ADS
AIMTRON
DESIGN STUDIO

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Inexpensive Reliable Solutions

Product Engineering

Industrial Design

Mechanical Design

Capture & Layout

User Experience

Hardware Design

Software Firmware

DFM DFT

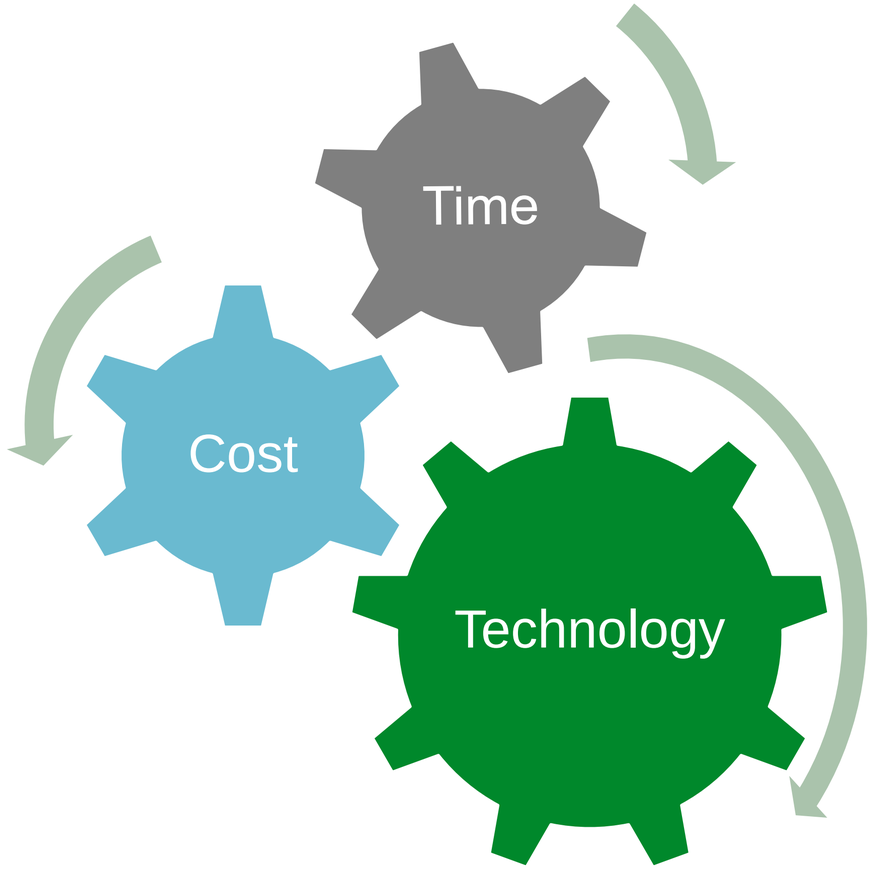
Compliance Testing

- Concept & Industrial Design
  - Product concepts based on requirements
  - Market research (‘comps’)

- Requirement Analysis
  - Capture and tracking of requirements
  - Translating details to Engineering blocks

- Preliminary BOM Calculation
  - BOM comparison for identified options
  - Device Registration
  - Cost reduction
  - Future expansion

- Deriving Product Specifications
  - Select blocks from options and prepare product specs
  - Define implementation budget and product costing



