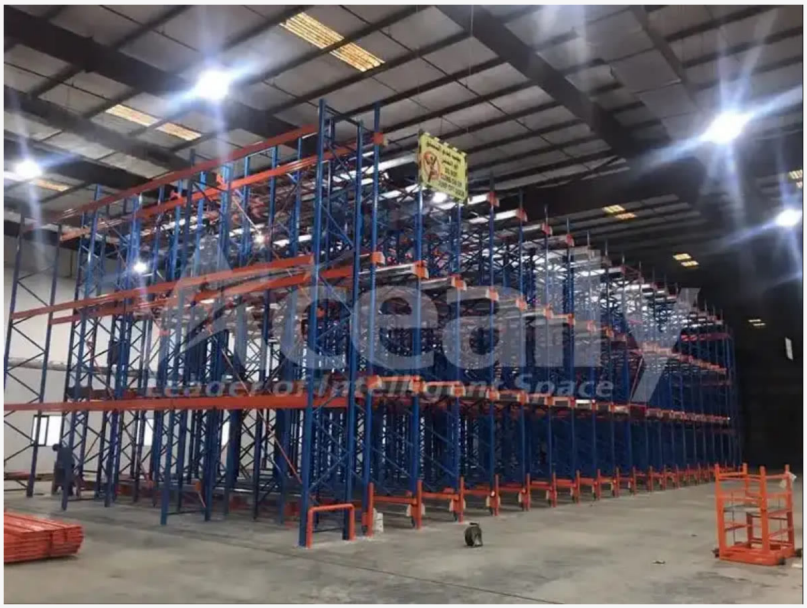
Saudi Smart Logistics Expo: Aceally's Automated Shuttle Rack and Mezzanine Systems for Modern Warehouses





XIAMEN, FUJIAN, CHINA, October 30, 2026 /EINPresswire.com/ -- RIYADH, Saudi Arabia - Announcing next-generation warehouse automation at the Saudi Smart Logistics Expo, Aceally (Xiamen) Technology Co.,Ltd. (Aceally Group) introduces its advanced automated radio shuttle rack system and high-capacity industrial mezzanine platforms. Designed to accelerate logistics modernization under Saudi Vision 2030, these integrated storage technologies provide commercial distribution centers across the Gulf region with high-density pallet handling, vertical space multiplication, and enhanced operational throughput. Aceally Group brings 30 years of specialized manufacturing experience to the exhibition, demonstrating factory-engineered automation systems tailored to regional logistics growth.

Modern warehouse facilities across Saudi Arabia face rising land values and increasing inventory turnover requirements. Logistics operators must choose specialized equipment tailored to specific material handling workflows. Aceally Group presents two separate core systems at the exhibition to address different operational zones within the facility. The automated radio shuttle racking system maximizes pallet density in deep-lane bulk storage zones. Meanwhile, heavy-duty industrial mezzanine platforms multiply usable square footage vertically for manual order

picking, sorting, and packing activities.

High-Density Semi-Automated Radio Shuttle Racking Capabilities

Semi-automated radio shuttle racking represents a major technological advancement for high-density pallet storage across commercial distribution centers. The system utilizes self-propelled, battery-powered shuttle vehicles controlled by wireless remote devices to transport pallets deep inside storage channels along precision steel rails. Because forklifts remain outside the racking structure, loading and unloading cycle times drop significantly, while operator safety hazards and structural frame collision risks are virtually eliminated.

Radio shuttle systems support both First-In, First-Out (FIFO) and Last-In, First-Out (LIFO) inventory management, allowing warehouse managers to adapt lane configurations based on specific SKU rotation requirements. The shuttle vehicles integrate seamlessly with electronic Warehouse Management Systems (WMS) via wireless communication protocols, optimizing inventory tracking. In cold storage and sub-zero freezer environments operating down to -25 deg C, shuttle racking maximizes spatial density, reducing refrigerated air volume and lowering facility energy overhead.

Vertical Space Multiplication via Industrial Mezzanine Platforms

Industrial mezzanine floor platforms provide structural multi-tier flooring that transforms unutilized overhead warehouse airspace into productive operational space without the cost and disruption of facility relocation. Engineered using heavy-duty cold-formed structural steel columns and main support beams, these customizable systems by Aceally Group support heavy floor loads ranging from 300 kg/m2 to over 1,000 kg/m2. They seamlessly integrate with pallet racking or shelving to support light machinery, assembly stations, sorting areas, or overhead administrative offices.

