needed.

The standard setting allows temporary negatives, which is the user-friendly and resource-efficient option. 



Bringing Together What Belongs Together

Organizing your products has just become even easier with CodeMeter License Central 2.20: Product bundles allow you to structure your products even better and take the effort out of the sales process.

The Situation

Imagine a typical example: You have a set of products not unlike the popular Microsoft Office suite. The applications in your suite are a word processor, spreadsheet software, presentation software, a mail client, a notepad, and a database frontend. Each can be bought on its own, or as part of one of your package bundles: Basic, Pro, or Ultra. The table below illustrates how the bundles exist in a product matrix.

	Basic	Pro	Ultra
Word Processor	X	X	X
Spreadsheets	X	X	X
Presentations	X	X	X
Mail		X	X
Notes		X	X
Database			X

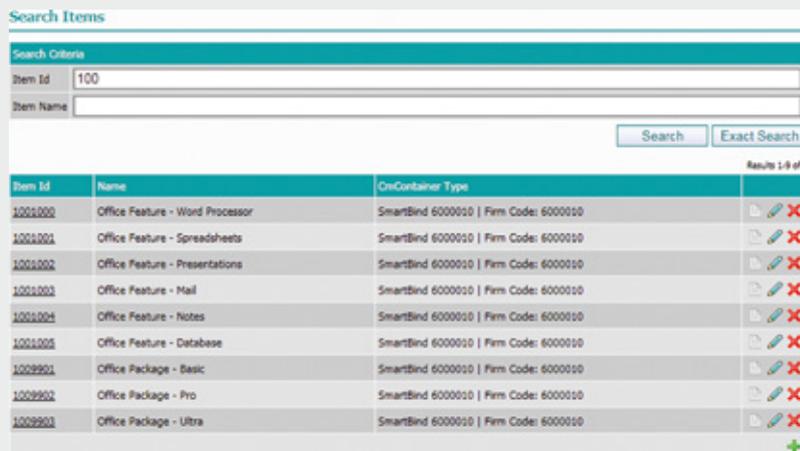
Coordinating the Licenses

Any software consultant will know and have come in contact with the many different ways in which software licenses can be implemented. The most versatile and flexible way of coordinating the licenses for such a product matrix is to assign a dedicated Product Code to each licensable product.

In this example, every license would get a Product Code of the type 1001000, 1001100, 1001200 and so on.

The choice of Product Codes depends on your actual needs. It can make sense to use number sets for different product groups, as we did with the 100xxxx for our hypothetical office application suite. We left a number of gaps in this list of codes to keep the option of licensing special sub-functions available for a later date.

The individual products can be identified by Product Codes in this manner. Alternatively, this can be done with individual bits in a feature map or a specific bit mask in the protected data. Both options are more labor-intensive and limit some of the automatic features built into CodeMeter License Central. Using distinct Product Codes also improves security for the protected applications: Each Product Code has its own secret cryptographic master key, and the most sophisticated hacker, even with access to one key, could not extract any other key.



Edit Item

License Details

Item Id: 1001000

Name: Office Feature - Word Processor

Status: active

OmContainer Type	Activation Count		
SmartBind 6000010 Firm Code: 6000010	1		

License Transfer Type Schema

<none selected>

License Entries

Product Code	Action	Option	Operation	Value	OS	
1001000	Add	ProductText	Set	Office Feature - Word Processor	No	
		LicenseQuantity	Set	0	No	

Generate Identifiers automatically

Constraints

Constraint

Components

Item Id	Name	Component Mode	Order Specific Mode	Activation Mode	

Items in CodeMeter License Central

Each product is expressed as a distinct item in CodeMeter License Central. If the system is integrated with a SAP or other ERP system, it is advisable to use the same item ID in CodeMeter License Central that you are using as the part number, material ID or SKU in your ERP system. For our example, we are using the Product Code as the item ID.

The products are all flagged as permanent single user licenses (License Quantity = 0 and no Expiration Time). The name of the module is entered in plain text.

Bundle Item

As a next step, an item is created for each bundle:

- Basic (1009901)
- Pro (1009902)
- Ultra (1009903).

The application products we have defined before are now allocated as components of these three items, and the suites are ready to hit the shelves.

