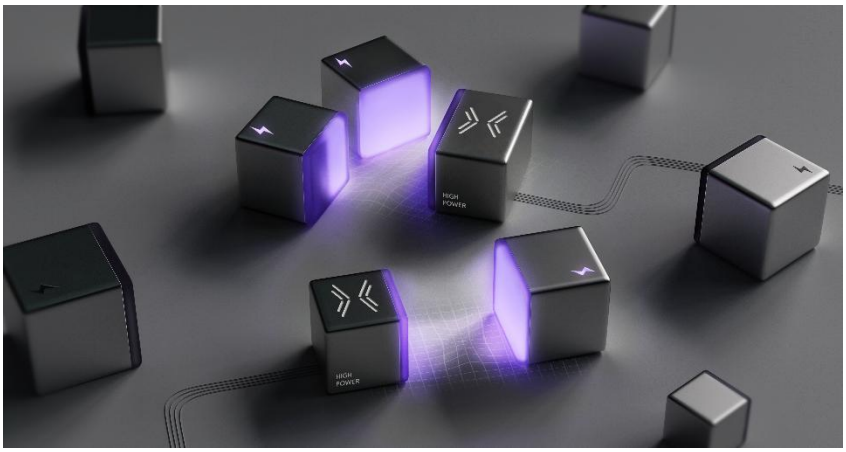
# AWL-E long-range wireless power transfer

Associated Partner

## Solution for contactless power in industrial, mobility & consumer applications



AWL-Electricity offers a comprehensive wireless power platform that delivers electricity over distance and through common building and product materials, including metal, using MHz resonant capacitive coupling.
In collaboration with Infineon, the solution combines AWL-E's patented power-transfer architecture with Infineon's CoolGaN™ and OptiMOS™ devices to achieve high efficiency at high switching frequencies while keeping the hardware compact and cool.

By utilizing Infineon's GaN and MOSFET portfolio in the inverter and power-conversion stages, the system can create spatial "power zones" that energize receivers even when they are moving, misaligned, or fully enclosed.

This approach enables several powerful operating modes for a wide range of applications.

### Operating modes

- **High-power point-to-point transfer**
  Focused, kW-class wireless power links for applications such as autonomous mobile robots, AGVs, drones, and other demanding industrial or mobility devices that benefit from fast, contactless charging.
- **Long-range multi-device "power bubble"**
  A three-dimensional power area that can supply multiple receivers at once, enabling cord-free operation of sensors, consumer devices, and accessories within the same wireless power zone.

### Enabled by




CoolGaN™
delivers outstanding switching performance with significantly lower switching losses compared to traditional Silicon-based solutions, enabling power supplies and converters to operate at higher frequencies with greater efficiency.




OptiMOS™
deliver the exceptional switching speed, ultra-low on-state resistance, and high-power density required for efficient and reliable next-generation power conversion systems.

- **Through-surface and through-metal installations**
  Power transmitted seamlessly through walls, floors, and metal or composite structures, enabling fully sealed designs and hidden infrastructure in factories, vehicles, and smart buildings

**Key Solution Benefits**

- **True spatial freedom** – Devices no longer need exposed connectors or precise alignment, supporting continuous operation while moving and reducing mechanical wear and tear.
- **Improved uptime and reliability** – Contactless power delivery eliminates connector failures and cable damage, lowering maintenance requirements in industrial and mobility use cases.
- **Design flexibility and robustness** – Enables sealed, port-less products and embedded power surfaces, enhancing durability against dust, moisture, and harsh environments.
- **Reduced battery dependence and waste** – Long-range, multi-device powering can decrease the number of replaceable batteries and charging accessories needed in a system.
- **Fast integration with proven components** – Built on Infineon's CoolGaN™ and OptiMOS™ platforms, supported by evaluation boards, reference designs, and global application expertise.

With these capabilities, AWL-Electricity's solution enables long-range wireless power for smart factories, next-generation mobility, and consumer ecosystems, supporting intuitive, cord-free user experiences and more flexible system architectures.

**Target applications**




Discover more

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