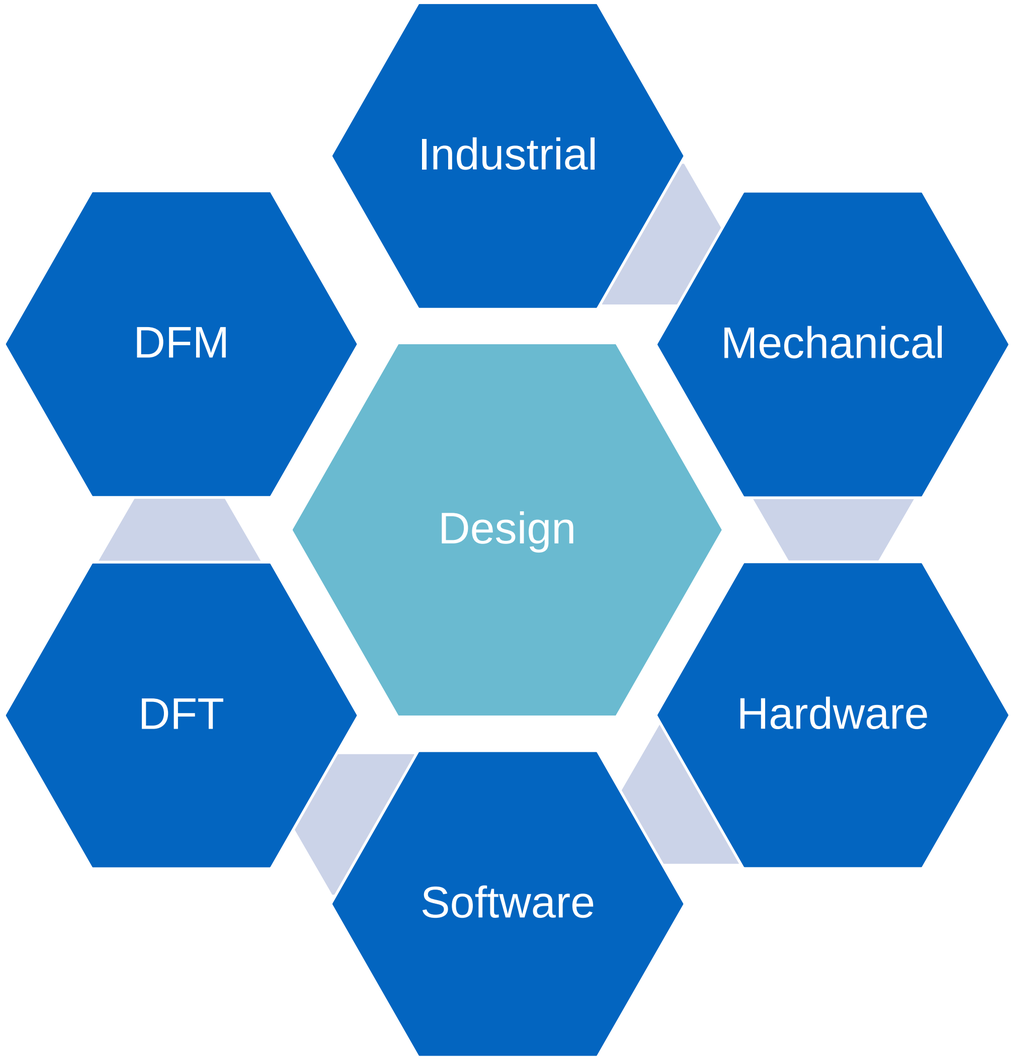
- Product Architecture & Design
  - Selection of base technologies

- Hardware Design
  - Schematics, Layout
  - Industrial Design and 3D modeling
  - Thermal, SI, DFM, DFT Analysis

- Software / Firmware Design
  - Software Architecture
  - Data Structures, Database

- Firmware Development
  - Device Drivers, Algorithms

- Application Development
  - GUI, Interaction, Mobile App, PC Application



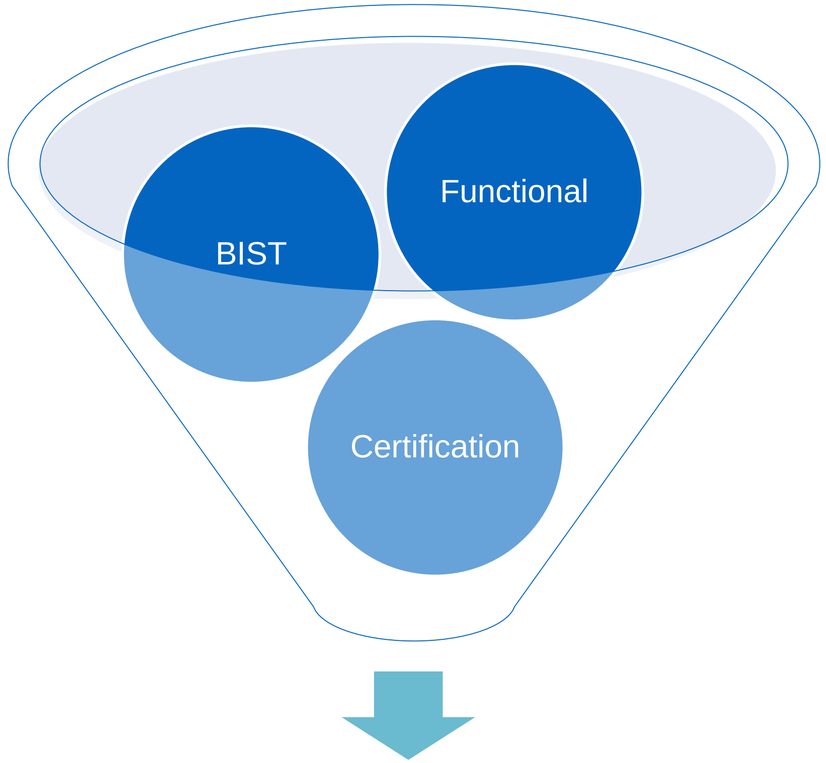
- Product QA
  - Define test procedures and standards
  - Generate Test Plan