In most cases, this simple setup will be more than sufficient. Four additional options can be used to modify their behavior to our needs:

- A dedicated Product Code for the bundle
- Component mode
- Order-specific mode
- Activation mode

modules of this main product. In that case, the main product is expressed as a distinct, separate product with a distinct Product Code, and the other products (sub-modules) are allocated as its components.

Another possible scenario would be the option to borrow licenses. This will need a dedicated Product Code as an anchor for Nested Product Items. This new functionality will be available in later versions of CodeMeter License Central.

Component Mode

The component mode is generally relevant if you are using the CodeMeter License Central web interface to produce tickets. In this mode, you get the following options:

Necessary: The component is a fixed part of the bundle and cannot be removed.

Opt-out: The component is an optional part of the bundle - it is included as standard, but can be removed.

Opt-in: The component is an optional part of the bundle. It is not included as standard, but can be included at will.

Order-Specific Mode

This option is only relevant if individual components come with order defined

Dedicated Product Codes

Each bundle can be given its own Product Code. This is not necessary for the application suites in our example.

This option makes sense if one component in a bundle has a higher profile as the main seller, and the other components are mere sub-

Edit Item

License Details

Item Id: 1009903

Name: Office Package - Ultra

Status: active

OmContainer Type	Activation Count		
SmartBind 6000010 Firm Code: 6000010	1		

License Transfer Type Schema

<none selected>

License Entries

Product Code	Action	Option	Operation	Value	OS	

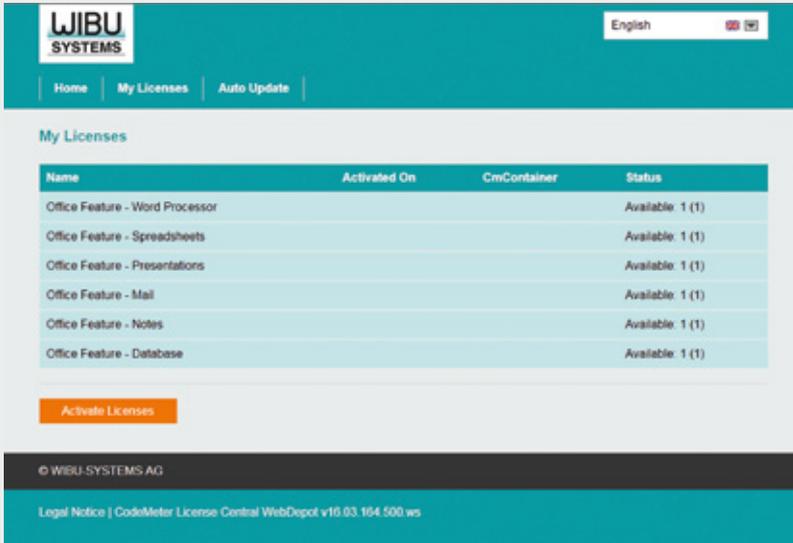
Generate Identifiers automatically

Constraints

Constraint

Components

Item Id	Name	Component Mode	Order Specific Mode	Activation Mode	
1001000	Office Feature - Word Processor	Necessary	Separate	Merge	
1001001	Office Feature - Spreadsheets	Necessary	Separate	Merge	
1001002	Office Feature - Presentations	Necessary	Separate	Merge	
1001003	Office Feature - Mail	Necessary	Separate	Merge	
1001004	Office Feature - Notes	Necessary	Separate	Merge	
1001005	Office Feature - Database	Necessary	Separate	Merge	

