



PRODUCTS ENGINEERING ACADEMY

EMBEDDED TOOL CHAIN PROVIDER FOR
MORE THAN 8 YEARS

OUR ESTEEMED PARTNERS



ECO SYSTEM PARTNERS



OUR MARKETS



AUTOMOTIVE



AEROSPACE & DEFENCE



RAILWAYS



MEDICAL



5G COMMUNICATION
& NETWORKING



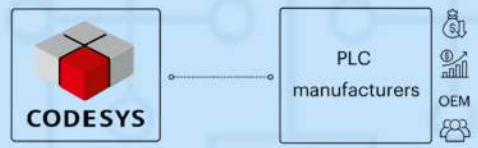
INDUSTRY AUTOMATION



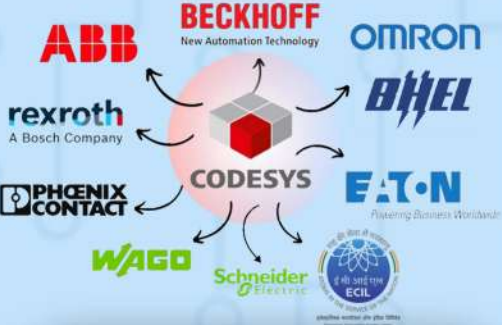
ENGINEERING SERVICES | TRAINING | SUPPORT

AUTOMATION SOFTWARE FOR ENGINEERING CONTROL SYSTEM - IEC 61131-3

CODESYS provides software solution for Industrial Automation to convert any intelligent device in to an IEC-61131-3 controller. PLC's, and Any industrial Devices, additional automation devices in various industries are programmed with this automation software. Device manufactures can adapt specific properties to the device with the help of Runtime Toolkit (SDK).



- CODESYS ENGINEERING
- CODESYS RUNTIME
- CODESYS FIELDBUS
- CODESYS COMMUNICATION
- CODESYS MOTION CNC ROBOTICS
- CODESYS SAFETY
- CODESYS AUTOMATION SERVER
- CODESYS VISUALIZATION



- HDMI Fiber Cable
- Converter Series
- Extender Series
- Splitter Series
- Industrial Serial Product
- Network Cable
- Smart Ring
- Other Series
- PCI Card
- Others USB Series



Power Supplies



Specification Range
Type: Digital, Analog, Mixed, Handheld
Bandwidth: 350 MHz
Sample rate:2GSa/s,
channels: up to 4
Interfaces:LAN,USB,RS232

Specification Range
Voltage: 0-1000 Volts
Current:0-120 Amps
Power:0-5100 Watts
Interfaces:LAN,USB,RS232

Oscilloscopes



Signal Generator



Specification Range
Type: Digital, Analog,Function Arbitrary
Frequency: 120 MHz
channels: up to 2
Interfaces: LAN,USB,RS232

Multimeters



Specification Range
Type: Bench, handheld multimeters
Display count:120000
Correction factor: True RMS,Averaging
Interfaces: RS232,USB,GPIB,LAN

DC Electronic Load



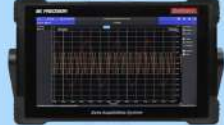
Specification Range
Voltage: 0-800 Volts
Current:0-720 Amps
Power:0-6000 Watts
Channels: 2
Interfaces:LAN,USB,RS232

Battery Testers



Specification Range
Voltage: 0-300Volts
Power:0-150 Watts
Channels: 2

Data Acquisition Recorder & Loggers



Specification Range
Type: Multi-Function, Portable
channels: upto 200
Memory: Upto 2TB Internal Memory
Battery Option: upto 3.5 Hours

And Other Testing & Measurement Tools



- Embedded Computer Platforms
- Mobile Data Terminal
- Test Instruments
- Home Automation Devices
- Camera & Broadcasting Monitors
- Touch VGA/HDMI Monitors for industrial applications
- USB Monitors Series
- Marine & Medical Monitors
- And other Special LCD Displays.



Security
Reliability
Power Loss Protection (PLP)

Capacity: Up to 15360 GB

PCIe Series

Capacity: Up to 30720GB

USB, DRAM, eMMC

Capacity Upto 2 TB

SATA Series

Capacity: Up to 15360 GB



- Oscilloscopes
- Data Loggers
- RF Products
- PicoDiagnostics NVH kits
- EV Kits and accessories
- Data Loggers
- OEM & custom Applications
- Milliohm Testers
- Pressure Sensors and accessories





**MEDIA
CONVERTERS**

TYPICAL USE CASES:

- ECU Development
- ECU Reprogramming
- ECU Diagnostics
- Testing/Simulation
- End of Line Process
- Vehicle Service



**CAPTURE
MODULES**

- Time Synchronization and distributed high-resolution Time Stamping.
- Capturing Data along with meta data such as interface, direction, and type.
- Build a modular and extensible capturing setup based on open protocols.
- Open ecosystem with free converters and Wireshark support.
- Capture Modules can be distributed for better signal integrity e.g., for CAN-FD!
- Support for many different communication



**SWITCH - BASED
PRODUCTS**

TYPICAL USE CASES

- Data acquisition and vehicle setups
- PoCs and concept validation
- Testing and automated test benches
- Extension of existing networks
- MACsec-based networks

Vgate

- iCar Series
- vLinker Series
- OBD Code Reader
- OBD Cables
- Battery Test Tool



UDE 2023 Highlights

- Intuitive user interface with perspectives feature
- Support for multi-screen operation
- UDE SimplyTrace for easy trace configuration
- Global time base for trace- based analysis functions

Features:

- Multi-core debugging and trace
- Compiler, RTOS & AUTOSAR
- Software API for tool automation
- Trace data analysis at system level
- Target interfaces and hosts

