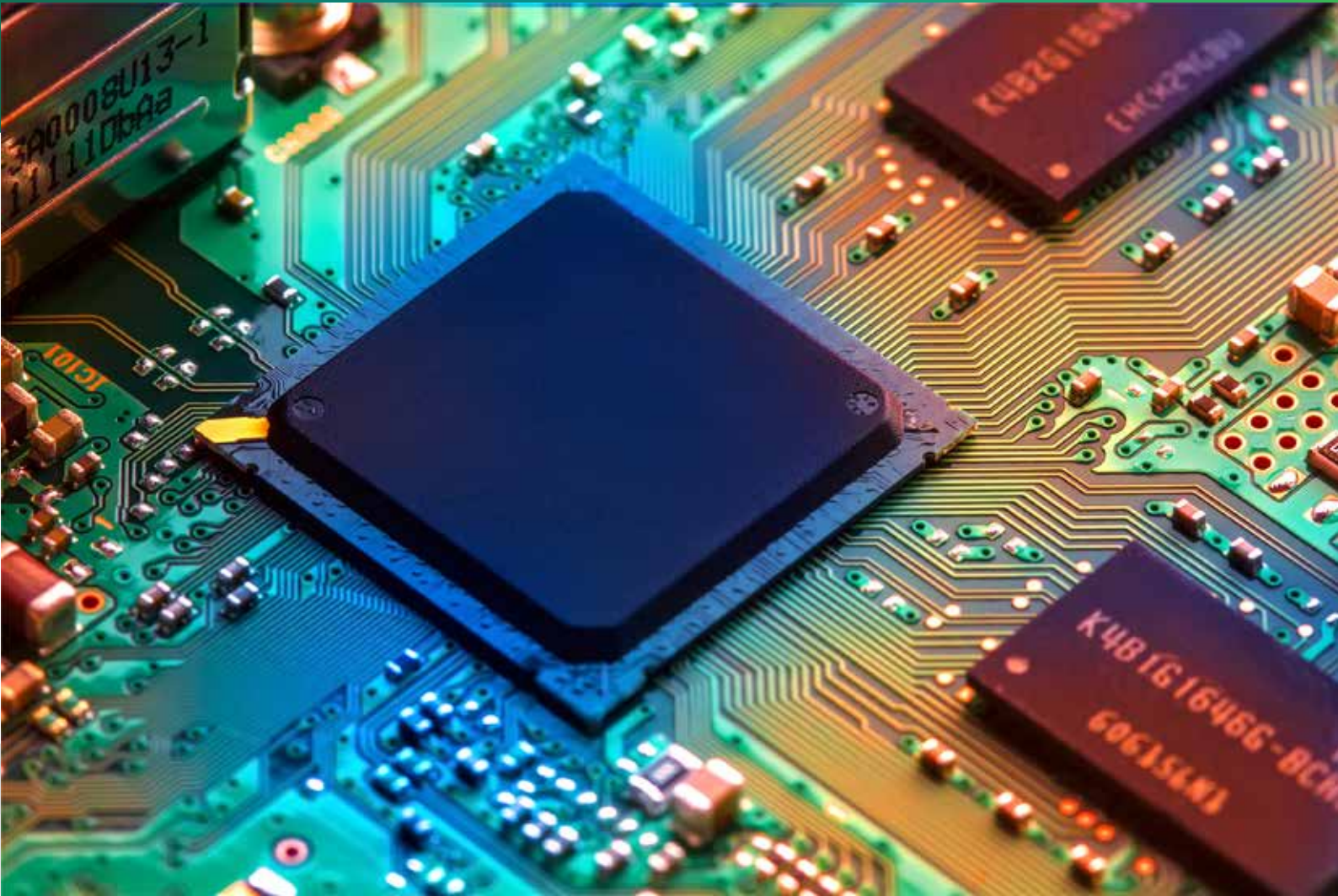


Embedded Design Services



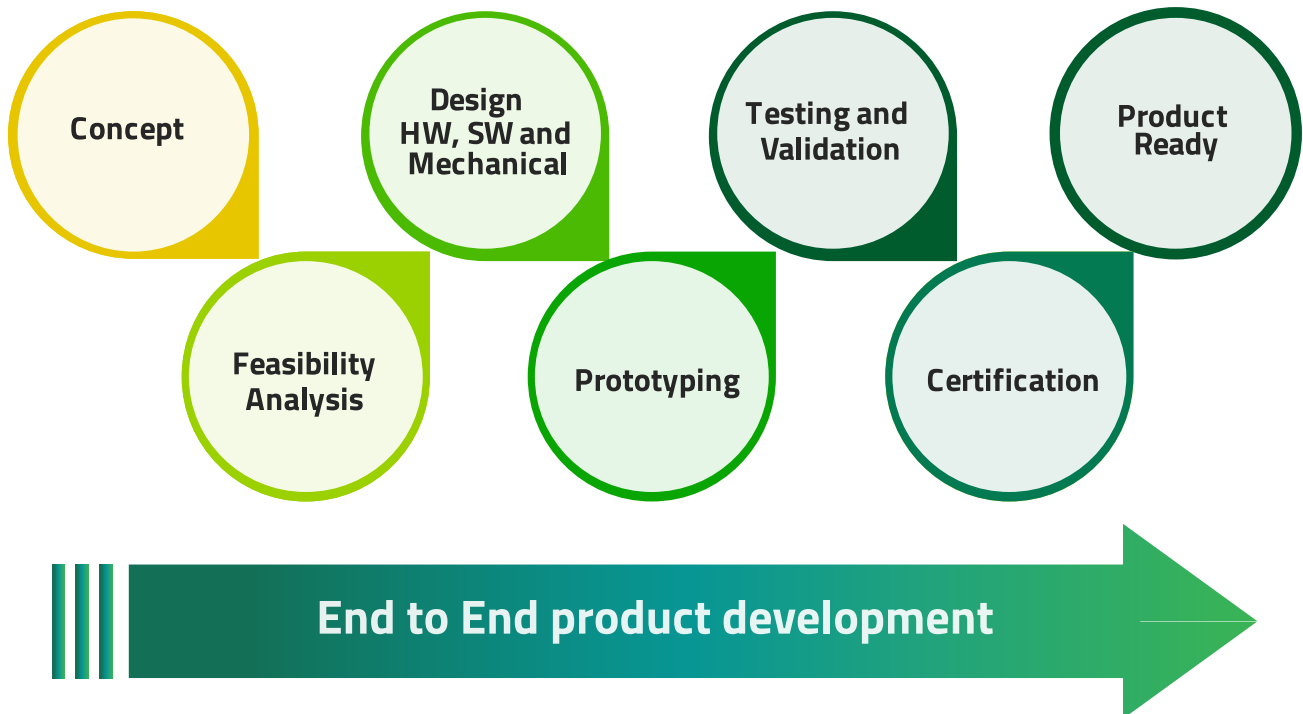
happiest
minds
The Mindful IT Company



www.happiestminds.com

Happiest Minds Technologies offers a wide range of Embedded Design Services that would help to transform an idea into a complete product. With expertise in every phase of the product life cycle, Happiest Minds Technologies brings in a wealth of people experience in designing a variety of products cutting across various domains such as:

- Automotive
- Computing
- Consumer
- Datacenter
- Defense
- Education
- Healthcare
- Industrial
- Infotainment
- Internet of Things
- Storage
- Surveillance
- Telecom
- Wearable



From miniature wearable devices to complex system designs, Happiest Minds is a one-stop-shop for any electronic product design requirement. A firm believer of first time right designs, we follow proven practices that ensure superior product quality, extended availability and high fault coverage. We undertake design of products such as:

- Single board computers: PC/104, 3.5" SBC, ITX, Industrial PC etc
- System on Modules and carrier boards: COM Express, SMARC Qseven etc
- Wearable devices
- IOT gateways
- Healthcare devices
- Servers, Storage solutions
- Data acquisition I/O boards
- Industrial control systems
- Networking devices – Modems, Routers, Switches, DSLAM etc
- System design: Rackmount, ATCA, uTCA, VME, VPX, cPCI etc.

Offerings

Board Design Services

- Feasibility Analysis
- Schematics & PCB Layout and Gerber Generation
- Pre & Post layout SI Simulation
- FMEA Analysis, MTBF Prediction
- Thermal simulation
- PCB Fabrication & Assembly
- Board bring-up & Functional testing
- Design Verification Tests
- EMI/ EMC & Regulatory certification
- Cost reduction, Obsolescence management
- Pilot production
- Production Support

Firmware Design Services

- Boot loader development
- Device driver development
- Board Support Packages (BSP)
- OS Porting / OS Migration
- Protocol stack porting/ integration
- Feature enhancement
- UX/ UI design
- Mobile application development
- Production test automation
- Manufacturing test software

FPGA Design Services

- RTL and Test bench design (VHDL and Verilog)
- Functional and timing simulation
- Platform migration
- Resource Optimization (Logic, I/O, Speed)
- IP core development
- Glue logic design