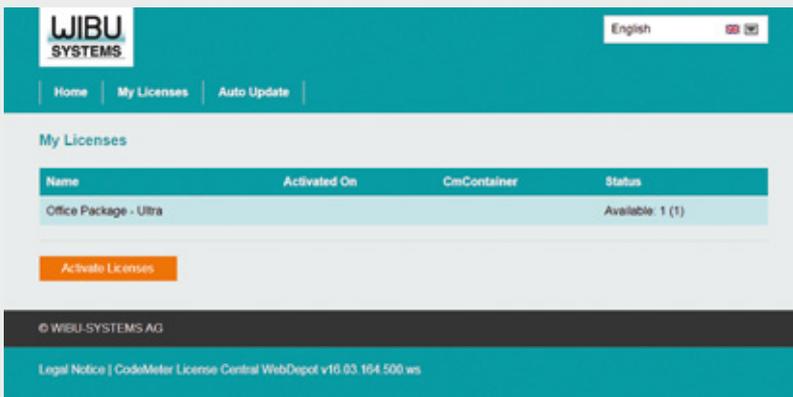


parameters. These parameters can define an individual expiration time, a client's name, or the number of network licenses when the ticket is created. These entries are not fixed settings for the item, as they are only finally configured when an actual ticket is created. In our example, no such parameters are used, so that the option is not necessary.

parameters accordingly in all components. This makes it easier to produce tickets and remove one possible source for human error.

Activation Mode

This option is relevant during activation, e.g. in WebDepot.



Separate: The component has order-specific parameters. These settings are configured separately for maximum flexibility, although it requires more manual effort.

Merge: The component receives its order-specific parameters from the bundle. If multiple components have parameters with the same name, these are only recorded once when the ticket is created and then set automatically for all components flagged with this mode.

The entry for an order-specific expiration time that applies to all components in the bundle, for example, would be recorded in one instance only, and the system would set the

Separate: The components are displayed to the user as individual products during activation and can be activated separately from all other components or the bundle as a whole. If this option is used, the bundle acts mostly as a means of facilitating sales on your side: The users receive only the products they want and activate only those products.

The bundle itself behaves slightly differently: If all components can be activated separately, and the bundle has no dedicated Product Code itself, it will not be listed during activation since there is nothing left to be activated apart from when the components are activated. If, however, the

bundle has its own Product Code, it will appear as a separate entry during activation. In our example, all components can be activated separately. WebDepot therefore displays all six components as individual products (cf. the top screenshot).

Merge: The component does not appear as a separate product during activation. It is activated transparently in the background as part of the bundle. If this option is used, once a bundle has been created, it is a permanent package and the users can only activate it (or deactivate it, depending on the settings) as such. In our example, the setting for the Ultra suite is changed to merge mode. WebDepot now shows one bundle that the user can only activate completely (cf. the screenshot in the middle).

Behavior in CmContainers

Product bundles are a special feature of CodeMeter License Central. Once a bundle has been activated, it reverts into its original separate components in the CmContainer.

In order to keep the link between the components, a separate license number can be allocated to all components as an order-specific parameter during activation, which the software can see and work with accordingly. A more elegant solution is the use of Nested Product Items, which will be a feature in the next version.

Summary

Product bundles make it easier to sell your product suites, bundles, and packages with CodeMeter License Central. Four configuration settings allow you to tailor the behavior of the bundles exactly to your needs.

Product bundles can be a way to facilitate the sale of complex licenses and act as a bracket holding related products together when they are activated in a CmContainer.

In the next issue, you will read more about how the bundle structure will remain in place in CmContainers by using Nested Product Items. 

News in Brief

CodeMeter 6.20 released



CodeMeter 6.20 now supports the Universal Firm Code with software-based CmActLicenses or CmDongles from firmware version 3.0. Updates are possible for CmDongles with serial number 3-xxx.

New CmCard/SD 4GB now available

With a Hyperstone S8 flash controller, SLC flash, and the Infineon SLM97 as CodeMeter smart card chip, the new CmCard/SD 4GB offers top reliability, speed, long life, and the full CodeMeter capabilities, including Universal Firm Codes.



All new Kontron designs will come equipped with CmASIC, available in the VQFN-32 package with USB and SPI interfaces.



Phoenix Contact Group chooses CodeMeter

The Phoenix Contact Group has chosen CodeMeter for its protection and licensing needs as part of a comprehensive new partnership. The first product with CodeMeter on board will be the programming software PcWorx.



German security delegation at Microsoft's Redmond campus

Wibu-Systems and other security providers joined representatives from Germany's Federal Office for Information Security for a high-profile security meeting at Microsoft's head offices. The purpose of the meeting was to improve mutual understanding of cyber and cloud security and the requirements of the German markets, investigate the details of the technology, and discuss future shared activities in the field. Our clients can benefit from the optimum integration of CodeMeter in Windows 10 versions.