Mezzanine platform decking options include high-strength steel chequered plates, open steel grating for overhead light transmission, and heavy-duty structural wood panels. Integrated safety features include perimeter handrails, kickboards, access staircases, and pallet loading safety gates complying with international industrial safety codes. Installing a structural mezzanine enables distribution centers and manufacturing plants to double or triple usable floor area while maintaining operational flexibility.

Distinct Application Scenarios Across Regional Logistics Facilities

Modern logistics centers achieve peak operational flow by deploying shuttle racks and mezzanine platforms in dedicated facility zones. Semi-automated shuttle racking functions as the primary high-density reserve storage zone, managing bulk palletized goods efficiently. Battery-powered shuttle carts maneuver pallets along continuous channel rails, delivering high spatial density and rapid retrieval.

Industrial mezzanine platforms serve as dedicated multi-level fulfillment zones within the same facility footprint. Upper mezzanine tiers accommodate carton picking, goods sorting, and parcel packing operations. Facility engineers can install vertical reciprocating conveyors, freight hoists, and spiral package chutes to connect mezzanine levels with ground-level dispatch docks. This distinct spatial allocation creates clear separation between bulk pallet replenishment and fast-paced manual order fulfillment.

Thermal and Corrosion Defense for Middle East Facilities

Warehouse infrastructure operating across Saudi Arabia and GCC markets faces extreme ambient temperatures, unconditioned warehouse heat, and coastal atmospheric humidity. Racks and structural mezzanine platforms installed in non-climate-controlled logistics buildings risk surface oxidation, rust, and coating degradation if raw steel profiles lack specialized chemical pretreatment and protective coatings. Ensuring long-term physical structural integrity requires advanced surface preparation technology.

To protect structural components in severe Middle East operating conditions, Aceally Group applies a standardized surface preparation process under technical standard TS-PRC-2026-01. The chemical pretreatment phase includes alkaline degreasing using a 5% to 10% solution heated between 40 deg C and 60 deg C for 8 to 15 minutes under ISO 8502-1 and ISO 8502-2. Following a two-stage neutral water rinse under ISO 8502-9, components undergo zinc phosphating under ISO 9717, forming a 3 to 8 micron crystalline layer that maximizes paint adhesion before applying heat-resistant powder coating or hot-dip galvanizing.

Q235B Structural Steel Engineering and Regulatory Credentials

Safety and structural durability represent essential priorities when deploying automated shuttle systems and multi-tier mezzanine platforms. Aceally Group manufactures all load-bearing components using prime Q235B structural steel, providing excellent tensile strength, yield performance, and structural stability under heavy dynamic loads. Cold-formed uprights, support beams, and rail profiles undergo precision roll-forming under an ISO 9001 certified quality management framework.

The manufacturing process holds official CE certification and Australian AS4084 compliance, verifying that material specifications, weld penetration depth, and structural load calculations satisfy stringent international safety standards. Structural engineering designs incorporate global industry standards, including American RMI (Rack Manufacturers Institute) guidelines, European FEM (Fédération Européenne de la Manutention) codes, and OSHA safety regulations, providing regional logistics contractors with verified structural safety documentation.

Single-Line Specialization Advantage of Factory-Direct Racking Supply

Sourcing automated shuttle racking and mezzanine platforms directly from a specialized factory manufacturer ensures that Middle East buyers receive Q235B structural steel, verified CE and AS4084 certification documentation, surface protection, and direct automation engineering support, accelerating warehouse commissioning compared to purchasing uncertified storage structures through trading intermediaries where unverified steel grades, inconsistent surface treatment, and missing structural load calculations introduce severe safety risks and facility operational delays. This direct factory partnership model provides warehouse contractors with transparent technical support, dependable delivery schedules, and high commercial value.

Conclusion and Smart Logistics Engagement Portal

Aceally Group's presentation at the Saudi Smart Logistics Expo highlights automated radio shuttle racking and industrial mezzanine platforms engineered for modern warehouse expansion. By combining Q235B structural steel engineering, AS4084 and CE certifications, heat-resistant surface protection, and 150,000 square meters of manufacturing capacity across four production facilities, Aceally Group supports regional logistics automation across Saudi Arabia.

To request custom warehouse automation CAD layout designs, download technical product specifications, or schedule an engineering consultation for Saudi Arabian projects, visit the official solution portal: https://www.acerackingsystem.com/shuttle-racking/. For direct engineering consultations, contact the technical sales team.

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