



**ELECTRONIC
INNOVATION Inc.**

**Vehicle Control
Networks**

DN Series DeviceNet Vehicle Control Modules



When the developers of DeviceNet sought a bulletproof technology for critical networking purposes, they opted for a ready-made solution from the automotive industry. Bosch developed CAN in the early 1980's for eliminating large and expensive wiring harnesses in Mercedes automobiles.

Of course in a vehicle, it's literally a life and death situation. Network errors are simply NOT TOLERABLE, regardless of origin. CAN lives up to the rigorous requirements, with a statistical probability of less than one faulty message per century. DeviceNet is a messaging protocol built on top of the CAN physical configuration and network access standards.



Large machinery and heavy equipment, which require electronic control, are ideal applications for vehicle networks. OEM equipment manufacturers realize significant savings in wiring, installation labor, and post-installation troubleshooting costs. The end user benefits from the advanced diagnostic capabilities provided by the electronic control modules.

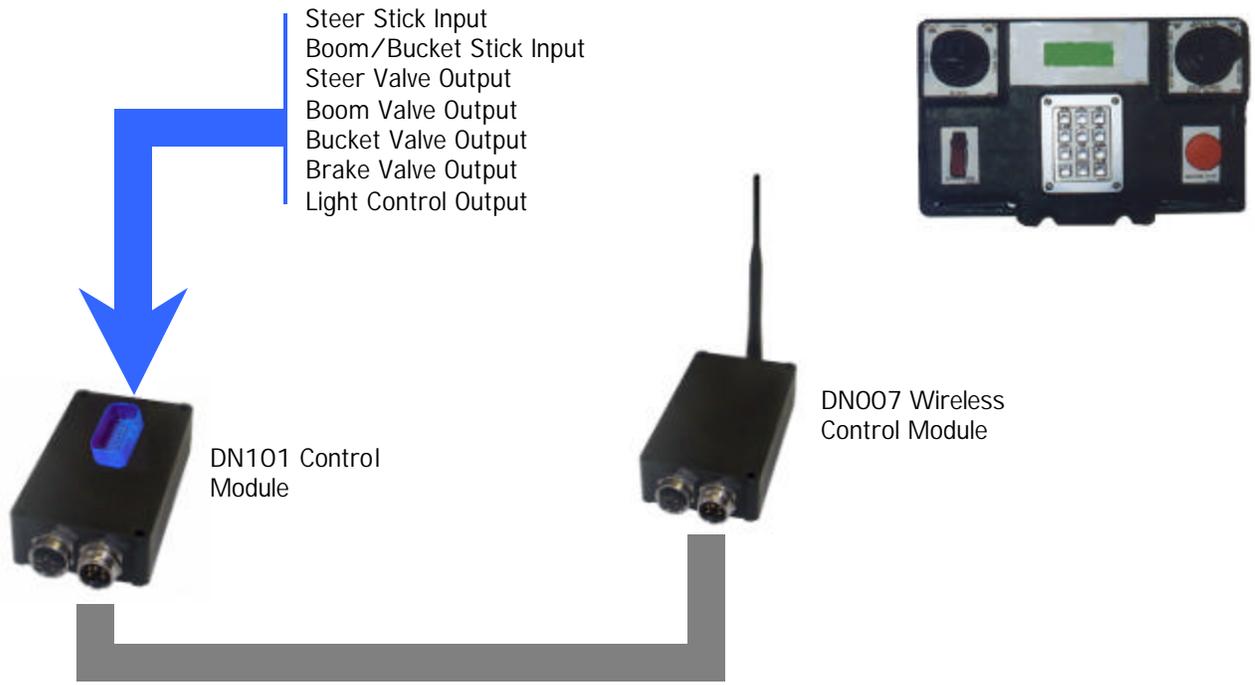


A vehicle control network minimizes wiring and wiring maintenance. This reduces complexity and increases reliability. Most OEMs select a vehicle network for the wiring cost reductions, but the savings are not just the cost of the wire and initial installation of the wire. Vehicle networks also substantially reduce the cost of the after-sales service and troubleshooting.

