



What makes you competitive?

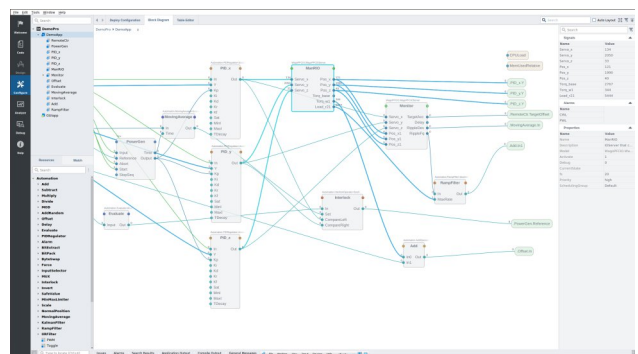
You are competitive through your knowledge of the customer use case and the differentiating features in your solution. In software, this is in your unique algorithms and functions. Efficient software development is about time consumption, so being efficient will save cost and reduce time to market.

CDP Studio is a comprehensive development tool, independent of HW vendors, for distributed, cross-platform, real-time control and monitoring applications.

THE ICEBERG

If we think of software as an iceberg, work that goes into basic functionality and the development environment is hidden under the surface. Customer value is the visible tip of the iceberg; the application.

CDP Studio let you focus on the visible tip, i.e. what your customer pay for, CDP Studio will take care of most of the standard functions, base runtime environment, toolchains, and deployment for you. CDP Studio let you start up with the application to be delivered from day one. It is like hitting the ground running.



How is this possible? Let us take you through a few of the key elements of CDP Studio – and their business impact.





That was truly magically simple!

Teamwork



Software developers capable of creating mission critical control systems are precious resources. CDP Studio improves this by splitting the development process in software coding, application assembly and GUI design. Application assembly and GUI design require no coding. Let the developer bring out the "smart stuff" and the project engineers who knows the customer use-cases and projects create the overall system.

The power of teamwork!

Quality

Software quality is important and anyone that has experienced the cost of buggy software that is almost impossible to maintain, know the impact.

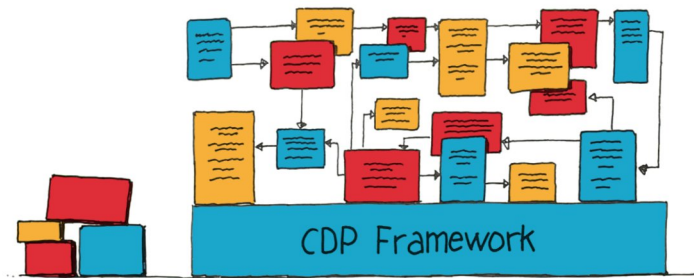


CDP Studio improves this by helping developers a common structure. You build a system from software components that all run as microservices connected together. Each component can be unit tested and stored in software repositories for version control.

The result is applications that are much more robust and maintainable.

Framework

The key to make all of the above happen, is the CDP Framework. This is the glue that let the software components snap in place to build complete applications. This framework is the underlying engine for a control system and is geared towards real-time and distributed systems.



This framework contains all essential functions to run control systems and includes everything from hardware specific toolchains to alarm and event handling.

Building applications on top of a dedicated framework allows you to deliver faster.



FREE TRIAL

CDP Studio is available for installation from our webpage as a fully functional trial. The development system is available for both Linux and Windows.
<https://cdpstudio.com/getstarted/>

Resources



A range of industrial protocols and standard functions is included, this is your toolbox to avoid wasting time on basic

functionality. There are even pre-mapped industrial products like remote I/O and controllers from a range of suppliers. By using the built-in resources, building simple applications for e.g. ad-hoc test setups is easy even without touching software code.

You will build your own toolbox of your company's core knowledge.



Open

The world of open source is accessible and CDP Studio is a suitable platform to integrate the functionality you are looking for.

Adding advanced functions like artificial intelligence and machine learning is then possible with all the advantages of the built-in framework and resources.



BUILDING A DIGITAL TWIN

CDP Studio has a simulation framework included, so starting a project by building a "digital twin" of the physical system even before it is available saves time. Testing and system analysis are also improved by having a virtual target easily available.



Independence

As CDP applications are abstracted from the hardware, this makes it easy to shop around for suitable products. A system may involve multiple products from different vendors, and moving to new hardware is also extremely easy, with the choice of both Linux and Windows.

INDUSTRIAL CONTROLLER

A control system is typically composed of one or more industrial computers and then interfaced through Modbus remote I/O modules. To make this easier, CDP Studio comes with pre-mapped I/O for a range of vendors. Some controllers have dedicated I/O bus solutions or even local I/O ports, so some of these have premade CDP components as well.



