Vehicle Controls and Connected Monitoring Solutions

Controllers

HMI

Telematics

HED®

Intelligent Vehicle Controls

ABOUT US

Our Dedicated Team

From development to deployment, our extensive multi-disciplined engineering and manufacturing teams are available to ensure you achieve your vision.

An industry leader for over 30 years, HED specializes in the design, manufacture, and implementation of innovative control systems and vehicle monitoring solutions for mobile equipment OEMs. Along with a complete line of controllers, HMI and telematics our application development tools provide the flexibility and configurability to create the optimal control system. Our products give you ultimate control and complete insights into your vehicle and entire fleet.

Our Approach

- Partnerships
- Process Focused
- Testing and Validation
- On-site Support
- Quality & Continuous Improvement

Products & Services

- Controllers (I/O)
- Displays
- Keypads
- Telematics
- Development Tools
- Engineering Services

1

World Class Intelligent Vehicle Controls and Monitoring Solutions

HED®
Intelligent Vehicle Controls

CAN bus Applications for Chassis and Body

JOG DIAL

DISPLAYS

KEYPADS

TELEMATICS

I/O

I/O

CONTROLLERS

Backend Services

Real-time tracking, monitoring and diagnostics of your fleet on-site or from anywhere in the world!

CONTROLLERS

| IP67 RATED | SHOCK & VIBRATION RESISTANT | TEMPERATURE -40°C TO 70°C (OPERATING) |

I/O for Small to Large Projects

Choose from a variety of master and client (I/O) control modules to fit your needs. Inputs and outputs are configurable to support any multiplexed or stand-alone applications. Our modules are designed for harsh environments.

Features

I/O - Software configurable

    Flexible design configurations ranging from 8 to 69 I/O

    High current output models

CAN Ports - Up to 3, fully customizable with support for J1939,

    CANopen, and proprietary protocols

Rugged & Versatile

CL-446-100

HMI

REAL-TIME CLOCK FOR DATA TIME STAMP	TOUCHSCREEN OPTION	SUNLIGHT READABLE	IP67 RATED	SHOCK & VIBRATION RESISTANT	TEMPERATURE -40°C TO 70°C (OPERATING)

Features

I/O - Software configurable

    Up to 11 inputs | 4 Outputs | 5VDC sensor supply

Programming Tools - HED Orchestra™, Open Platform, Crank Storyboard

        Codesys, Supports Qt Widgets

Memory - Flash 8GB (upgradeable to 32GB), RAM 512MB

Resolution - Up to 1280 x 800

Video Inputs - Up to 4 NTSC & PAL inputs; graphics over video

Communication Ports - 2 CAN, Ethernet, USB

Graphical Displays

Color displays from 4.3" - 10.1" offering high-brightness graphics, text and video. Our NEW 5" display features a minimalistic design for an updated look and feel. Made for harsh environments, our displays can be mounted in the cab or outside your vehicle.

Durable Design

No-button models also available

4

HMI

| WITHSTAND CAUSTIC CHEMICALS | IP67 RATED | SHOCK & VIBRATION RESISTANT | TEMPERATURE -40°C TO 70°C (OPERATING) | LONG LIFE |

CAN Keypads

CAN Keypads are a convenient, economical way to consolidate mechanical switches to reduce failures and harness costs. Keypads can be integrated into multiplexed systems and are fully programmable to support stand-alone applications. Designed for harsh environments, they can be mounted in or outside the cab.

Features

Customizable - Icons, LED back light, LED indicators

LED Indicators - Fully dimmable, customizable colors and location

Multiple Configurations - 2x3, 4x3, 2x4, 2x6 and 2x8

CAN Port - J1939 interface, or programmable for custom protocol

Additional Connector - I/O and CAN pass-through options

Long Life - Over 2 million key presses

Customizable Icons

Features

Encoder - rotary scrolling, joystick and push button capable

CAN Port - J1939

Long life - 500,000 cycles

Jog Dial

Our NEW multi-function jog dial features 5 hot keys for fast navigation, a rotary encoder for easy menu scrolling, push-button selection and joystick navigation.

Multi-functional

SUCCESS STORY

Wi-Fi Connected Graphical Display Allows Ambulance Drivers to Focus on Driving

Overview

Life Line Emergency Vehicles partnered with HED to develop a best-in-class vehicle control experience in an effort to differentiate their ambulances in the market. The Life Line G3 Elite Touch System© incorporates vehicle controls, keypads, multiple 7" displays and Wi-Fi for remote access.

Application

The system utilizes an HED Wi-Fi control module for wireless intelligent vehicle functions, including vehicle maintenance, system diagnostics and reprogramming. The Wi-Fi module has an 800MHz ARM Cortex8 processor, 4GB of flash memory and 2 CAN ports for interfacing with vehicle and control CAN buses. The addition of these two components into the existing HED control system allows Life Line to deliver the most technically advanced system in the industry, while utilizing field-proven controller hardware.

The 7" graphical display also includes an 800MHz ARM Cortex8 processor and 4GB of flash memory. The third generation touch-screen display incorporates on-board diagnostics, allowing vehicle technicians to verify system functions such as input and output diagnostics on-screen without having to plug in additional equipment. The display also reduces system boot-up time, feature-rich operator control screens and updated icons with automotive styling. The LCD screen incorporates an anti-reflective touch-screen with a glass bonded overlay to prevent external light glare and provide accurate touch control.

