

imperix

Give **real power** to your control

Solutions for cutting-edge power electronics



B-Box RCP control platform

The ultimate prototyping controller for power electronics

1

€ 11 600.-
HARDWARE



“ The B-Box RCP accelerates the development and experimental validation of power converter control techniques in a laboratory environment.

2x ARM 1Ghz

NEW
DSP

4 ns PWM resolution

NEW
FPGA

TAILORED DESIGN

The B-Box RCP is exclusively designed to be a digital controller. It notably distinguishes by its configurable analog front-end as well as its rigorous management of timings and PWM signal generation.

134 user I/Os

MORE
I/Os

HIGH-END DESIGN

The B-Box RCP embeds the latest processing devices for state-of-the-art performance. As such, running a closed-loop control algorithm in the hundreds of kHz range is no longer a challenge!

SCALABLE DESIGN

Up to 64 B-Box RCP units can be stacked together, for up to thousands I/Os. Meanwhile, the RealSync technology guarantees that the whole system operates exactly as if it was a single larger controller.

FUTURE-PROOF DESIGN

The B-Box RCP is built over a strong hardware abstraction layer, ensuring that a code that works today will still work in the future, despite the inevitable evolution of the underlying hardware.

NEW

B-Board PRO

Embeddable controller



more information
on imperix.ch



Comprehensive software

Flexible programming and real-time monitoring tools

2

€ 5560.-
SOFTWARE



€ 2730.-
SOFTWARE



ACG SDK

The Automated Code Generation (ACG) SDK enables engineers to program the B-Box RCP and B-Board PRO controllers directly from MATLAB™ Simulink™. The provided toolchain handles fully automated code generation, compilation and upload, in just one click.

“ With the Simulink blockset, engineers are capable of accurately pre-validate their control in simulation, before moving seamlessly to experimentation.

C/C++ SDK

The C/C++ SDK provides a direct way to implement converter control techniques without requiring any simulation software. This approach also offers superior performance over automatically-generated code, as well as greater configuration flexibility.

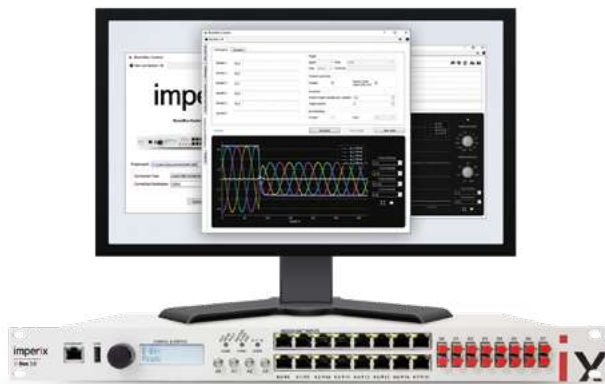
FEATURE	ACG SDK	C/C++ SDK
BBOS operating system	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Blockset for Simulink™*	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C/C++ coding environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BB Control monitoring software	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Code examples	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
User-editable FPGA area	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Multi B-Box operation (I/O extension)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

* Requires a valid MATLAB™ license issued by MathWorks™ and the following toolboxes: Embedded Coder, MATLAB™ Coder and Simulink™ Coder.

BB CONTROL UTILITY

The BB Control Utility software allows to configure imperix controllers, as well as to access, monitor and tune any variable in real-time.

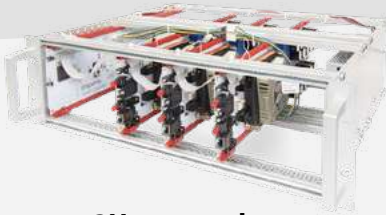
Furthermore, the software provides datalogging capabilities that are similar to those of an oscilloscope coupled with a signal generator. This allows to produce and observe various transient regimes, while logging every data points, thereby facilitating the debugging and tuning of converter control algorithms.



Power modules

Reliable building blocks to implement 1-100kW converter prototypes

3



3U open rack



4U closed rack

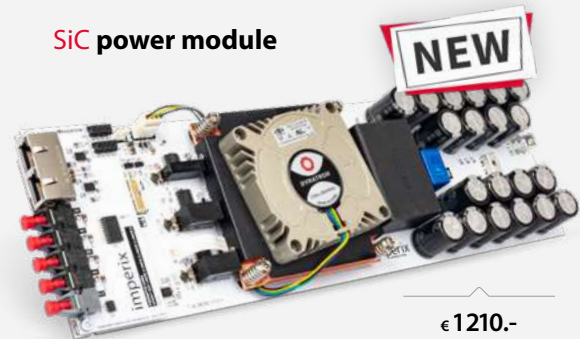
“ Imperix power modules offer a broad range of solutions for everyone’s need and ambition!

NEW SiC HALF-BRIDGE MODULES

FOR ULTRA-FAST CONVERTERS

The new PEB 8024 SiC power module features 1200 V Silicon Carbide MOSFETs semiconductors. It offers significant performance increase over its predecessor, notably regarding the achievable switching frequency, while guaranteeing lower losses. This enables building converters with superior harmonic performance, better efficiency, improved power density or all of them at the same time!

SiC power module



€ 1210.-

PEB SiC 8024
HALF-BRIDGE 800 V / 24 A



€ 980.-

PEB 4046
HALF-BRIDGE 400 V / 46 A



€ 900.-

PEH 2015
FULL-BRIDGE 200 V / 15 A



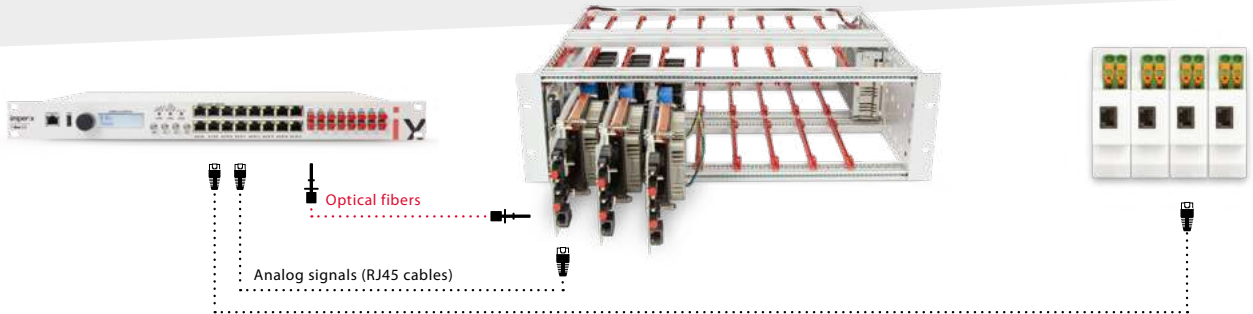
€ 1140.-

PEN 8018
NPC PHASE-LEG 800 V / 18 A

Modular converter systems

A flexible approach to build up almost any converter topology

1 + 2 + 3



BUILD UP CONVERTER PROTOTYPES WITHIN MINUTES!

Imperix products are ideally suited for downscaled prototyping applications. Indeed, with the help of power modules, dedicated digital controllers and accessories, power converters of practically any topology can be built within minutes!

For those who want to work even faster, or save the trouble of building up systems, starting kits and specialized bundles are also available on imperix.ch/products/bundles.

In any case, thanks to the modularity of the approach, elements can always be reused in multiple scenarios and across projects.



from € 19 990.-

STARTER KIT

HARDWARE + SOFTWARE



from € 65 300.-

LITE MMC


HARDWARE + SOFTWARE



from € 66 300.-

MICROGRID TEST-BENCH

HARDWARE + SOFTWARE



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