



CORPORATE PRESENTATION



VISION AND MISSION

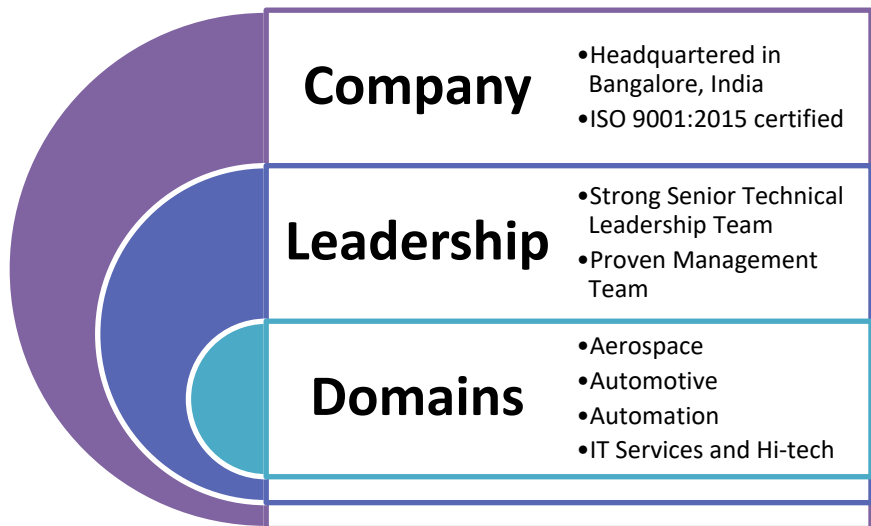
VISION:

- To be the Engineering and Technology Partner of choice for leading National and Global OEM's in the domains of Aerospace & Defense, Automobile and Automation Industries and to build robust, technologically advanced products for use in Air, Land, Sea and Space applications, by integrating state of the art homegrown technology with foreign technology via win-win relationships, including JV's, Partnerships and License Manufacturing.

MISSION:

- To continuously create cutting edge home grown technology in niche areas, harnessing the capabilities of our human capital, focusing on quality in every aspect of our operations.
- Build robust, advanced and eco-friendly systems and services meeting all the requirements of customer.
- Practicing Transparency and ethics with customers and employees.

INTRODUCTION



Target Clients

- Tier 1, Tier II, OEMs, System Integrators
- Focus on long term partnerships and repeat business

Engineering Team

- Human capital with multiple decades of experience in the related industries
- Prior experience with product and service companies
- Quality Excellence

Growth Plans

- Talent Management
- Core teams on Machine learning, Artificial intelligence and IoT
- Technology partnerships