Results

This collaborative development resulted in an ambulance electrical control system that maximizes vehicle up-time and enhances operator performance, while reducing operational costs, leading the way for the ambulance of tomorrow.

CANect® TELEMATICS

Get the full picture
Streamline Processes, Create Efficiencies and Increase Productivity

See data for one vehicle or an entire fleet, on-site or from anywhere in the world, with our complete suite of CANect® Telematics products and tools. We will work with your team to design a complete telematics system specific to your use case or provide you with the tools to develop the system yourself.

Full configurability and flexibility to design your solution

Benefits
- Lower Cost of Ownership
- Improve Operator Safety
- Maximize ROI
- Vehicle Prognostics
- Increase Up-time and Performance

Features
- Vehicle Tracking
- Remotely View Diagnostics
- Predictive Maintenance
- Remote Vehicle Interaction

Hardware

CANect Portal™
Complete back office solution to manage an entire fleet from anywhere

Compatible Add Ons
- Business apps
- Integration APIs

CANect View™
Connect to a single vehicle on-site

CANect Reflector™
Connect to a single vehicle from anywhere with remote app

CANect Composer™
Our custom configuration software tool-set

8

CANect® PORTFOLIO

Overview

CANect® is a portfolio of hardware, software and web portal tools that give you complete control of your vehicles and fleets in the field.

CANect empowers you with a broad array of vehicle and fleet management tools.

CANect® Hardware
• Over-the-Air-Programming (OTAP)
• View/Analyze/Update Live Data
• Customizable Data Logging
• Ruggedized for Harsh Environments

WiFi   Cell   WiFi & Cell

NEW 4G now available in Europe

CANect PORTAL™
Process, present and archive vehicle data to effectively manage your fleet from anywhere using our web portal solution.

• Push critical data to the cloud
• Customize vehicle dashboards
• View fleet/groups
• Receive alerts/notifications/reporting
• Rapid development & deployment
• Over-the-Air-Programming
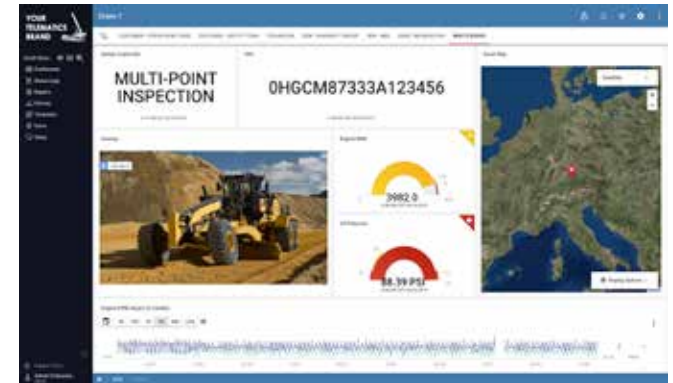
CANect VIEW™
Access vehicle data while on-site using an on-module user interface.

• Receive real-time health reports
• Access manuals and documents
• View live data graphs
• Get pre-operation checklists
• Customized experiences using SDK
• No software required

CANect REFLECTOR™
Remotely access CANect View from anywhere in the world for any vehicle. All the benefits of CANect View +

• Remote troubleshooting/tech assist
• Over-the-Air-Programming
• Simultaneous user support

9

SUCCESS STORY

IoT Solution Provides Real-Time Data Monitoring for Concrete Quality

Overview
Concrete is one of the most widely used materials in the world. From parking garages and bridges to roads and buildings, concrete forms the infrastructure and foundation for much of our commercial, residential and transportation structures. In order to achieve optimal strength and long-term durability, the perfect combination of aggregate, cement, water, and air must be created for each application.

CiDRA Concrete Systems understands the challenges involved with producing concrete and that is why they developed the SMARThatch™ system, which features AIRtrac™ technology, giving their customers the ability to monitor the entrained air content in real-time while being transported from batch plant to job site.

The Opportunity
Other methods used to monitor air content in concrete involve a highly manual process that requires on-site technicians to complete. Testing can only be completed once a truck arrives on the job site, resulting in costly downtime if air content adjustments are required.

To optimize their operations, concrete producers and truck operators need greater visibility into these key metrics throughout the mixing process in order to identify issues earlier, adjust loads proactively, and provide real-time feedback about concrete quality to the plant.

The Solution
CiDRA partnered with HED and Exosite to develop their SMARThatch monitoring system, which is installed on the mixing drum of concrete trucks. As the drum rotates to agitate the concrete, the sensor unit collects data on air content, temperature, drum rotation speed, and volume. This helps their customers leverage real-time data to enhance concrete quality, optimize processes, and reduce costs.

Sensor data is sent to the HED CANect® Telematics unit, along with an in-cab display for truck operators that provides real-time air content and temperature data they can access during transit. The telematics unit then transmits the sensor data, along with GPS and other key metrics, over the 4G LTE cellular interface to the back office for visualization by remote users using the ExoSense® condition monitoring application. From this tool, users can identify batch issues, enhance quality control coverage, and test new mix designs.

Results
• Speedy deployment
• Recurring revenue stream
• Reduced downtime and waste
• Lower costs and variability
• Enhanced quality control

HED is headquartered in Hartford, WI, just outside of Milwaukee. Our professional mindset centers on disciplined ISO-based processes, continuous improvement and innovation. Our company culture works hard and plays hard. Our teams are dedicated and deeply integrated to partner with you and offer the best experience in developing your vehicle control solution.

www.hedonline.com