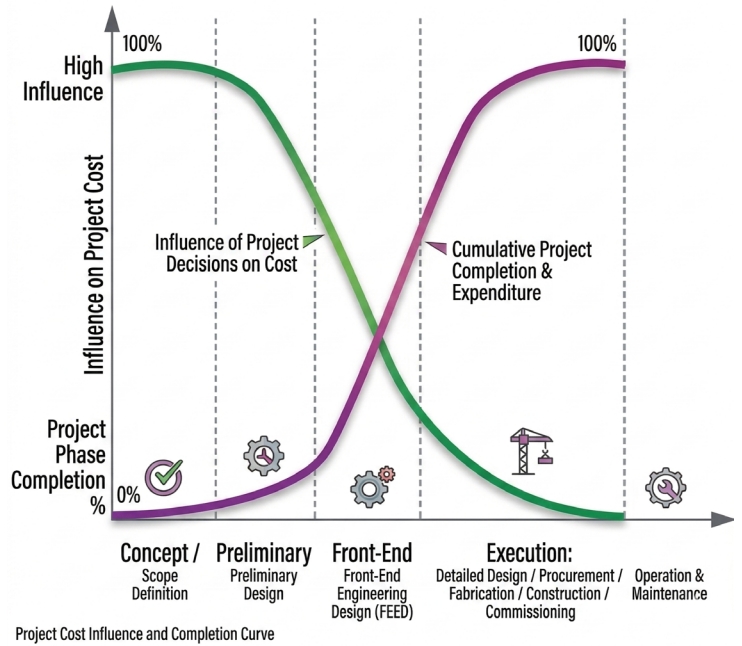




# Industry Challenges

## Project Cycle Cost Impact Model

In today's rapidly evolving society, the core challenge facing enterprise R&D lies in this paradox: the early-stage decision-making window is extremely narrow, yet it locks in the majority of costs; while substantial investments are made in the later stages, the cost of correcting mistakes becomes prohibitively high—resulting in a serious mismatch between risks and returns. This requires enterprises to make accurate judgments at the very early stage to address market uncertainty.



## The 15-85 Law

Another challenge facing enterprises today is this: excessive focus on explicit procurement costs, while ignoring the implicit costs that account for 85% of the total. Enterprises often lack systematic coordination across design, supply chain, after-sales and other links, leading to high manufacturing costs, rework, quality and after-sales issues caused by early-stage decision-making errors—ultimately driving up the total cost of ownership (TCO) significantly.

15%

VISIBLE COST

Fastener Procurement Cost

85%

HIDDEN COSTS



# Services Offered by ZCJ

Total Cost Optimization Expert from Prototype Design to After-Sales



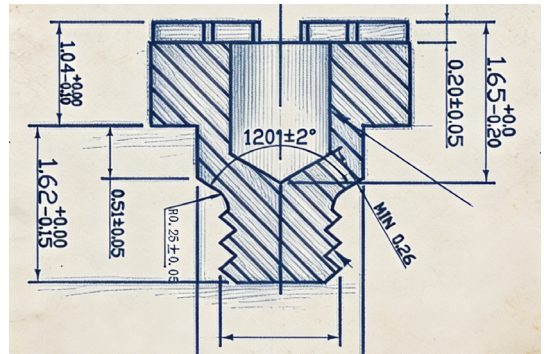
Rapid Prototypes



Professional Training



Professional Testing Services

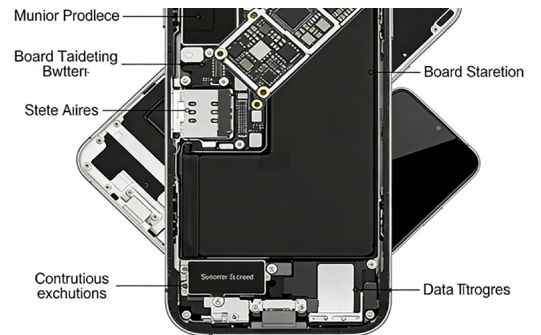


Professional Design Consulting

<p><b>OPTIMIZATION PROPOSAL I:</b></p> <ul style="list-style-type: none"> <li>- CHANGE FROM HOT FORGING TO COLD FORGING PROCESS: FORMING CAVITY INCREASED</li> <li>- MATERIAL CHANGED TO 10B21</li> <li>- TOOLING COST: 78,000 RMB</li> <li>- MDE: 100,000 UNITS, TOTAL PRODUCTION 500,000 UNITS.</li> </ul>	<p><b>PROPOSAL II:</b></p> <ol style="list-style-type: none"> <li>1: REMOVE 4 R5.0 CORNERS, MAKE INTO STRAIGHT SIDES,</li> <li>2: INCREASE ROOT RADIUS TO R0.8.</li> </ol>
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IF ABOVE CONDITIONS AND PROCESSES ARE MET, UNIT COST REDUCED BY 0.75 RMB, TOTAL COST SAVINGS: 375,000 RMB