DOMAINS AND INDUSTRIES



Aerospace



Automotive



Automation



Ship Building

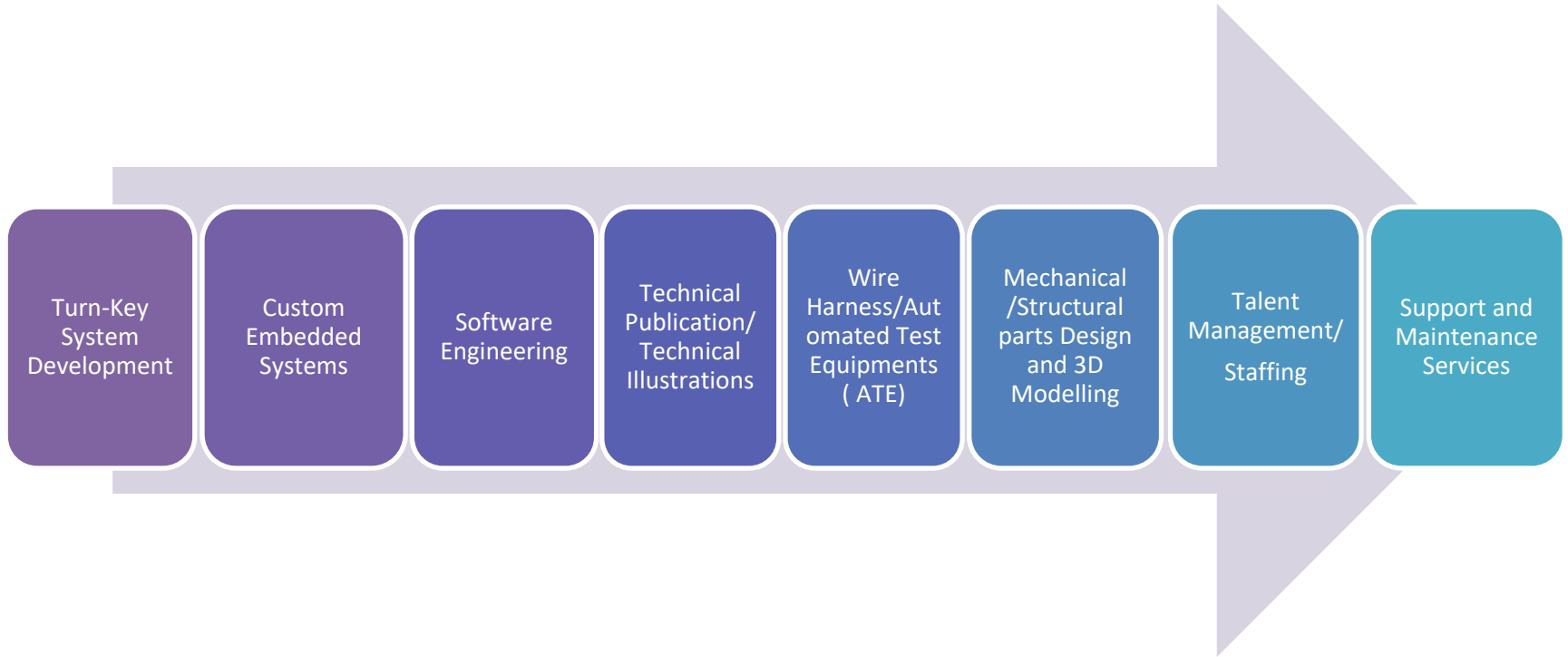


IT Services



Energy

OUR OFFERINGS ACROSS INDUSTRIES



Key Clients





PRODUCT ENGINEERING SERVICES

WIRE HARNESS ENGINEERING & MANUFACTURING

Samniya is the one stop solution for all your wire harness fabrication and cable fabrication requirements, we provide the complete End to End support in wire harness Engineering & Manufacturing, we practice a stringent quality stage gate inspection at every stage of the fabrication to meet the global standard.

Wire Harness Activities Includes:

- Design and Routing of wire harness & Components detailing .
- Wiring Board design
- Wiring chart, BOM preparation
- Wire harness fabrication / cable assembly
- Braiding, Shielding, Marking & Finishing
- Wire Potting
- Testing
- Integration & Installation.



Wire Harness



Military Ground Equipment Wiring



D38999 Series Connectors Wiring



Aircraft Wiring



Automobile Wiring

TEST SYSTEM ENGINEERING & MANUFACTURING

We provide customized / standard test solutions for all your applications/ products/ LRUs and systems, with the experienced team of System engineers we can understand the functionality of the systems better and can propose customized, reliable and effective test solutions in a cost effective approach.

- Design and Develop Test Systems
- Custom built Automated Test Equipment (ATE)
- Test Equipments to the Build to Print Requirements
- Test Equipments to the Build to Specification Requirements
- Test Jigs & Rigs fabrication



Test Jigs



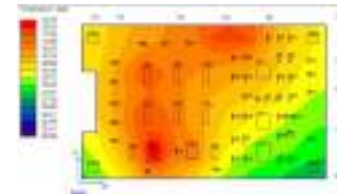
Case Study on Digital & Analog Servo Controller for an UAV Actuator Case study

Over View: Servo Controller Cards for Rotary Actuator are the Shop replaceable boards used in the Nose Wheel Steering Actuator and Control Surface Actuator.

This is a build to specification requirement, Where customer provided only Baseline Schematics, Bill of material.

