The market for power modules will be worth $6B by 2024 with a 2018-2024 compound annual growth rate (CAGR) of 6.6%. The power module market plays a key role in several industrial applications, such as motor drives and traction. In 2018, the biggest power module market segment is motor drives at $1.4B.

Module packaging currently faces several challenges, from housings to die attach and connections. To remain competitive, power module makers must deliver high reliability while remaining cost efficient.

In this dynamic context of the power module packaging market, System Plus Consulting provides a deep comparative review of packaging technology and cost, of 10 Industrial Power Modules from the main suppliers on the market: Infineon, Mitsubishi, IXYS, Vincotech, ABB, and Wolfspeed.

System Plus Consulting analyzes several packaging technologies to provide an insight into their structures, processes and costs. We look at their external parts, including cases, covers and baseplates, and their internal structure, including substrates, assembly of the substrates and modules, die and substrate attach and connections.

The cost of each power module packaging is detailed including external part costs, assembly cost per process step, and yield losses cost.

The ten Industrial Power Module packaging have been compared in terms of packaging structure, assembly, and electrical performance. Finally, they have been compared in terms of packaging cost, including package cost breakdown, cost per commutation cell, cost per power in $/kVA, cost per module package surface and per package volume.

COMPLETE TEARDOWN WITH
- Detailed optical and SEM photos
- Precise measurements
- Packaging assembly process flow
- Packaging cost analysis
- Technology comparisons of packaging structure, assembly, and electrical performance
- Packaging cost comparisons per commutation cell, power, package surface, package volume
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System Plus Consulting Services

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6.1 The Seller shall be liable for any delay in performance directly or indirectly caused by or resulting from acts of nature, fire, flood, accident, riot, war, government intervention, embargoes, strikes, labour difficulties, equipment failure, late deliveries by suppliers or any other difficulties which are beyond the control, and not the fault of the Seller.

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6.4 The deadlines that the Seller is asked to state for the mailing of the Products are given for information only and are not guaranteed. If such deadlines are not met, it shall not lead to any claim, cancellation or penalty for the orders, except for non-acceptable delays exceeding 3 months from the stated deadline without information of the reason of such delay, the only, the Buyer shall be entitled to ask for a reimbursement of its first down payment to the Seller.

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