- Device Testing
  - Board Bring up testing, Functional Testing
  - Verification and Validation Testing

- Certification Testing
  - Pre-scan tests and environmental tests
  - Certification testing with third party labs

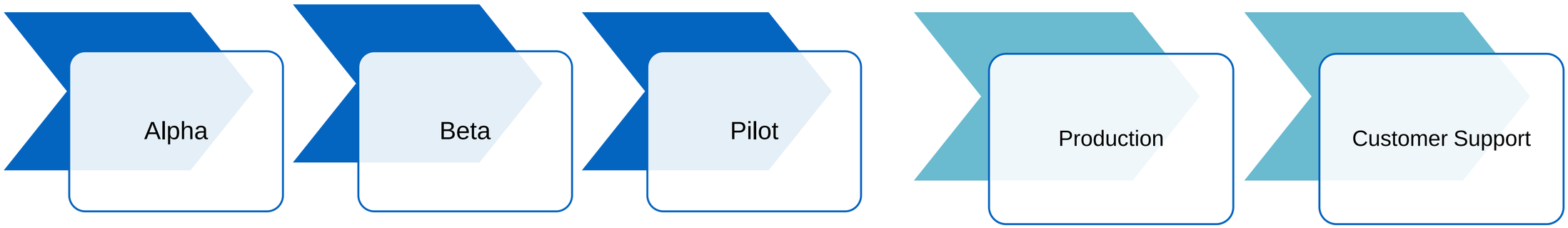
- Manufacturing Diagnostics
  - Manual, semi or fully automated production tests

- Manufacturing Documentation
  - As per customer production process

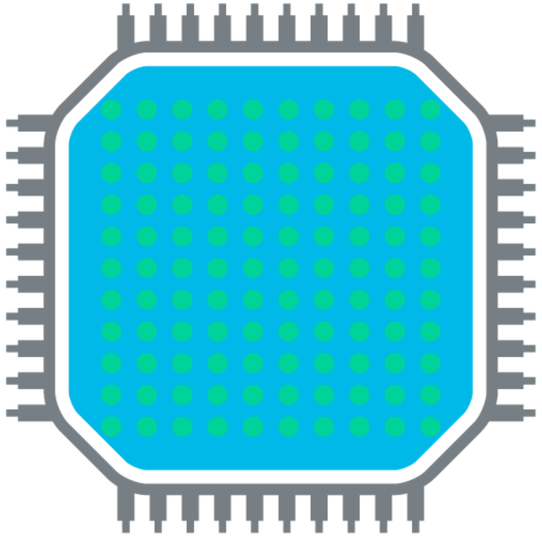


Production

- Alpha Customer Testing Support
  - Functionally tested prototypes
  - Quick bug fixes and work arounds
- Beta Customer Testing Support
  - Analysis of problems faced by customer
  - Onsite support (if required)
- Product Launch in Market
  - Support for marketing material
  - Support for demos in trade show
- Customer Support
  - Email or phone support
- Product Sustenance
  - Customization, Upgrades
  - Obsolescence management



- Processors Expertise:
  - ARM Cortex A8/A9 – TI AM335x, TI AM437x, iMX5xx, iMX6
  - ARM Cortex M4 – STM32F4xx, TI TM124x, Kinetis, LPC43xx
  - Video SoC – TI DM36x, TI DM64xx, TI AM389x, TI AM387x
  - 16-bit micro – TI MSP430, Microchip PIC
  - 8-bit micro –ST STM8xx, Intel 8051, Atmel Atmega
  - Bluetooth chips with 8051 and Cortex-M0 processors