Samniya Responsibility:

- Requirements capture
- Schematic Analysis
- PCB Layout Design
- Board Analysis including Signal Integrity(SI) Analysis, Thermal Analysis,
- Component Derating Analysis and MTBF of the boards
- BOM Scrubbing and Procurement of components
- PCB Layout design and Fabrication as per the required standards.
- Population of PCB
- Assembly and FTP
- SRU level ESS tests
- Kit of parts and Final Assembly complying with RDAQA
- Testing and Qualification



Fully Airworthy Qualified System.



CUSTOM EMBEDDED ENGINEERING

At Samniya we support/ provide customised embedded system design, development and manufacturing meeting specific customer requirements.

Hardware Design

- Customized Analog, Digital and Mixed signal boards design
- Embedded board bring up
- FPGA design and implementation
- Synchro to Digital /Digital to Synchro conversion
- PCI Cards (Analog, Digital, Discrete I/O)
- Isolated Digital & Analog I/O cards.
- RS232/RS422/RS485 Communication IO cards.
- Wireless (BT, Wi-Fi, 802.15.4, ISM), RFID)

Solutions:

- Servo controllers for actuators,
- Custom Power supply design.
- Product Design Service
- Custom Computing Solutions
- Design verification and testing
- Production Management
- IoT Solutions

Embedded Software:

- Firmware Development
- Board Support Packages (BSP)
- Device Drivers Development(Windows, Linux, RTOS)

PCB Design

- Design of Multi layer & High Density Boards.
- High-speed digital design & analysis
- Schematic and layout translation
- Advanced PCB including HDI rigid, flex and low loss board design.

Simulation & Verification Services

- CAM verification / Gerber edits and checks
- Digital simulation for integrity
- Thermal simulation



Hands on Experience in

Customized data acquisition / IO Card Design on Standard form factors

- VME based data Acquisition
- PCIe Based Data Acquisition
- PMC Based Data Acquisition
- PMC Based IO Design
- cPCIBased Data Acquisition
- cPCI Based IO Design
- PCI Based Data Acquisition
- PCI Based IO Design
- HSMC Based IO Design
- FMC Based IO Design

FPGA Based Design

Experience with SPARTAN 3A and SPARTAN 3AN, Virtex 4 SX, FX, LX, Virtex5 SX, FX, LX, Virtex6 FX, Virtex7, Kintex 7, Artix 7, Zynq 7, Altera Cyclone IV,V

Analog Designs,

- DAC - 1.2 GHz Rated DAC (LVDS Interface)
- DAC - 500 MHz for arbitrary waveform generation (LVDS Interface)
- ADC – 400 MHz with 73 dB SFDR
- ADC – 210 MHz with 76 dB SFDR
- DDS – 3 GHz for Arbitrary waveform generation

Processor Based Design,

- Intel E3930 based design
- ARM based design
- iMX 7D based Design

Protocol,

- 1553B Interface
- ARINC 429 and 717
- RS422,485
- Ethernet
- USB
- UART
- C012

Multi Output Buffer Unit (MOBU) Case study

Multi Output Buffer Unit (MOBU) is used to drive the single signal Input to Multiple Outputs, This unit drives signal input to two different 16 Set of Outputs through two 50 Pin Standard D-Type Connector. This unit works with input 230V 50-60Hz and Output 15v Power supply adaptor.

Application:

Simulation of Sensor out put up to 5Mhz with 2+ to 10V VPP, to use at Test environments.

Specifications:

- Size : 180mm x 150mm x 30mm (LxWxH- Portable & Table top)
- Power Input : 15V.
- Frequency Range : up to 5 MHz, +/- 10v
- Driving Capabilities : Up to 5 Mtrs.
- Signal Output : 32 Outputs through two 50 pin D- type connectors
- Operating Temperature : 0° C - 50° C
- Storage Temperature : -40°C - +80°C
- Operating Voltage : 230 V AC using 15V 5A Output power adaptor.