Continuous Process Improvement



Professional Teardown & Analysis



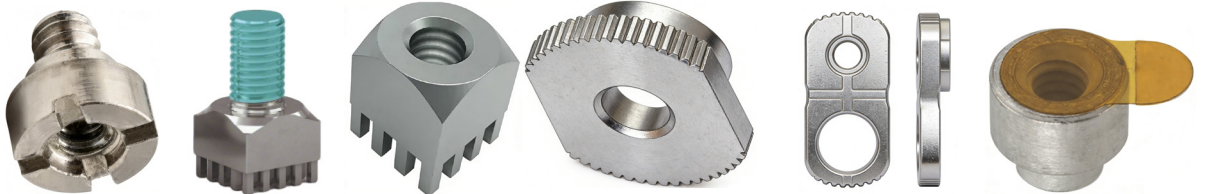
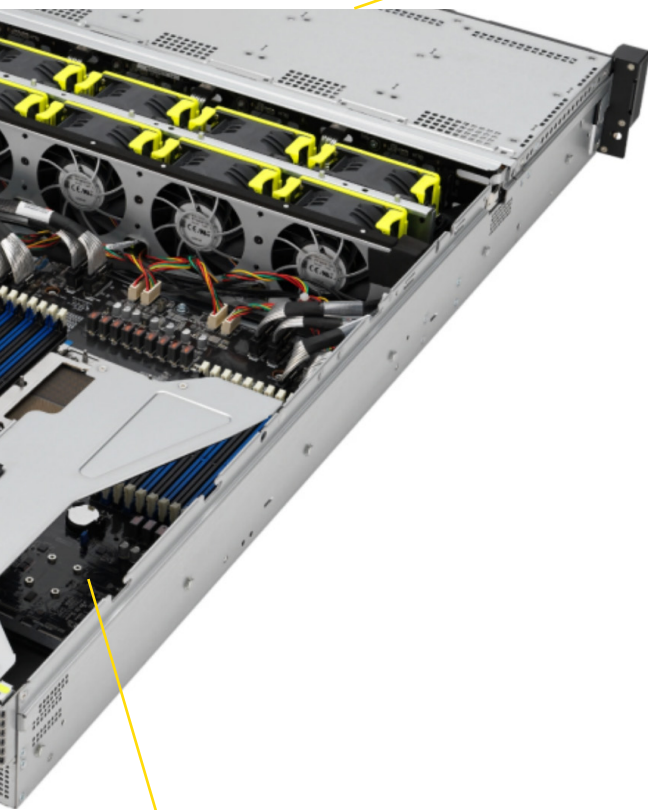
Riveting Products - Blind Riveting, Press Riveting  
(Sealed & Non-sealed)



Screws - Locking, Sealing, Captive Screws, etc.



UQD Connectors

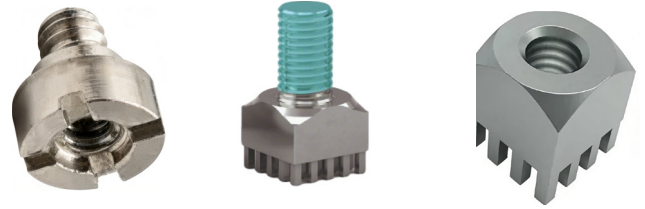


PCB applications, SMT, etc.

## PCB Application

Tin-plated copper nuts and small plates are used for PCB soldering to form threaded connections and can also be applied for height spacing. Both can be supplied in tape & reel packaging.

High-current terminals are used in high-current applications to conduct electricity while connecting PCBs and forming reliable threaded connections. Threads (internal and external) can be pre-coated with adhesive for locking.



## Riveting Products

Clinching nuts/studs, rivet nuts and blind rivets are used for the fastening connection of sheet metal cabinets in HPC-AI servers, while clinching grounding terminals are used for the grounding connection of sheet metal.

Sealed clinching studs, pre-coated rivet nuts and rivets are used for the connection of waterproof sheet metal cabinets, achieving an IP68 sealing rating.



## UQD Connectors

UQD connectors feature drip-free, high-flow and quick-connect capabilities. They are used in liquid cooling systems for AI servers, enabling fast, sealed connections between cold plates and pipelines to ensure efficient heat dissipation and convenient operation & maintenance.



## Locking, Sealing, and Captive Screws

Bolts achieve locking through combination and pre-coated thread locking compound (chemical or physical). Sealing up to IP68 can also be realized by pre-coating compound on the head or thread, or adding a sealing ring.

Brexit screws (PEM studs) can be removed from the panel without the screw falling off.



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