INTERECHA

DUAL-USE CAPABILITIES BRIEF

Ruggedized retrofit cowls & sheltered docking bays for autonomous fleets

01 / SHARED ARCHITECTURE

Vehicle Retrofit Cowl: native-hardpoint brackets, hermetic shutter, conical guides and self-wiping blind-mate power pins.

Expeditionary Swap Shelter: weather-sealed canopy, pneumatic purge, single-axis transfer ram and 4-8 buffered cassettes.

Designed to MIL-STD-810H and industrial ingress requirements. Configuration-dependent qualification.

02 / MARKETS & INTEGRATION

Defense: tracked/wheeled UGVs, tactical UAS and tactical microgrids. Rear-echelon charging with standardized cassette logistics.

Commercial: autonomous agriculture, open-pit mining, forestry and seaport terminals.

Reduce charging pauses and remove manual high-voltage cable handling.

Engineering engagement: interface audit, fitment review and configuration-specific validation.

03 / TACTICAL PARAMETERS

Mechanical swap cycle: < 30 seconds (ram extract/insert) (Kinematic simulation verified)

Total turnaround time: < 60 seconds (ingress to clear) (Target operational budget)

Ingress protection target: Designed to meet IP67 (closed) (Pre-prototype engineering target)

Environmental standard: Designed for MIL-STD-810H (Chamber testing slated Phase 1)

Docking tolerance: +/-25 mm omnidirectional (CAD compliance model)

Contact cycle life target: 5,000+ tactical insertions (COTS terminal spec baseline)

Bus compatibility: 24V / 48V / 72V / 120V DC (Architecture configurable)

Particulate mitigation: High-velocity air-knife purge (Integrated bay feature)

04 / COMMERCIAL PARAMETERS

Mechanical swap cycle: < 45 seconds (ram extract/insert) (Kinematic simulation verified)

Total turnaround time: < 90 seconds (ingress to clear) (Target operational budget)

Ingress protection target: Designed to meet IP66 (closed) (Pre-prototype engineering target)

Environmental standard: Industrial severe-duty (ISO 12100) (Chamber testing slated Phase 1)

Docking tolerance: +/-35 mm guide-rail assisted (CAD compliance model)

Contact cycle life target: 10,000+ industrial insertions (COTS terminal spec baseline)

Bus compatibility: 48V / 72V / 96V DC (Architecture configurable)

Particulate mitigation: Compressed air / mechanical wipe (Integrated bay feature)

TRL 4 pre-prototype; ratings are engineering design targets.

Request platform evaluation at info@interecha.com

Design targets. Qualification required.