



# ECHORING™ BASICS

EchoRing™ is a ground-breaking wireless technology designed for applications that require time-critical performance and high-robustness simultaneously. Based on extensive research and the introduction of massive cooperation EchoRing™ enables a deterministic and low-latency wireless communication with a cable-like performance.

The EchoRing™ software runs on standard hardware platforms, making it a cost-effective and highly flexible solution for time-critical communication requirements.

EchoRing™ enables new product concepts. For instance, with EchoRing™ an ordinary industrial robot can develop into a cheaper and lighter product with new mobile and cooperative capabilities.

## AGNOSTIC HARDWARE

OSI LAYER 1

### DYNAMIC COOPERATION

Massive cooperation is the underlying technology of EchoRing™. Our dynamic cooperation schemes safeguard the guaranteed performance levels.

### SEAMLESS ROAMING

Wireless coverage is an important requirement. EchoRing™ offers features to extend the coverage introducing a novel seamless roaming approach.

### ADAPTIVE COEXISTENCE

EchoRing™ deals with potential interference scenarios intelligently and adapts its communication pattern dynamically at runtime.

### MACHINE LEARNING

Reinforcement learning incorporated in EchoRing™ is used to optimize the system performance at runtime.

### FLEXIBLE TOPOLOGY

EchoRing™ is not limited to a fixed set of topologies. In fact, EchoRing™ adjusts automatically to the need of the scenario or application.

### EXTENDED SECURITY

Besides standard security measures, EchoRing™ introduces additional encryption and authentication features.

### SERVICE LEVEL

EchoRing™ introduces a service-oriented wireless communications link extending the opportunities of the higher layer applications.

### FLEXIBLE IMPLEMENTATION

EchoRing™ can either be realized as firmware (high performance) or as a driver (regular performance).



ECHORING™

## TRANSPARENT INTERFACES

OSI LAYER 3



## ECHORING™ DEMO-KIT

EchoRing™ Demo-Kit is the first wireless communications prototype using our technology EchoRing™. The Demo-Kit can be ordered by contacting us directly and includes the following:

- NUC
- 2 Types of stations:
  - Fix: to be power directly to the power line
  - Mobile: with a power bank integrated
- Cabling
- Web GUI

