



Griffintech Solutions

Electronic Design & Consultancy Services

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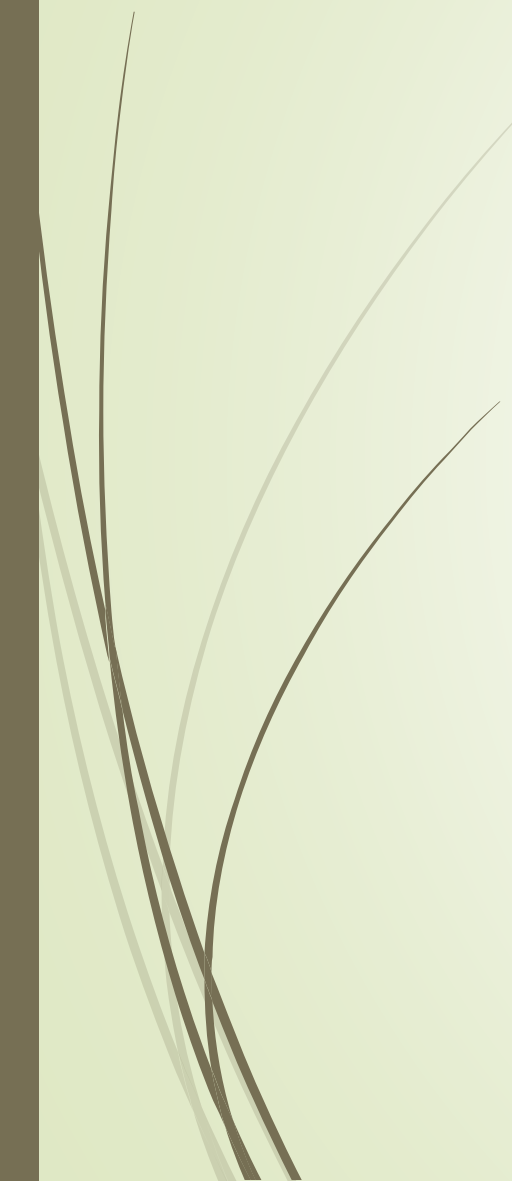


Electronic Design Services

- ▶ We offer End to End Electronics and Embedded Software Design Services covering the following
 - ▶ Evolving Complete Solution Architecture
 - ▶ Evolving Schematics with selection of components
 - ▶ Multilayer PCB Schematic
 - ▶ PCB Manufacturing and SMD Assembly
 - ▶ PCB Testing and Evolving PCB Test Jigs for Mass manufacture
 - ▶ Embedded Software Development
 - ▶ Tool and Mold Design for Plastic Injection Molding and Press parts
 - ▶ 3D Printing
 - ▶ PLC's and Automation
 - ▶ EMI/EMC , CE and ATEX Certification



Consulting Services

- Knowledge Transfer
 - Solution Architecture
 - Schematic Evolution and PCB Layouts
 - Substitute Components and Reengineering
 - BOM Optimization and Cost Reduction
 - Documentation and Technical Manuals
 - Setting up Hardware and Embedded R&D
 - Setting Up Manufacturing
 - Assist for Interviews, Organize Training and Hand holding up to desired capability.
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Advantages

- The promoter is himself an Electronics Engineer with 30+ years of experience in Hardware and Embedded Software Design.
- We maintain very high Level of Trust and Transparency.
- Very Strong team of independent professionals all having minimum 20+ years of experience in their respective fields.
- Areas of work – IoT Nodes and Gateways, Test and Measurement, Energy and Power, Camera Vision and AI.
- Worked with Top Brands and Multinational Companies from Europe and America and familiar with their culture.
- Completed and Delivered projects with remote working. No need of physical presence.
- High Quality Work, Strict Confidentiality and Non Compete policy.
- Strong partnerships with CEM's , Certification Laboratories and Prototype Development houses.
- Excellent Supply Chain Management.

