Electronics Engineering Services
About Us

- Electronic Engineering and R&D Services Company based out of San Jose having development center in India.
- 30+ Years of Experience in Hardware and PCB design.
- Experienced Management and Engineering teams
- 20+ qualified and experienced Engineers
- Owned by Engineers
Product Engineering Services

Concept
- Concept Validation
- Product Specification Development
- System Architecture

Hardware Design & Development
- HW High Level Design
- HW Low Level Design
- Component Engineering
- Board Bring-Up
- Testing
- PCB Layout Design
- Signal / Power / Thermal Integrity Analysis
- PCB Fabrication
- PCB Assembly

PCB Design, Fab & Assembly
- Enclosure Design
- Mechanical / Industrial Design
- Proto Enclosure Fabrication

Mechanical Design & Development
- Firmware Development
- Driver & BSP Development
- Application Development - Linux / RTOS / Android / Web
- Cloud Application Development

Firmware / Apps / Cloud
- Compliance Certification, FCC / UL / CE
- Vendor Audits
- Test Jig development

NPI
- Manufacturing co-ordination

Manufacturing
- Manufacturing Testing
Hardware Engineering
Case Studies
Security System Controller

- Hardware / Firmware design and Development
- Mechanical / Enclosure Design / DFM
- IMx6 CPU / STM32
- Linux / RTOS
- High Density Digital
- FCC Class B certified

Stackable Design
Aerospace Structural Health Monitoring System

- Altera A10 FPGA for Digital Signal processing
- Low Power, Light Weight, Compact Design
- Complete HW / FPGA / Enclosure design
- Ultra-Low Noise / SNR of 50dB
- High Speed ADCs / DACs / Sync – E / HV Mux
Control System with POE Switch and RTOS

- Qualcomm Snapdragon 820
- NXP K66 running RTOS, K20
- Broadcom BCM53128 GBE Switch
- Hardware Design and Development
- Firmware and Driver Development
- High Power POE Injector.
Medical Electronics – Digital Nanoscope

- Freescale – i.MX6 – Quad Core DSP/ARM Processor
- Complete product development
- Hardware, Firmware, Camera Drivers, Image processing
- Full Utilisation of GPU to improve image processing
- Stepper motor control for Zoom and Focus Control
- Superfine X-Y Slide Movement using Servo motor
- Ultra High Sensitive image sensor from Omnivision

FalciPurum positive - FISH imaging
- Hardware / Firmware / ID / Mechanical design
- Lora / BLE 4.2 / Temp / OBD2 / 3D Accelerometer
- Multiple RF / Battery Powered / Automotive
- Indoor Location tracking device
- FCC / RoHS / CE / Contract Manufacturing
Ultra Low Power BLE Mouse

- Cutting Edge Ultra Low Power BLE Technology
- Pixart PMW3610 Laser sensor and LM18 lens
- Hardware Design / Firmware Development
- Prototype Manufacturing
IOT Micro Gateway

- Qualcomm QCA4020 Chipset
- Dual Band Wi-Fi, Bluetooth 5.0, ZigBee
- Gateway between WAN and IOT Devices
- Hardware / Firmware / RF Development
- Power Supply Design
- Enclosure design / ID
- Compact Design: 42mm x 36mm x 27mm
Lithium Titanate Battery Power Bank

- Lithium Titanate Battery
- Capacity: 3000 mAh, High Current, Super Fast Charging
- Charging Current - 20A, Full Charge in under 10 Mins.
- Inbuilt Safety Features, OLED Display
- Hardware, Firmware, Enclosure Design
Rugged Automotive Control Electronics

- Complete product development
- NPI Contract manufacturing
- Test jigs / Test plans comprehensive documentation
- Volume Production
- Encapsulated in Epoxy
- ARAI (Automotive standards) certified
- FCC / Vibration / Temp Tested
- Tier 1 Automotive client
- Qualcomm QCA4024 Chipset
- BLE 5.0 / Zigbee / Thread
- Complete product development
- Hardware design, Firmware development
- RF design and optimisation
- Industrial design and Manufacturing
OBD Device Charging Station

- Complete product development
- HW / FW / Linux System Integration
- Charging and Firmware upgrade of Custom OBD2 Devices
- Mechanical / Enclosure Design
- Custom connector design with Contacts for Firmware Update
- Contract Manufacturing
4K, 360 Degree Camera

