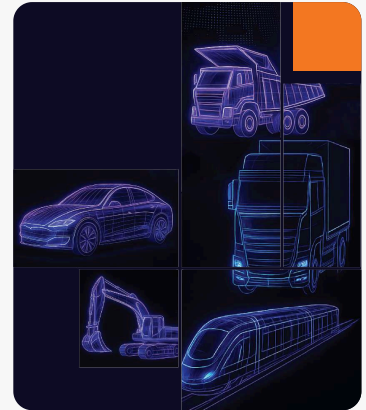


AUTOMOTIVE & EV • TEST & VALIDATION

YOUR TRUSTED PARTNER IN AUTOMOTIVE TEST SOLUTIONS

Advanced Verification & Validation for a Smarter Future

TMCS engineers advanced test and automation solutions that help the automotive and EV industry innovate with speed, safety and confidence — integrating NI platforms, PLCs and custom electronics into unified test ecosystems.



9+

Fortune 500 companies served

500

Projects executed

8+

Global coverage

80+

Team members

01 COMPANY OVERVIEW

Established in 2013, TMCS is a leading provider of industrial automation, test, measurement and control solutions. As a trusted NI System Integration Partner, TMCS specialises in customised solutions that seamlessly integrate advanced measurement hardware, intelligent software and precision control architectures — delivering high-value test systems across international markets.

VISION

To be a global leader in Test & Measurement, delivering innovative and reliable solutions worldwide.

MISSION

Delivering value-driven, on-time Test & Measurement solutions for Manufacturing and R&D globally.

02 OUR SERVICES

- Automated Test Equipment (ATE)
- End-of-Line (EOL) Testing
- Hardware-in-the-Loop (HIL)
- High-Speed Data Acquisition
- Panel Engineering
- Software Development
- Indigenised Defence Equipment
- Resource Deployment
- Training

03 WHY TMCS?

- 01 Decade of Excellence**
Partnering globally through technology and trust.
- 02 Authorised NI Partner**
Certified system integrator for scalable test solutions.
- 03 Certified Professionals**
Skilled LabVIEW architects and developers.
- 04 Compliance Driven**
CE-certified systems built to global standards.
- 05 Industry Leadership**
Trusted by 9+ Fortune 500 global clients.
- 06 Domain Expertise**
10+ years across transportation, aerospace and defence.
- 07 LabVIEW Excellence**
NI and third-party hardware integration expertise.
- 08 Technology**
Customised solutions powered by in-house technology.
- 09 Global Presence**
Offices in Pune, Hyderabad and Germany.
- 10 Timeliness**
Timely, complete and transparent project delivery.

04 AUTOMOTIVE & EV CASE STUDIES



CASE 01
VCU Test Bench

- ✓ Dual-station EOL bench for 2-wheeler ECUs
- ✓ CAN DUT identification, I/O, load & FIU tests
- ✓ NI hardware, LabVIEW & NI TestStand



CASE 02
Steering HIL Test Rig

- ✓ Real-time EPAS / HPAS validation
- ✓ NI VeriStand + PXIe with hydraulic actuators
- ✓ Live visualisation & parameter logging



CASE 03
ABS Solenoid Test Bench

- ✓ Pneumatic brake-pressure control
- ✓ Temperature & current DAQ on NI hardware
- ✓ Multiple solenoid DUTs tested together



CASE 04
E-Axle Test Bench

- ✓ RPM, braking, diff-lock & gear-ratio tests
- ✓ NI DAQ, LabVIEW, PLC & MySQL data management
- ✓ Adaptable to multiple axle variants



CASE 05
Line Traceability & Assembly Monitoring

- ✓ QR-based traceability across all variants
- ✓ LabVIEW SCADA with OPC-UA PLC link
- ✓ Torque logging & BOM-based part validation



CASE 06
Power Window Regulator

- ✓ Current, displacement & sound monitoring
- ✓ False-reversal & cyclic-behaviour detection
- ✓ Motor noise analysis in acoustic chamber



CASE 07
Gearbox Endurance Test Bench

- ✓ Automated endurance up to 100,000+ cycles
- ✓ Input/output RPM, torque & power measurement
- ✓ Oil filling & leakage verification



CASE 08
BLDC Motor Drive

- ✓ 12 DUTs tested simultaneously
- ✓ Temperature rise, kWh, line & load regulation
- ✓ Automated report generation

PRODUCT SPOTLIGHT

AutoHIL

Experience the future of electric vehicle mobility



Real-time VCU-HMI interaction with live simulation of charging, faults and vehicle functions such as ignition, brake, gear and drive modes.

Fault injection

CAN-based control

Automated testing

Visual feedback

Validation, analysis & R&D

Let's Connect

Your trusted partner for automation, testing and system integration – from concept to commissioning, with seamless execution and long-term support.

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RECOGNITION

ISO 9001:2015 certified (QRO)

Exhibitor, Auto EV India 2024

SIAT 2024