

# Locomotive Control and Fault Diagnostic System

Medha's MEP system is a 32 bit, high performance microprocessor based modular system that provides complete traction and propulsion control of the vehicle with continuous monitoring and extensive fault diagnostics.

Major functions includes Engine control, Excitation control, Propulsion control, Wheel slip control, Auxiliary controls, Traction equipment protection, Fault Diagnostics, Data recording and Parameters display.

- ✔ Very cost competitive
- ✔ Increased protection of traction equipment
- ✔ >10% increase of traction motor life
- ✔ User configurable parameters for easy adaptation to different types of vehicles
- ✔ >15% reduction in vehicle assembly and commissioning time
- ✔ >20% increase in haulage capacity
- ✔ Upto 45% increase in wheel-rail adhesion
- ✔ Extended comprehensive warranty, maintenance contract and other customer friendly after sales support packages
- ✔ Easily configurable to suit any make or model of locomotive (new or retrofit locomotives)



## Standardized Solutions

to suit Vehicles of different make, model, type and HP rating, with nominal software and hardware variations

- Any combination of traction equipment make, model or type (AC or DC traction)
- For new locomotives and for retrofit during repowering, rebuilding or major overhaul



## Large Number of Installations

Since 2002, over 4200 systems have been installed on different make and types of locomotives and vehicles in various countries

## Complete packaged solution Inclusive of,

driver display | event recorder | driver alerter | speedometer | sensors | interconnecting cables | other components and sub-assemblies



## Easy Installation and Commissioning

Available as ready to install control panel with all electrical components, reduces vehicle assembly and commissioning time by >15%

## Features



### Communication and Interfaces

Using CAN, ethernet or other channels for interface with Engine ECU unit, HEP, Surveillance system, ATP and other sub-systems of the vehicle



### Safety Features

Protections for low water level, low lube oil pressure, engine overspeed, locomotive overspeed, traction motor overspeed, engine overload, power and control ground, traction motor overheating and many more.....



### Auto Test Modes

Various auto and manual test modes, including load box, auto test for relays, manual test of inputs and outputs, self load test, meters test, excitation test, radiator fan tests and more ...



### Extensive Fault Diagnostics and Data analysis

Over 250 types of faults with over 220 types of parameters with fault data pack recording (1 second resolution) and easy download to laptop and USB pendrive

## Compliance to International Standards

IEC 60571  
IEC 61373 (shock and vibrations)  
IEC 62498-1 (relative humidity)  
IEC 62236-3-2 (surge, EMC, ESD, EFT)

## Add-on Features

- + Vehicle remote monitoring
- + Fuel saving solutions
- + Distributed power control
- + Fuel level sensors
- + Auto creep control and many more...



More than 4,200 locomotives of different models are operational with Medha's Locomotive Control system in various Countries like, Indonesia, Thailand, Myanmar, Tanzania, Zambia, Mozambique, India...

Locomotives: EMD (G26MAC model), Alstom (AD3400 model), YDM4 model, GE (Class88 model)...

[www.medha.com](http://www.medha.com)

**MEDHA SERVO DRIVES PVT. LTD.**

    
Design ▶ Manufacturing ▶ Maintenance

  
**MEDHA**

2-3-2/A, Cherlapally, Hyderabad - 500 051, India  
Tel: +91-40-67237000 / 01  
[exports@medha.com](mailto:exports@medha.com), [marketing@medha.com](mailto:marketing@medha.com)