

Our experience is
our greatest
asset

Overview

Phoenix Systems is a technological startup. The company is focused on development of **Phoenix-RTOS** realtime operating system and software stacks for Smart Grids (e.g. PRIME PHY/MAC).

Phoenix Systems business model is selling licenses for **Phoenix-RTOS** and **software stacks** and providing embedded software engineering services. The company offices are located in Warsaw (PL) and Bristol (UK).

Products

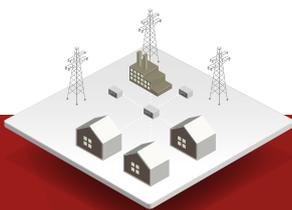
Phoenix-RTOS

Phoenix Systems' **Phoenix-RTOS** is the state-of-the-art, fully proprietary, real-time operating system designed specifically for both single and multicore embedded applications. Its modularity and portability, coupled with a small footprint, virtual memory support and an advanced architecture supporting widely used programming abstractions, ideally suit it to use in modern embedded systems.

PLC PRIME stack

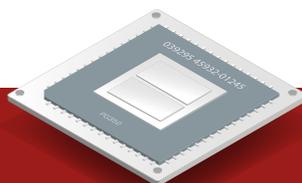
PRIME (PowerLine Intelligent Metering Evolution) is a worldwide PLC standard for Advanced Metering applications based on OFDM modulation. The Phoenix Systems' stack is the **software-based** implementation of the standard designed for low-cost microcontrollers. No DSP extension nor specific hardware required. Choice of analog part (integrated utilizing internal ADC and DAC) can be adjusted on deployment-basis.

Real-time Operating System for ...



Smart Grid

The combination of **Phoenix-RTOS**, Smart Grid software stacks and low-power processors will give customers a distinct commercial advantage in the upcoming Smart Grid market by allowing them to prepare fully integrated solutions.



Configurable Cores

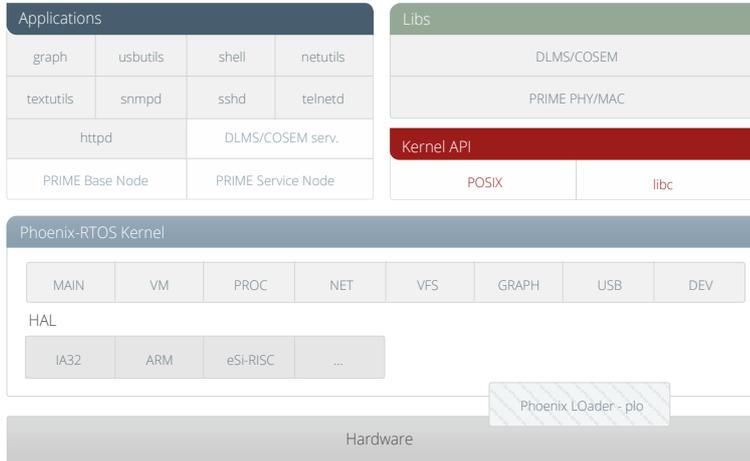
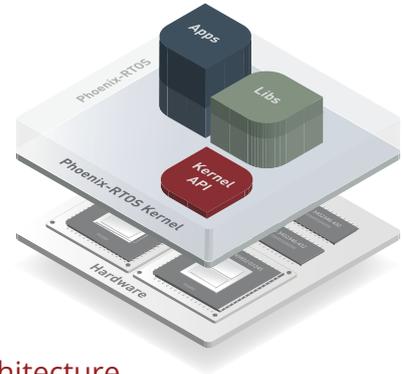
We believe that configurable cores are the future of the embedded systems industry. Due to a modular and advanced architecture, small code footprint, portability and multiplatform support, **Phoenix-RTOS** ideally completes these solutions.



Mission Critical Systems

Dependability evaluation using **SWIFI** (SoftWare Implemented Fault Injection) technique is the crucial part of the development process. This allows for estimating the system behavior in case of persistent or transient hardware faults.

Phoenix-RTOS is the state-of-the-art, fully proprietary, real-time operating system. Phoenix-RTOS is based on proprietary, reentrant, preemptive, layered kernel.



Architecture

System consists of four main parts: kernel, kernel API libraries, libraries and set of applications. Kernel API enables an easy way to compile and run popular UN*X applications and libraries.

The lowest part of the kernel is HAL that hides the differences between hardware and enable easy porting for new architectures. To satisfy the real-time requirements the computational complexity of algorithms used inside kernel critical section is **O(1)** and duration of sections varies from **80 to 3000** cycles.

Why Phoenix-RTOS?

Phoenix-RTOS is the real-time operating system with rich functionality and appropriate vendor support.

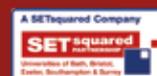
	Phoenix-RTOS	VxWorks	QNX	Nucleus	ThreadX	GNU/Linux
Hardware platforms	IA32, ARM, eSi-RISC	IA32, ARM, Power, MIPS, SH, SPARC, M68K, i960	IA32, ARM, Power, MIPS, SH	ARM, Power, MIPS, M68K	IA32, ARM, Power, MIPS, SH, ARC, M68K, BlackFin, AVR32, MicroBlaze, Nios II, SHARC, Xtensa	IA32, IA32E, IA64, ARM, Power, MIPS, SH, SPARC, M68K, ALPHA, PA-RISC, v850, Xtensa
Non-MMU architectures	●	●		●	●	
Virtual memory	●		●			●
Memory protection	●	●	●			●
Min. phys. memory	few KBs	few KBs	few KBs	few KBs	few KBs	few KBs
Max. phys. memory	unlimited	unlimited	4 GB	4 GB	4 GB	unlimited
Processes	●		●			●
Threads	●	●	●	●	●	●
IPC	●	●	●	●	●	●
VFS	●		●			●
TCP/IP	●	●	●	●	●	●
USB	●	●	●	●	●	●
Dynamic link libraries	●		●			●
POSIX API	●	●	●			●
Realtime	●	●	●	●	●	
Dependability analysis	●					
Error propagation barriers	●					

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Company is a member of SETsquared's Bristol Business Acceleration Centre