

Tactical ground

True unmanned autonomy



Tactical ground



IPP's high-power wireless charging technology enables fully autonomous, maintenance-free charging in the harshest operating environments.

Unmanned Ground Vehicles (UGVs) operate in mud, dust, water, and extreme vibration, where conventional charging connectors can clog, corrode, or fail, reducing operational readiness.

IPP replaces physical connectors with a fully sealed, contactless charging system with zero moving parts. The result is reliable autonomous charging, lower maintenance, and dependable performance in demanding defence and commercial environments.

TECHNOLOGY ADVANTAGES

Capable of 10 kW+ of power transfer, supporting multiple C-rate charging, maximising operational readiness and the ability to charge large ground robotics.

Elegant physics and MHz frequency allow simple, efficient, rugged design and a high tolerance to coil misalignment.

Operating at 13.56 MHz minimises efficiency loss (98% efficiency ring to ring). Transmission to nearby metallic components or objects is negligible.

Thin air-cored copper rings (or electroplated 3D printed materials) allow a low subsystem mass, preserving payload and endurance for UGVs and ground robotics.

Transmitter and receiver coils can be flexible in terms of shape, size and arrangement, allowing high-power wireless charging solutions in space-restricted areas.

Bi-directional power and data transfer capability.

To discuss a specific application or mission requirement, contact us.

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