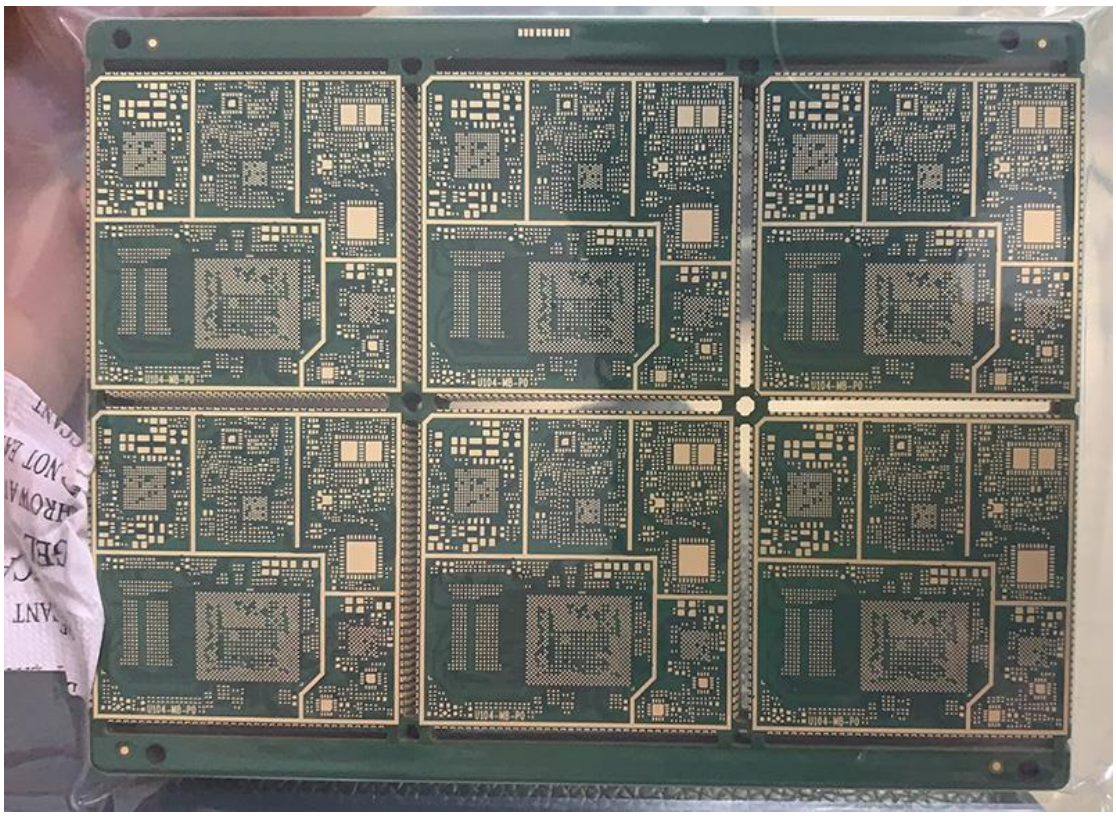

Smart Device Mainboard Module Specifications
Core Features at a Glance

Parameter	Specification	Key Benefit
Layer Technology	10-layer 2nd-order HDI	✅ Supports ultra-compact, high-speed designs
Thickness	1.0mm (±0.05mm)	✅ Ideal balance of rigidity and space savings
Surface Finish	Half-hole ENIG + OSP	✅ Combines reliability and cost efficiency
Special Process	Half-hole plating (PTH edge contacts)	✅ Enables secure board-to-board connections

Technical Advantages Explained

1. 10-Layer 2nd-Order HDI Architecture

- **Advanced Interconnect**:
  - Laser-drilled microvias (50μm) connect 1-2/2-3 and 9-10/8-9 layers
  - Stacked copper-filled vias for power integrity
- **Performance Benefits**:
  60% higher component density vs standard 10-layer boards
  Supports **PCIe 4.0 (16Gbps)** and **LPDDR5 (6400Mbps)** signals

2. 1.0mm Optimized Thickness

- **Precision Engineering**:
  • Uses ultra-low-loss materials (Dk=3.5 @10GHz)
  • Thickness variation <±0.03mm across panel
- **Real-World Advantages**:
  ✅ Perfect for **slim smart devices** (<8mm chassis)
  ✅ **30% better heat dissipation** vs 1.6mm boards

3. Half-Hole Plating + Dual Surface Finish

Feature	Half-Hole ENIG	OSP Option
Process	Gold-plated PTH edge contacts	Organic solderability coating
Thickness	Ni 5μm + Au 0.1μm	0.3μm organic layer
Best For	Board stacking connectors	High-volume SMT assembly
Durability	500+ mating cycles	Cost-effective solution

Performance Comparison

Metric	This Module	Standard 10-Layer
Max Signal Speed	16Gbps	8Gbps
Thermal Resistance	15°C/W	22°C/W
Weight (100x80mm)	18g	25g

Ideal Applications

- Premium smartphones/tablets
- AIoT edge computing devices
- High-end wearable health monitors

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