Digital Telemetry De-Multiplexer — Model #:ST/TM/DDM-01

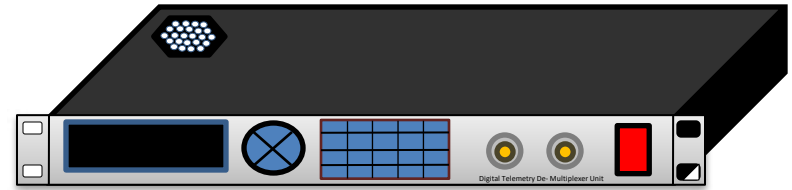
Digital De- Multiplexer consists of two Input channels having 34 output channels (1- PCM, 1- Audio & 32-Analog signals).

Specifications:

Number of Input Channels	2
Number of Output Channels per Input Channel	34(1-PCM, 1- Audio, 32- Analog)
Mode of Operation for Individual channels	<ul style="list-style-type: none">a. Filter Only: Filter the Input Signal and bypass the demodulator. Output available from the filter.b. Filter and Demodulator: Filter the Input Signal and demodulate . Output available
Display	To be provided to configure the filter and demodulator parameters using key panel.
Parameters to be configured through key panel per channel	<ul style="list-style-type: none">a. Filter: Function, type, Cutoff frequency, gain, Maximum Output Voltage.b. Demodulator : Subcarrier Frequency, demodulation Parameters, Video filter, bandwidth, Output Voltage.
Configuration utility	Provision to be provided for configuring the unit through configuration utility over Ethernet and /or RS232 link.
Parameters to be configured through Ethernet	All the Parameters
Performance	Minimum Output SNR of 10dB at all the Subcarrier outputs when input signal is 100 mVpp with input SNR of 15dB

Digital Telemetry De-Multiplexer — Model #:ST/TM/DDM-01

Size		1U, 19" Rack Mountable
Power Supply		230V/50 Hz
Interface Connectors		BNC (F) Connector for Input and Output (for Output Via octopus connector due to limited dimension)
Temperature range	Operating	0°C to 50°C
	Storage	-30°C to 65°C
Relative Humidity		Up to 95%



Digital Telemetry De- Multiplexer Unit

Linux Firmware & Driver Development for Dual Band Wifi Module

Overview:

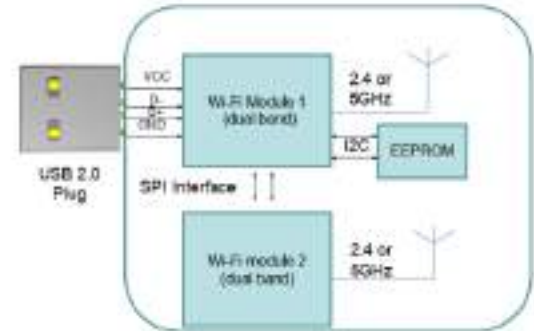
Development of Firmware on Linux RTOS Platform for Dual band WIFI Module, this includes design and development of Board Support Packages(BSP), Kernel Porting, Device drivers development and Board Bring up activities.

Our Responsibility:

- ❖ Linux Board Support Package and Board Bring-up Activities on Dual Band Wifi module.
- ❖ Porting U-Boot on Main Module.
- ❖ Porting Linux-Kernel 4.4 or Latest Version
- ❖ Linux driver, Stack or, Application support for the following H/W interfaces.

Interfaces:

- USB 2.0 x2
- Micro SD Card
- eMMC
- BLE-5.0
- LEDs x2
- Reset Button
- RTC
- Power Management IC



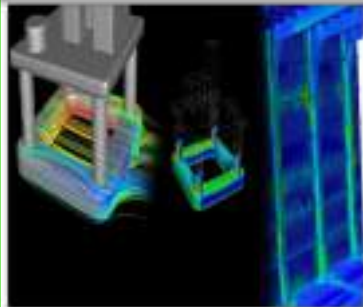
MECHANICAL ENGINEERING SERVICES

Product Design and Modelling



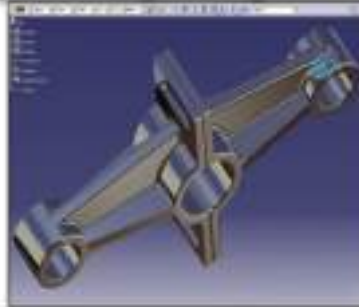
- Concept Design
- 3D Modelling
- Detail Engineering
- Re Engineering
- Reverse Engineering
- System Installation Design
- Conceptual to Detail Design
- 2D to 3D Conversion
- Digital Mock –Up