- 3rd party IP core integration
- ASIC prototyping in FPGA

FPGA/ ASIC Verification Services

- Test bench architecture and test plan creation
- Test bench design and development
- Test case development and execution
- System/ SoC/ IP/ Subsystem/ Block level verification
- Services based on VHDL/ Verilog/ System Verilog/ UVM/ OVM
- Assertion based verification
- Code coverage and Functional coverage
- Gate level simulation
- DFT scan insertion
- DO-254 process compliance

Mechanical Design Services

- Industrial design
- Conceptual drawing
- Rapid prototyping
- Sheet metal/ Plastic enclosures
- Drawing format conversion
- Packaging/ carton design
- Label design
- Thermal design and cooling solution

Reference Case Study

1

PCIe/104 SBC based on 6th Gen Intel processor with 20GB DDR4 RAM, multiple display interfaces, for industrial applications

2

IOT gateway and data logger for energy management - ARM9 processor with I/O such as Wi-Fi, Ethernet, 3G, RS485, uSD, NAND flash

3

Wearable smart tracker for tracking children, people with disability, elderly people etc with Accelerometer, heart rate sensor, GPS, GPRS, LCD

4

Low power, high performance Micro-server based on Intel Atom/ Xeon processor for cloud hosting applications

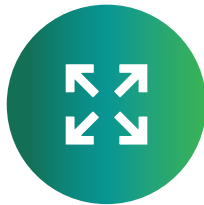
5

Real-time Industrial Data Acquisition system, based on Cortex-A9 processor with Analog and Digital I/Os, EtherCAT, FPGA based PID loops for error correction

Happiest Minds Advantage



**Accelerate
Time to Market**



**End to End
Capability**



**Technology
Expertise**



**First Time
Right Design**

About Happiest Minds Technologies

Happiest Minds enables digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights through an integrated set of disruptive technologies: big data analytics, internet of things, mobility, cloud, security, unified communications, SDN-NFV, etc. Happiest Minds offers domain-centric solutions applying skills, IPs and functional expertise in IT services, product engineering, infrastructure management and security. These services have applicability across industry sectors such as retail, consumer packaged goods, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.

Headquartered in Bangalore, India; Happiest Minds has operations in the US, UK, The Netherlands, Australia, Middle East and Turkey.



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