- Qualcomm Snapdragon 800 CPU / 2.3 GHz ARM Core
- Hardware / PCB Design / Firmware
- HDMI / MIPI CSI-2 / MIPI DSI / USB - 3.0 / Battery Powered
- High Res LCD / Touch Screen / Wi-Fi / GPS /
- 4K camera / Audio out / Microphone
- Sony IMX135 Image sensor / Camera Driver / 4K Video Via HDMI
- Power management / Touchscreen driver development
- Qualcomm QCA4531 + QCA4024
- Wi-Fi, BLE 5.0, Zigbee, SIG Mesh
- Firmware and Hardware Development
- Enclosure Design
- Polyphase Power measurement system
- Texas Instruments MSP430F6779 SOC
- Hardware Design / Firmware Development
- PCB Design / IoT Application
- Voltage / Current / PF Measurement
- High accuracy measurements
Bluetooth Padlock

- Complete Product Development
- Hardware / Firmware Development
- Android application development
- Industrial and Mechanical design
- Anti-Shim Technology
- IP65 rated
IOT Capabilities

Dashboard → Cloud → IOT Gateway → IOT Nodes

Cloud Sync
- AWS - Green Grass
- Eclipse Ditto
- Eclipse Ditto
- Q-Sync

Enablers
- alexa
- Google Home

Integrates
- Node Red
- FLoGo

IOT Capabilities
- MESH
- ETH
- TCP / UDP
- RS485
- LoRa-Wan
- Zigbee
- Bluetooth
- 6LoWPAN

LAN
- Radio
- Antennae Design
- RJ45 / USB / other Interfaces

WAN
- ETH
- 3G/4G
- Wi-Fi

Hardware
- Microcontroller
- Memory / Storage
- Battery / Power Management
- Sensors / Actuators
PCB Design Case Studies
PCB Design Services

- PCB Design
- SI / PI / EMI Analysis
- Thermal Analysis
- PCB Fabrication and Assembly (thru partners)
- Compliance testing and certification (thru partners)
Design Expertise

- Highly Dense and Complex PCB Engineering
- High-Speed Digital Designs
- Analog and Mixed Signal Designs
- Power Electronics
- RF Designs
- Compliance Engineering
- DFx
Tools Expertise

- PCB Layout
  - Cadence Allegro / Mentor PADS / Expedition / Altium

- Schematic Entry
  - Concept HDL / Orcad Capture / Altium / PADS Logic

- Signal Integrity / Power Integrity
  - Sigirity / ADS / HFSS /

- Thermal Analysis
  - Flotherm

- CAM
  - CAM 350 / Genesis / Valor Enterprise 3000

- Mechanical
  - Creo / Solidworks
Networking Board

- 100 GBE Switch/Router Board / High speed (12.5 Gbps) / DDR3
- 36 layers / 2597 Pins BGAs
- 19705 pins
- Chipset: BCM88650
- High Current
- Ultrahigh density
- Cadence Allegro 16.5
Rugged SBC Board

- Ultra high density – 460 Pins per sq. inch
- Military Application
- 20 layer
- High Speed Digital
- Double side components
- HDI – Blind /Buried Vias
Video Processor PCB

- Video Processing Hardware
- High speed digital / PCIE / DDR3
- Cadence Allegro
- High Current
- Total pin count : 16533
- Low density, Consumer grade wireless AP
- Wireless LAN Application
- 4 layer
- High Speed Digital, RF
- High Volume product
- High density
- Blade server Application
- 14 layers
- High Speed 10 Gbps Ethernet
- Set Top Box
- 4 layers
- High speed Digital / Analog
- Medium density / High volume product
- Consumer Electronics
Automated Test Equipment PCBs

- Test boards for BGA packages
- High Density – 0.4mm BGA
- High Layer count – 18-20 layers
- Impedance Controlled
Automotive PCBs
Medical Electronics PCBs
Aerospace PCBs
Qmax Advantage

- Our PCB Designers are highly Skilled, Experienced and Qualified
- High Quality PCB Design work, Clean Documentation, Lower Price Guaranteed
- Well managed Schematics Symbols, PCB Footprints and 3D models
- Well defined process and procedures
- Clean communication model, Daily status reports / Online Design review
- Experience in all major CAD tools
- Flexible deployment model
- Discounted rates for long term engagement
Value Added Services

- PCB Fabrication: 2 – 36 Layer / IPC Class 2 and Class 3 / HDI / Flex / Rigid - Flex
- Component Sourcing
- PCB Assembling / SMT / X-Ray / Micro BGA
- Box builds
- Testing services
- Qmax has long term working relations with suppliers in USA, Taiwan, China and India, Qmax can help you choose the right supplier.
For More Information
Please Visit Our Website at
WWW.QMAXSYS.COM
Thanks!

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