Engineering Analysis

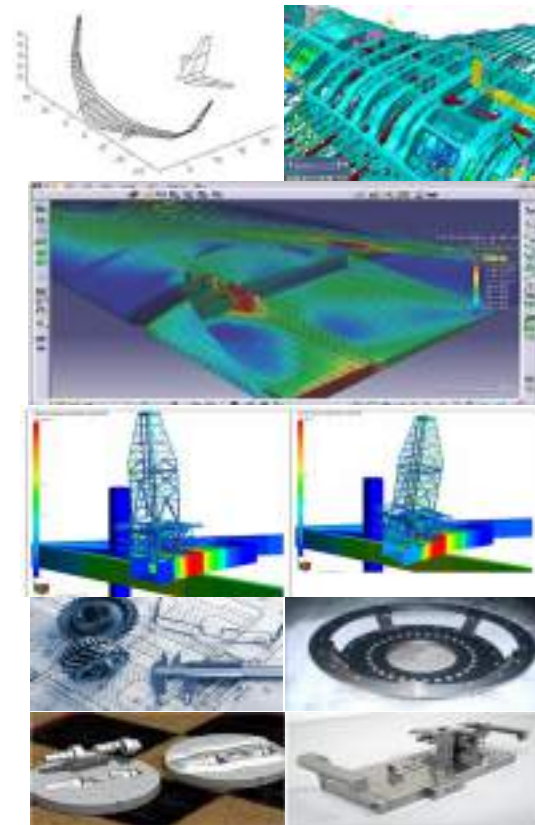


- Fatigue and Damage Tolerance (F&DT)
- Static Shock & Vibration Analysis
- Crash and Drop test Analysis
- CFD- Thermal & Hydraulic flow analysis
- CFD Lift & Drag Analysis
- Optimization of Design for weight and strength

Manufacturing Engineering



- Tool Design and Detailing
- Jigs & Fixtures Design & Detailing
- Design-for-Manufacturing
- NC Programming
- DFM DFA & DFMA
- Redrafting/ Re Designing of legacy Tools.



Shot Peen Masking

one of the Mechanical Modeling Case Study

Scope of Work:

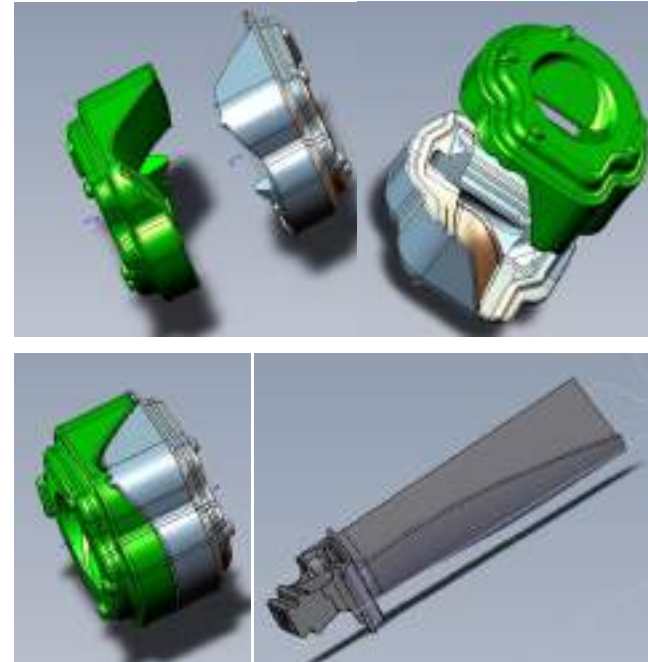
Design of masking for the blade leading edge side:

- Extend the masking features covering till blade root platform.
- Maintain the maskant contour and clearances near blade platform side as per to other masking areas.