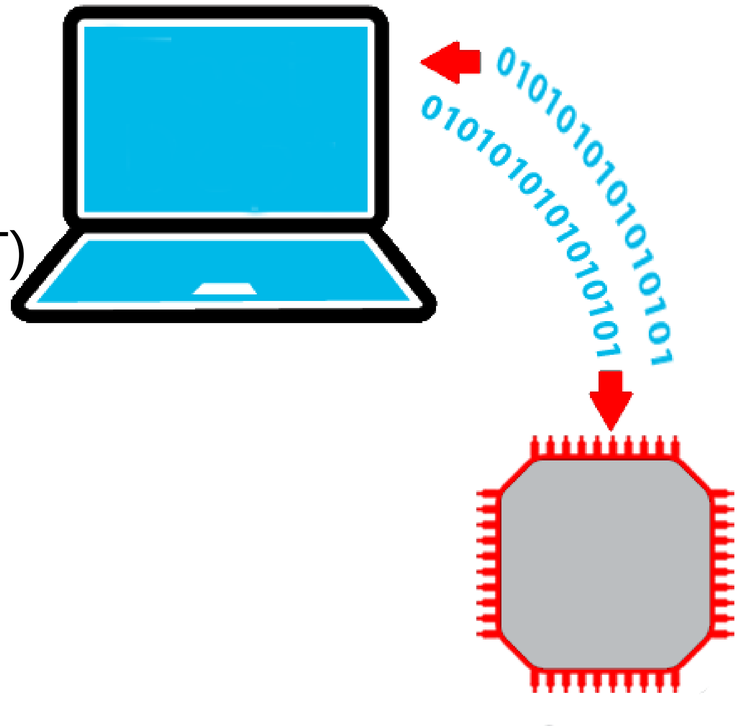


- Peripherals:
  - Ethernet, USB, RS232, RS485, CAN, I2C, SPI
  - HDMI, Video, Audio
  - Bluetooth, Wi-Fi, RFID, Sub-GHz, ZigBee
  - Sensors – Field sensors, analog IO, Digital IO, Isolation

- Tools:
  - Schematics in Orcad, Altium
  - Board layout in Allegro, Altium
  - Thermal, SI and DFM analysis

Software:
Android / iOS
Mobile
PC / Web
GUI Design (Qt, StemWin, VB.NET)
Audio/Video Codecs
Protocol Stacks
Algorithm / Formula / Maths
COMM (CDMA / WiFi / BT)

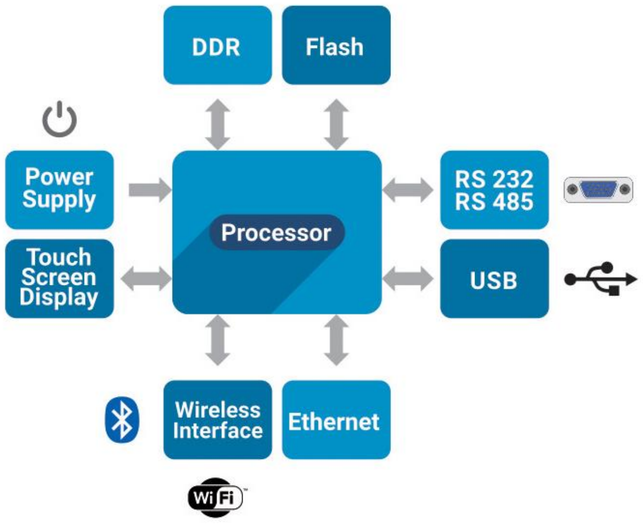
iOS App development
Android App development
iOT device<>device nets