Projects Delivered

- SCADA compatible RMU protection Numeric Relay with uBlox 4G cellular. – Schneider Electric
- Vehicle Infotainment System using x86 SMARC 2.0 architecture SoM– Portwell America, USA (Through SI)
- Award winning Multi-position Residential Energy Meter Test Bench with portable reference standard with 4G SIMCOM module – KiGG Systems UK
- Openthread IoT technology- RF Mesh 2.4GHz , Cellular Gateway(Embedded Linux) using uBlox cellular module- Electroshell, INDIA
- Camera Vision – Edge Level Defect Detection System (Linux SoM with Coral accelerator) with SSD and YoloV5 models on cloud as well as Edge. – AI-Hero USA
- IoT hardware and Software for Preventive Maintenance for Power Transformers and Motors with failure prediction using AI models (K-Cluster) - Symphony AI , USA
- BOM Optimization for Smart Metering IoT nodes and Gateways – CyanConnode
- IoT Smart Street Lighting – Individual Dimming and energy measurement with fault detection, Group schedules, Astronomical time clocks using Zigbee, LoRa and RF Mesh. HTTP and MQTT - MOTWANE
- IoT Water Meter – Digital interface to Flow meter LoRa and BLE – AIVA Engineering

Brands we worked for





Human Resources

We have team of on demand professionals for

- Electronic Analog, Digital and Power Supply Design
- Embedded Hardware and Software Design and Development
- CPLD and FPGA
- Cloud Software Development
- EDA and Simulation
- Mechanical and Tool Design
- PCB Testing technicians
- Certification Specialists
- Flexible Team Sizes as per project requirement.



Platforms

- Schematics and PCB – Mentor Graphics
- MCU and DSP – Microchip, ST Micro, NXP, TI, Analog Devices, Renesas and Silicon Labs.
- RF and Wireless – Silicon Labs, uBlox, Telit , Quectel and Neoway
- Embedded Linux CPU – NXP, TI, Rockchip, Mediatek and Allwinner
- CPLD and FPGA – Altera Cyclone (AHDL), Quartus
- SOM – Toradex, RPi Compute, Technexion, Variscite, Omega and Portwell (x86)
- Embedded Linux Tools – Buildroot and Yocto
- Embedded Development - C/C++, Python with QT5
- Embedded OS – Debian based Linux including Ubuntu, Mendel (Google Coral), OpenWRT/LEDE
- AI and Camera Vision – Google Coral
- Prototyping – Raspberry Pi, Orange Pi , Jetson Nano, Google Coral
- Mechanical – Solid Works and Unigraphics



Technologies

- ▶ Power Supplies – Flyback, Full Bridge and Resonant Converters
- ▶ Embedded Interfaces– I2C, SPI, PCIE, CAN, RS232/RS485, USB and Ethernet
- ▶ RF and Wireless – RF GFSK 868MHZ and 2.4GHz, WiFi, Mesh 802.15.4, LoRa and BLE 5.x, 4G LTE and NBloT.
- ▶ FPGA - AHDL
- ▶ Protocols – MODBUS, CAN, DLMS, HTTP/s , MQTT, IPv6
- ▶ Security and Encryption – AES128, HTTPS , DTLS/TLS, PKI
- ▶ Cloud Software – Python, DOT NET, VueJS, Ruby Rails
- ▶ Databases – SQL, Mongo DB, Postgres.
- ▶ AI – OpenCV, Python, Deep Learning Models like SSD, Yolo V5.



Engagement Model

- ▶ Project Basis Consultancy
- ▶ Monthly Fixed Charges for defined scope
- ▶ Single point of contact
- ▶ Complete Knowledge Transfer
- ▶ Setup facility as and when required and with training and handover
- ▶ We have tie-ups for the following
 - ▶ Professionals with diversified skill sets
 - ▶ Companies who can offer specialized skills with capital equipment's and software.
 - ▶ Test Labs who can offer certifications (ISO17025, CE, EMI/EMC, Safety , Accelerated Ageing, ATEX)
 - ▶ Tooling and Molding
 - ▶ SMT assembly
 - ▶ Test Labs for calibration and Testing
 - ▶ Prototype testing and Software Development.