Design of masking for the blade trailing edge side:

- Extend the masking features covering blade root platform.
- Maintain the maskant contour and clearances near blade platform side as per to other masking areas.
- Design of complete parametric Model of the Maskant and Blade.

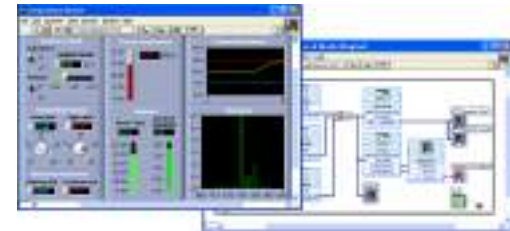
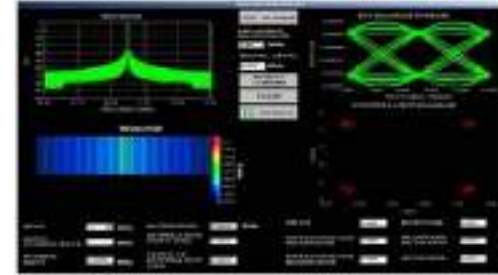
Tools Used: SolidWorks 2019-20



SOFTWARE ENGINEERING SERVICES

We know the importance of software engineering activities in the process of critical system development. To meet this requirement of software Engineering we bring together the right technical expertise with strong business process knowledge using the state of the art technologies to deliver flexible and scalable software solutions to our client in the areas like

- Design and Development of Software,
- Application Software Development - Desktop, Embedded, Mobile
- Data Acquisition Software
- Firmware Development
- Software Verification and Validation
- Software Test Case Development
- Software Maintenance & Support



Technical Documentation

We at Samniya provide end-to-end solutions in the area of Technical Documentation including Authoring, Illustration, Computer Based Training and Content Management.

Our team have hands-on experience in wide range of Technical Manuals for the Aerospace Industries, including Operation and Maintenance Manuals for Airframes, Engines, Mechanical/Electrical/Electronic Systems, Ground Support Equipments, Standard Practices Manuals, Illustrated Parts Catalogues and Service Bulletins.

Our Offerings:

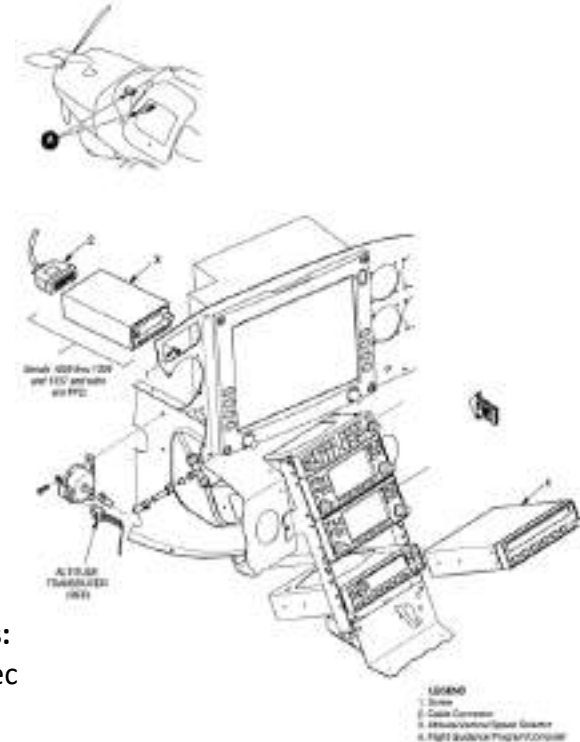
- Interactive Electronic Technical Manuals (IETM)
- Computer Based Training Packages (CBT)
- Illustrated Parts Catalogues (IPC)
- Content Management
- Technical Illustration
- Animation
- eLearning Solutions
- Technical Translation and Localization
- Application development
- Legacy data conversion

Tools Expertise:

- Arbor text
- Oxygen
- MS Office
- Adobe FrameMaker
- AutoCAD
- Active CGM Author
- ISODraw
- Adobe Illustrator
- Solid Works

Standards:

- ATA iSpec
- S1000D
- CMS





Industry / Domain Expertise.