Wibu-Systems demo at the RSA Conference in San Francisco

A highlight of the show was our demonstration of the binding of a CmActLicense with a Trusted Platform Module, an ideal choice for industrial applications that have the secure element installed.



Infineon Security Power Hour at the Mobile World Congress in Barcelona

The Industrial Internet Consortium's President Bill Hoffman spoke about security concerns in the IoT; Stefan Hoffschien of Infineon about certifiable secure elements; Oliver Winzenried about applying these secure elements with CodeMeter.



Wibu-Systems becomes a member of the Trusted Computing Group



The membership will offer a platform for licensing in the TCG.

Representing security in the VDMA working group on medical technology

Oliver Winzenried has been chosen to join the board of the VDMA working group on medical technology with responsibility for security concerns.



Updated certifications

New tests by Underwriter Laboratories (UL), the VDE test and certification institute, and KISC in Korea have again confirmed the conformity of CmDongles with current standards: REACH, the new SVHC list, China RoHS, CE, FCC, VCCI, RCM, KCC, and UL, thus providing certified security for everyone shipping products with CmDongles anywhere in the world.



Kontron trusts CmASIC



Kontron and Wibu-Systems have launched a strategic partnership to augment IoT security. Wibu-Systems' CodeMeter technology will be integrated in Kontron's portfolio of IoT boards, gateways, modules, and systems for robust security in IoT applications.

Success Story: B&R



The Challenge

More and more functionality of machines and manufacturing facilities is determined by the controller software, production settings, and machine data. This essential know-how of the machine producer must be protected and shielded from manipulation by competitors, organized crime, or simple incorrect use. New business models need to be supported. And any solution has to be highly reliable and work even in harsh environments.

The Solution

B&R clients can use their Technology Guarding system to manage the functionality and settings of their machines. The machine operators do not want to pay for functions that they do not need. At the same time, engineers cannot simply provide additional functions free of charge. They need the ability to manage the machine's configuration for each client. B&R enables them to do so with dedicated license management using CodeMeter. The licenses required by each client are managed on a license server and used on the machine itself.

Technology Guarding is produced with Automation Studio software and implemented on a custom B&R version of the CmStick/C.

The Results

The USB dongle is included in B&R's package when the hardware is installed for the first time. Replacing hardware in the field is not an issue, as the CmStick can simply be connected into the new component and will automatically resume its safeguarding function.



The Client

The pioneering spirit of the company's founders Erwin Bernecker and Josef Rainer and their determination to achieve a great leap for the automation industry, are still felt in the company today. Enterprising courage, combined with real vision, have made B&R into a globally successful corporation over a quarter century span. With its excellent sense for developments and trends in the market and its dedication to developing high-tech solutions for the good of its clients, B&R has become an innovation and technology leader in the industry. 

Manfred Mitterbuchner, Technical Manager Automation Software

"With Technology Guarding, B&R clients can rest assured that their products and know-how are protected. B&R integrates the USB dongle CmStick/C from the moment the hardware is installed."



Wibu-Systems Workshops

Wibu-Systems offers you the opportunity to participate in one of the special seminars about:

- Software Monetization, Back office integration
- Licensing of software, with hardware or software-based keys (SmartBind)
- Code protection against illegal use & reverse engineering
- Solutions for embedded software in systems or cloud applications



Access the latest training schedule by scanning the QR Code or visit:
www.wibu.com/trep

Training location	Date	Time
Leuven (BE)	4 May 2016	11.00-15.00
Paris (FR)	24 May 2016	11.00-15.00
Den Bosch (NL)	7 June 2016	11.00-15.00
Cambridge (UK)	14 June 2016	11.00-15.00

Contact your local sales representative for details about the workshops and/or upgrading your test kit or current solution to Universal Firm Code with secure offline license transfer and borrowing.

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Hannover Messe 2016
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SMART MANUFACTURING SUMMIT 2016
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03.05. – 04.05.2016



Industrial Automation Beijing
11.05.– 13.05.2016



Techorama 2016
03.05. – 04.05.2016



Smart Industry Forum
16.06 – 17.06.2016

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**SECURITY
LICENSING
PERFECTION IN PROTECTION**

