

# **Pack battery automation architecture**





## Overview

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Nowadays, battery design must be considered a multi-disciplinary activity focused on product sustainability in terms of environmental impacts and cost. The paper reviews the design tools and method.

Why do you need a smart battery pack assembly line?

Having a smart, automated assembly line helps you grow faster and deliver on time. It shows customers you're serious about quality and ready to meet demand. In a competitive market, that can make a big difference. Creating a high-performance battery pack assembly line requires two crucial elements: mechanical design and controls engineering.

How does a battery pack assembly line work?

A battery pack assembly line involves several key steps to ensure the final product is safe, high-performing, and ready for use. Here's a breakdown of the main operations: Cell Testing and Sorting: The first step is to test and sort the battery cells. Only the best-performing cells move forward to ensure high-quality output.

What is the pack assembly process for cell-to-pack lines?

The pack assembly process for cell-to-pack lines involves several critical steps to ensure the battery pack is reliable. The first step is arranging the cells in the desired configuration to maximize space and optimize performance. Once the cells are positioned, they must be held in place.

What are the technical parameters of intelligent battery pack?

Intelligent battery pack finished product handling and packaging system. 3: Technical Parameters: Total production line length: 16 meters. Production capacity: Up to X battery packs per hour (customizable). Precision level:  $\pm 0.1$ mm positioning accuracy. Processing efficiency: 99.5% uptime.



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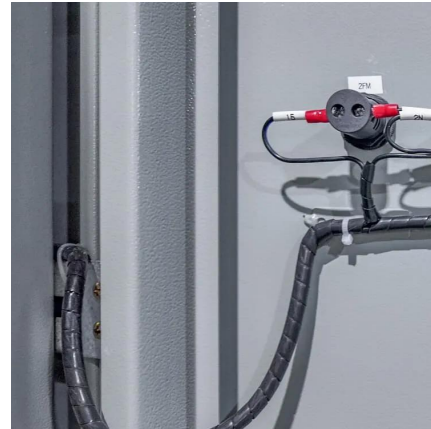
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For cell/module pack assembly, PIA Automation offers flexible and highly automated systems for the efficient production of battery cells, modules, and battery packs. These ...

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Moreover, they delivered a House of Quality chart for an EV battery to describe the relationships between the customer's requirements and the architecture of the battery pack.

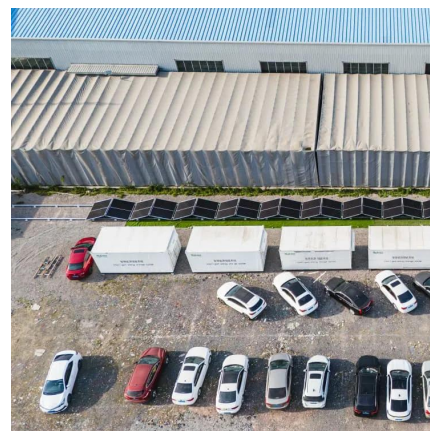
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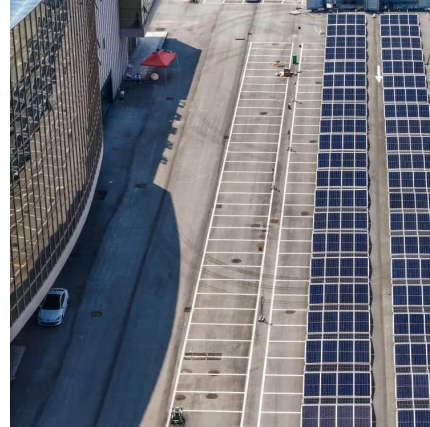


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