AEROSPACE & DEFENSE OFFERINGS

Systems, Sub systems design and development – Airborne and Ground based

ATEs & Test Jigs/Rigs development

Firmware and Platform engineering

Application software development

Independent Verification and Validation

Value Engineering – Obsolescence management, Re-Engineering

Technical Documentation

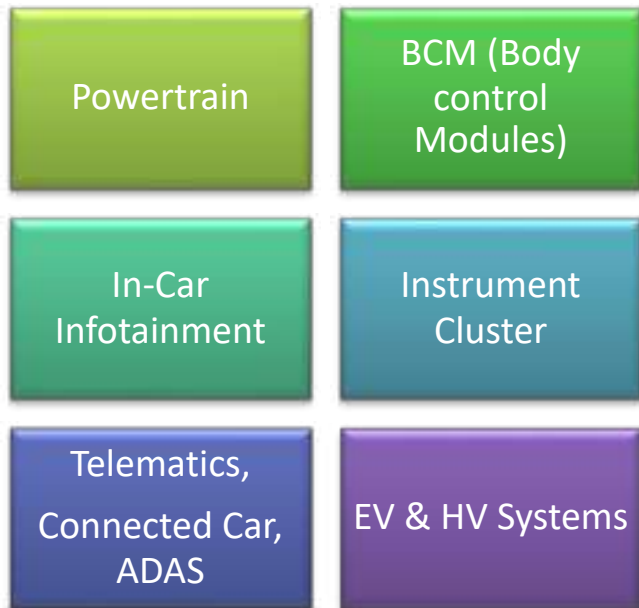
Testing and Certification services

Maintenance, Overhauls and Repair services

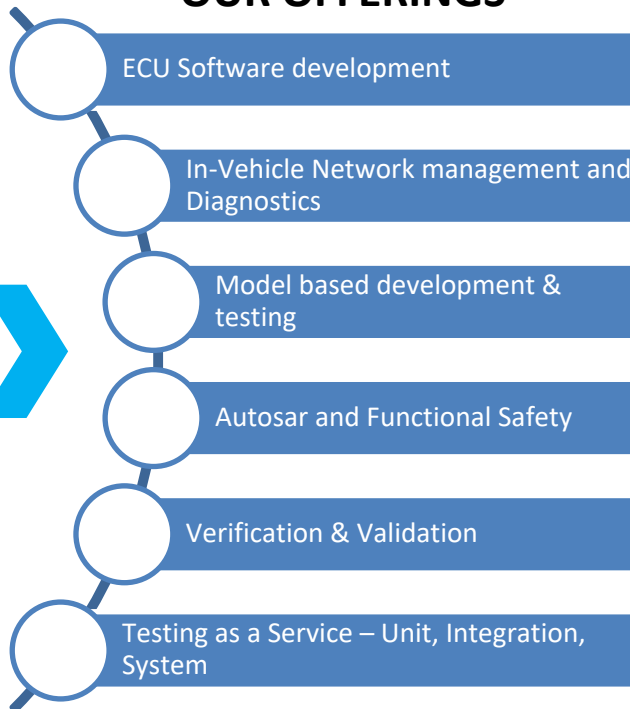


AUTOMOTIVE OFFERINGS

FOCUS AREAS



OUR OFFERINGS



INDUSTRIAL AUTOMATION

PC/Cloud based applications

HMI for SCADA systems

HMI/Application development for control panels

PLCs, DCS Implementation

Communication protocols – Modbus, ProfiBus,
EtherCAT,RS-485, Wireless HART etc.,

Data Acquisition Systems

Sensor/Actuator control





Focused To
innovate In
Aerospace
And
Automotive
Industries



CONTACT US



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