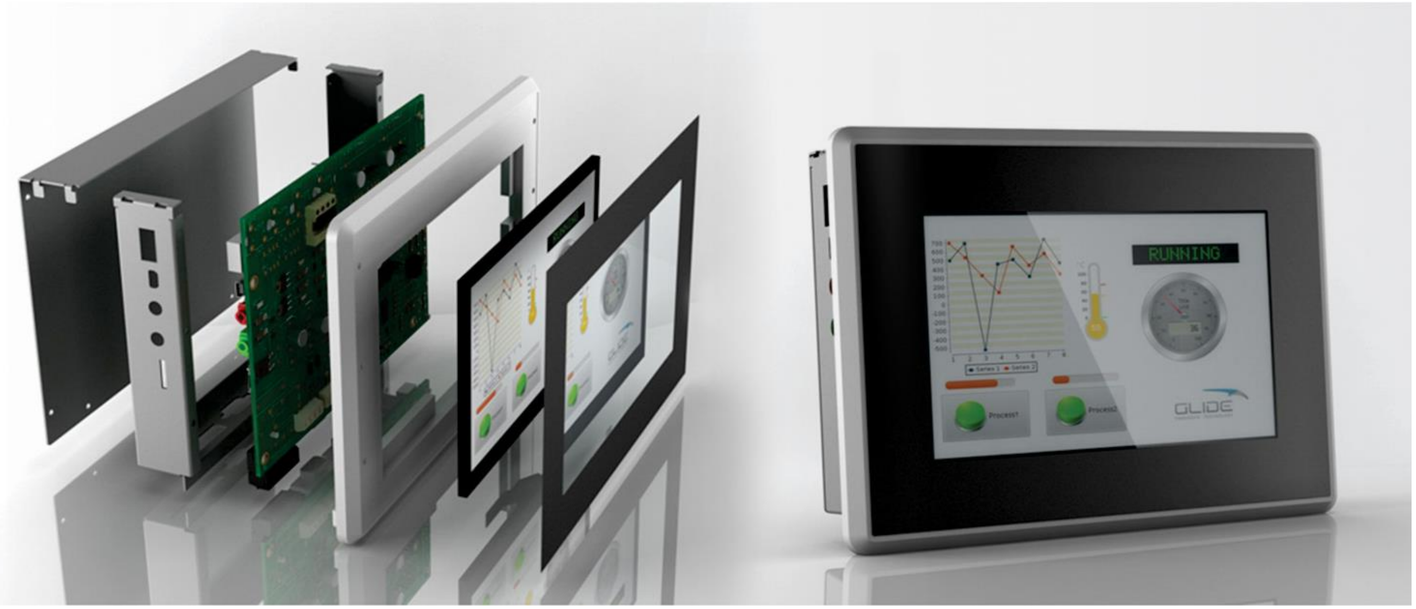


Firmware:
Boot Loader,
Board Support Packages
Device Driver Development
Embedded Linux / RT Linux
Free RTOS, TI DSP/BIOS
Freescale / Microchip / Atmel / ST
Android

Industrial Design
UX Renders
Concept Sketching
Market Research

Mechanical
Solidworks / AutoCAD / NX UG
3D Printing & CNC model shop
Plastic / Metal / Graphics





Industrial Automation

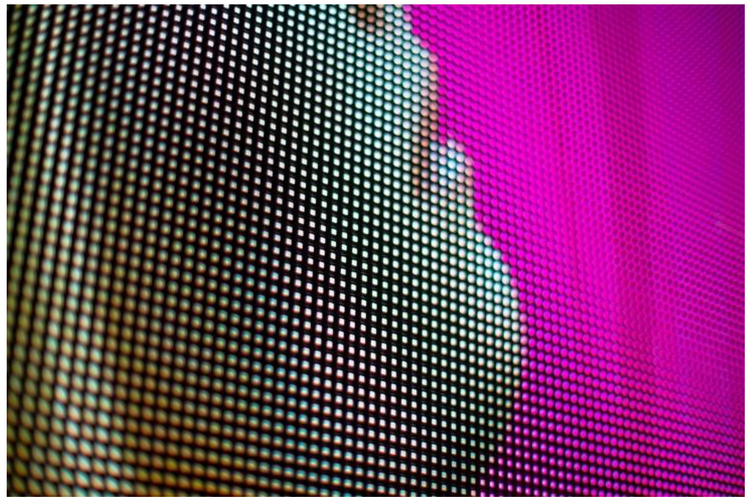
Security and Surveillance

RGB LED Control

Wearable Device

Health Care

RGB LED Control



- LED Light Controller
  - Individual LED control on long strings of multicolor LEDs
  - Generate multiple patterns and special effects
- Multicolor LED signboard displays with video for advertising
- Drive-thru information device with ordering and video advertising
  - Outdoor display with environment control to maintain unit internal temperature

Wearables

- Wearable device (Smart Watch) with notifications
  - ARM Cortex-M4 based design
  - Bluetooth for mobile communication
  - Gyrometer and healthcare interfaces
  - Mobile application on Android and iOS platforms
- Wearable device with NFC
  - Can integrate with regular watch
  - NFC tags for payments and identification

Med

- Pain Relief Device for fast and natural healing
  - Laser and Electrical current for stimulation
  - Variation of current and time of treatment
- Fitness monitoring device
  - Bluetooth for mobile communication to record performance
  - Wireless charging of product with weatherproof design
- Past experience of Medical image Processing boards design

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Thanks!
We look forward to working together.