EMBEDDED DEVICE

The availability of embedded devices, System on Modules, and Single Board Computers running Linux is growing. With CDP Studio, you have a single tool where you even can move applications between hardware; build a prototype on Raspberry Pi, and move it to the final device later.



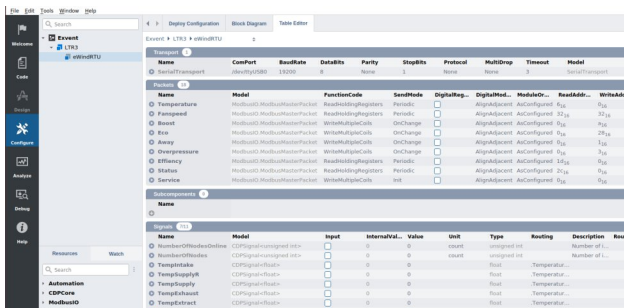
PANEL PC

For operator panels you will have a wide choice of standard panel PCs, both Linux and Windows, so no need to be stuck with a dedicated GUI tool locked to specific HW. With CDP Studio, the user interface is an integral part of the control system.



Workspace

CDP Studio is an Integrated Development Environment (IDE), with a tight integration into the CDP Framework. The IDE runs on Linux and Windows as a standalone complete package, with all dependencies taken care of. Just having a single tool that handles multiple versions of the build systems is a massive time saver when maintaining older deliveries.



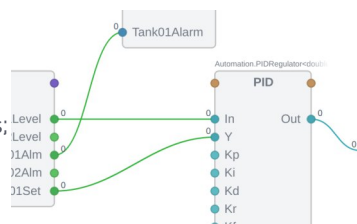
FUNCTION BLOCKS

Even though CDP Studio is a graphical development tool, you will build specific re-usable function blocks (Components) using C++. CDP Studio provide templates and wizards to simplify the setup, basically what is left is to code the logic. It is actually a nice way to do the first steps into C++ coding, even if some think it is "too easy".

```
/* Write your code here */
if(!SetOutOfOrder){
    if (TimebeforeLightChangeTimer > 0){
        TimebeforeLightChangeTimer = TimebeforeLightChangeTimer -1.0/GetFreq;
    } else {
        ChangeTrafficLight1.SendMessage("ChangeLights");
        ChangeTrafficLight2.SendMessage("ChangeLights");
        TimebeforeLightChangeTimer = TimebeforeLightChange;
    }
}
```

APPLICATION ASSEMBLY

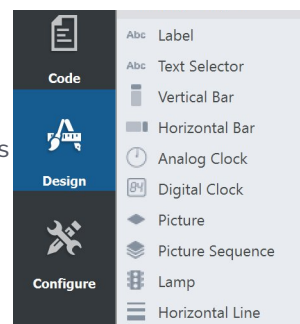
The key philosophy is to move as much as possible of the application development from "coding" to "configuration". The result is a that building or modifying a system is about working with function blocks, signal routing, and parameters; all fully graphical.



The actual application is put together by connecting functions in a block diagram view, not unlike NodeRed and LabView. The power of CDP Studio becomes apparent when a system of multiple applications can be distributed over multiple devices, and still be worked on as a single entity. Moving functions between applications/devices for load balancing, redundancy, or just modularity is extremely easy, as all routing is name based.

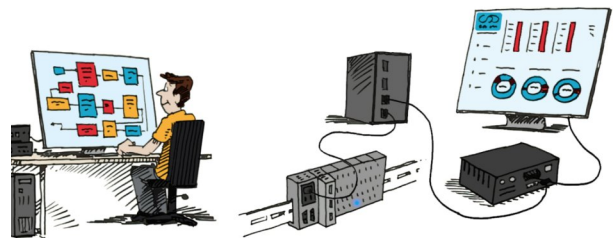
GUI DESIGN

CDP Studio has a GUI design tool fully integrated into the IDE. Designing a modern GUI is easy and straight forward as a wide range of pre-made widgets (graphical elements) and themes are included.



TARGET DEPLOYMENT

Deploying your applications is extremely easy as CDP Studio automatically cross-compile the system to the target devices architecture. The range of supported build systems for different hardware devices save time.



SYSTEM TESTING

Connect the development system to a live system to for efficient testing and verification. To tune your new system, the analyse tool help you to look inside a running system, and even tweak parameters etc.

CDP Studio is at home with moving machinery, simulation, and HIL testing.