UAD2pro

- Basic debugging
- Entry-level on-chip trace
- Production FLASH programming



UAD2Next

- Basic & Remote Debugging
- Trace based debugging and measurement
- Range Extender available to bridge up to 2m between UAD2next and target system



UAD3+

- High-End Trace
- High Bandwidth Trace Recording for Trace Based System Analysis, Measurement and Debugging
- Remote Debugging
- Multi-Target Debugging



SUPPORTED MICROCONTROLLERS

INFINEON

AURIX TC4x, TC3xx, TC2xx, TriCore
Cortex XMC1xxx, XMC4xxx
Cypress PSoC4

STMICROELECTRONICS

Stellar E/P/G, STM32, STM32H7
Power Architecture:
SPC56, SPC57, SPC58

NXP

Cortex-A53 532G, S32V
Cortex-R52.532Z, 532E Power Architecture
MPC56, MPC57, 532R Cortex-M i.MX RT, S32K, Kinetis

RENESAS

RH850, R-Car H3, RZ/T2M

ARM

Cortex-R52, Cortex-A53
Cortex-AB, Cortex-A9, Cortex-M33
Cortex-M/R/A, Arm7/9/11

VARIOUS VENDORS

e.g. RISC-V, Synopsys ARC
TI Jacinto, Sitara
Hilscher NETX 90
Xilinx ZYNQ7000
and more...



**MODEL-BASED SOFTWARE
AND
SYSTEMS ENGINEERING**



PRODUCTS AND SERVICES

As a specialist for model-based software and systems engineering, we give you everything you need from a single source. As part of our LieberLieber 360° Principle, we offer a range of services with which we integrate our powerful tools into your existing development process. Our two plug-and-play products are in strong demand: Lemon Tree and Embedded Engineer.

Products & Services

- Lemon Tree
- Embedded Engineer

BEAMENGINE

Safe Navigation For Any Vehicle

High Resolution for Safe Autonomous Navigation



- High-resolution and solid-state 3D LIDAR
- CCTV camera
- Thermal camera
- Unprecedented stability and robustness
- Neural network pretrained to detect humans
- Other types of objects are possible under demand
- Close to zero false alarm rate in any environment
- Embedded inside the sensor casing



OUR SERVICES

EMBEDDED PRODUCT ENGINEERING SERVICES

TESTING

- Code review
- Defects Analysis
- Unit Testing
- HIL, SIL, MIL
- Integration testing
- Regression Testing
- System Testing
- Test automation

APPLICATION LAYER

- Application Framework
- Porting & Integration
- open source software
- integration & customization
- UI Design, Development & integration
- Legacy Application Migration

MIDDLE WARE LAYER

- Protocol Stacks & Application
- Framework Services for CAN, LIN, Flex ray, Modbus, Profibus, USB, RS232/485, Ethernet, WLAN, Bluetooth, RFID, ZigBee.
- Codec's & DSP algorithm development for various Audio, video& Images

BSP LAYER

- BOARD BRING UP
- BOOT LOADER
- DEVICE DRIVERS
- OS/RTOS PORTING
- Expertise on VxWorks, Linux, Android, Windows Embedded, Greenhill's Integrity, EB Tresos, PXROS, QNX, LYNUXWorks, Thread X & xenomai

PLATFORM EXPERIENCE

- PLATFORM EXPERIENCE
- INTEL, FREESCALE, TI, ARM, RENESAS, PIC, MIPS, ANALOG DEVICES, INFINEON, NXP, LSI, NEC, ST, AMCC

AUTOMOTIVE ELECTRONICS ENGINEERING SERVICES

AUTOMOTIVE PLATFORM

INTEGRATION SERVICES

1. MIGRATION OF AUTOMOTIVE APPLICATION FROM LEGACY ARCHITECTURE TO AUTOSAR.
2. ALL VERSION OF AUTOSAR PLATFORM INTEGRATION.
3. NON AUTOSAR LIKE OSEK BASED PLATFORM INTEGRATION.
4. INTEGRATION INCLUDES
 - I. MCAL OR LOW LEVEL DRIVERS.
 - II. AUTOSAR OR NON AUTOSAR BSW

AUTOMOTIVE PLATFORM MAINTENANCE

1. MAINTENANCE OF CUSTOMER SPECIFIC MCAL OR LOW LEVEL DRIVERS
2. MAINTENANCE OF AUTOSAR OR NON AUTOSAR BSW STACK INCLUDING OS

INFOTAINMENT SERVICES

1. LINUX BASED INFOTAINMENT DEVELOPMENT.
2. INTEGRATION OF REAL-TIME EXTENSIONS.
3. MOST ISO INTEGRATION.

POWERTRAIN/CHASSIS/ BODY SERVICES

1. FEATURE DEVELOPMENT / VALIDATION BASED ON CUSTOMER SPECIFICATION.
2. PROTOTYPE IMPLEMENTATION IN STANDARD HARDWARE
3. APPLICATION MIGRATION TO NEW HARDWARE
4. RE-ARCHITECTURE FOR PROCESSOR INDEPENDENCY.

RN ACADEMY

EMBEDDED SYSTEMS

- Embedded Software Development
- Embedded Hardware Design
- Embedded Software Testing
- Firmware Development
- Firmware Testing

ESSENTIALS OF C IN EMBEDDED SYSTEMS

- Basics of C for Embedded Programming
- Data Structures and Memory Management
- Functions and Modular Programming
- Interfacing Hardware with C

OTHER COURSES

- Linux Debugging
- Embedded Debugging
- C++
- Rust



RN EMBEDDED SOLUTIONS PRIVATE LIMITED

Hyderabad, Telangana

PRODUCTS | ENGINEERING | ACADEMY

INDIA | EUROPE | SINGAPORE