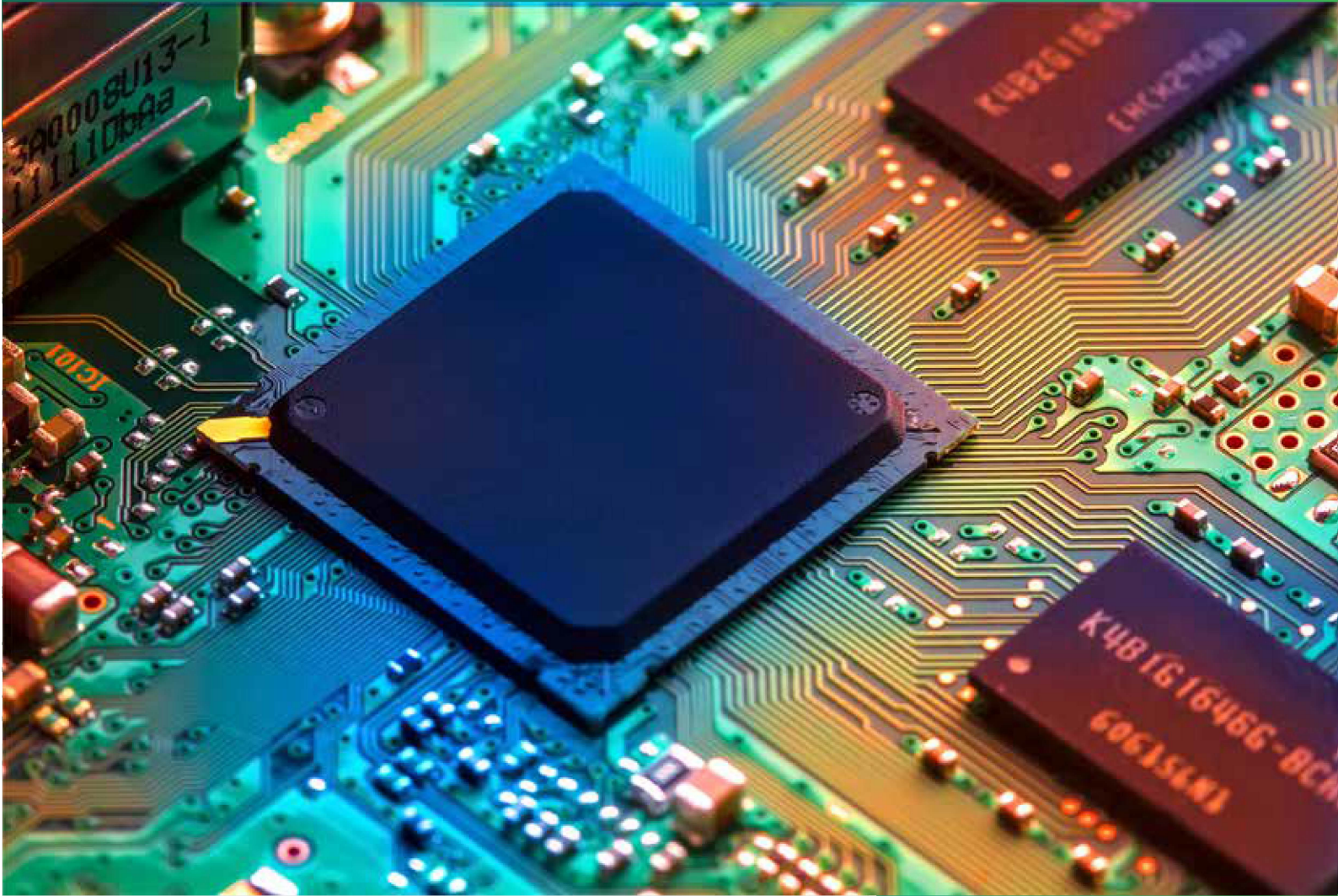


Embedded Design Services



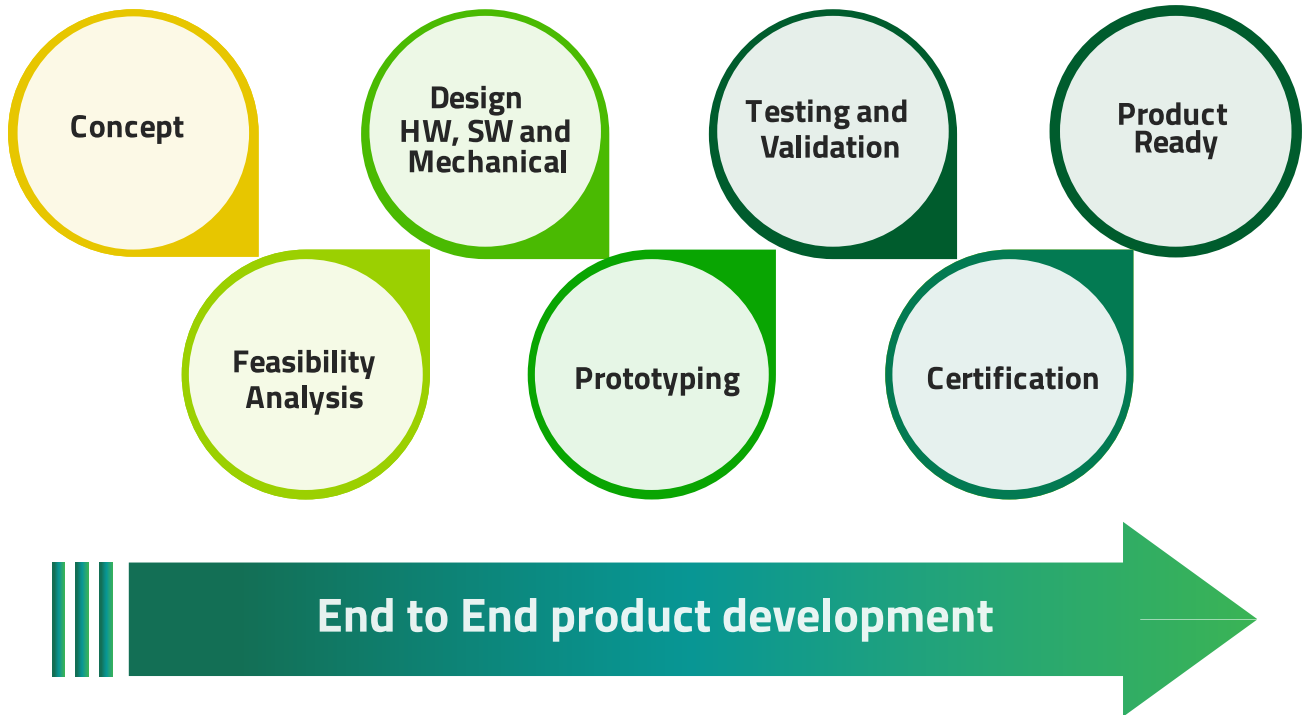
happiest minds
The Mindful IT Company
Born **Digital** . Born **Agile**



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

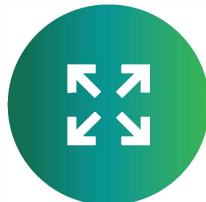
5

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, the Mindful IT Company, applies agile methodologies to enable digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights. We leverage a spectrum of disruptive technologies such as: Big Data Analytics, AI & Cognitive Computing, Internet of Things, Cloud, Security, SDN-NFV, RPA, Blockchain, etc. Positioned as "Born Digital . Born Agile", our capabilities spans across product engineering, digital business solutions, infrastructure management and security services. We deliver these services across industry sectors such as retail, consumer packaged goods, edutech, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.

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



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