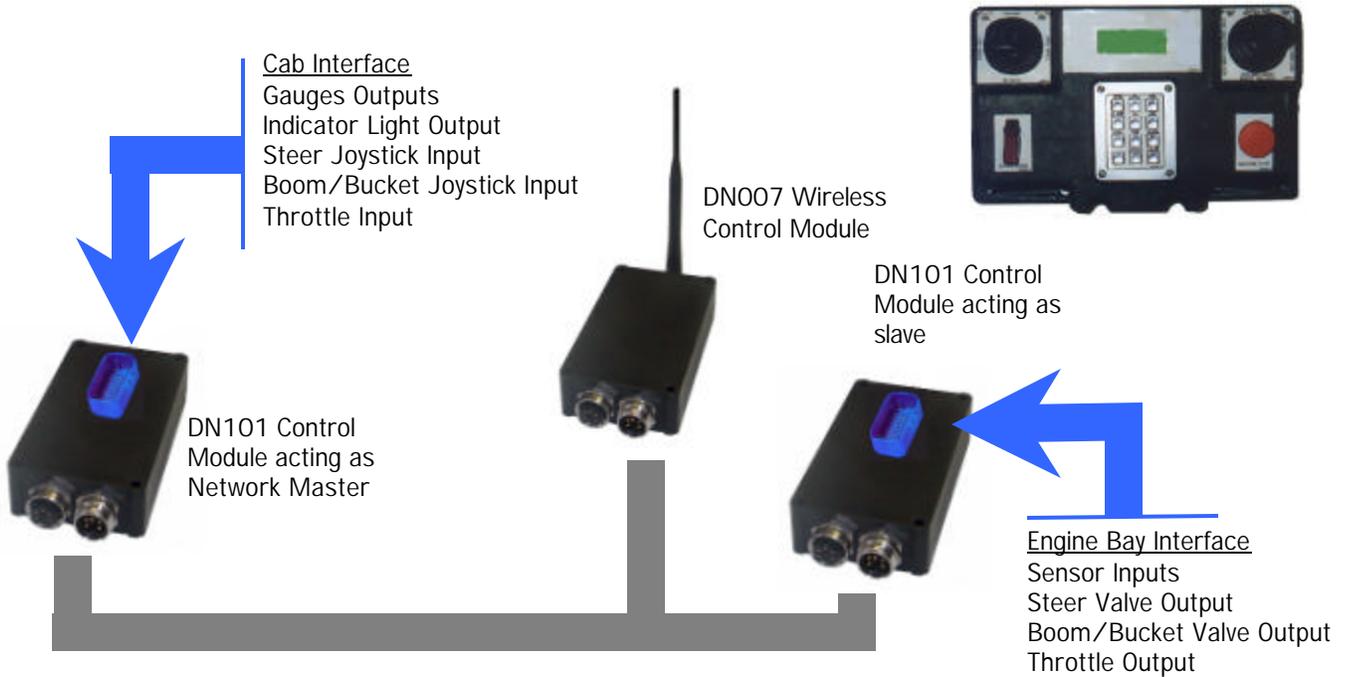


While wiring considerations alone can justify vehicle networks, end users find that the network provides an additional benefit. The advanced diagnostic capability allows for the immediate awareness of unstable conditions. When a device is broken or worn, the problem may remain undiscovered until equipment failure, or other more serious problems occur. Electronic Innovation vehicle networks perform internal self-diagnostics and are able to report the working status of each device over the network. When a fault does occur, diagnostics identify the location of the fault. This eliminates the time-consuming process of tracing faults back through the wiring harness.

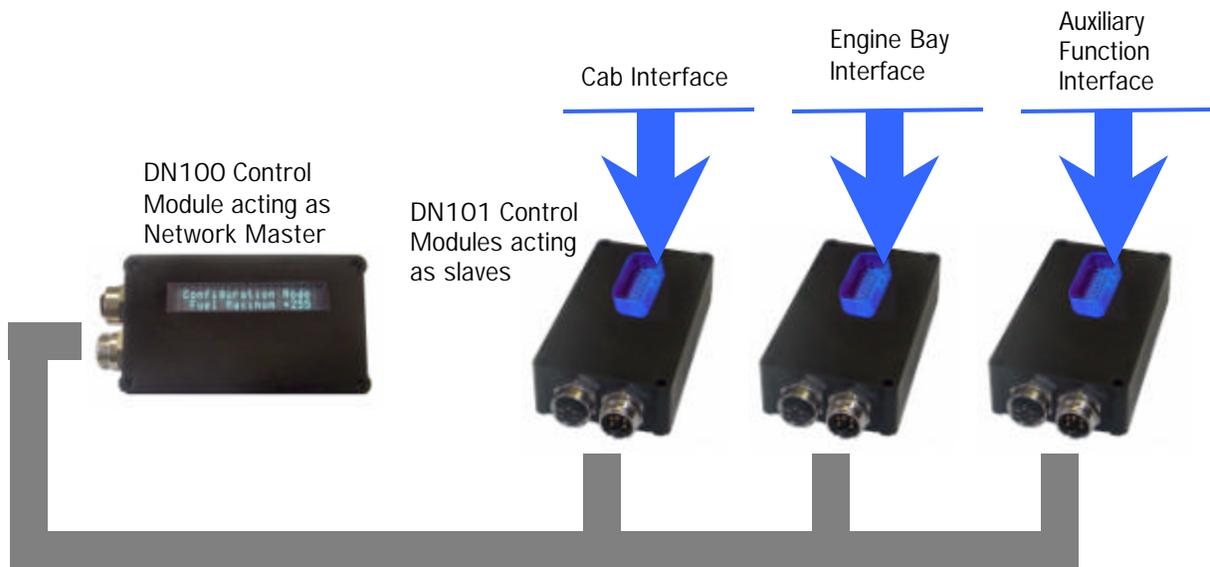
DeviceNet
CONFORMANCE TESTED



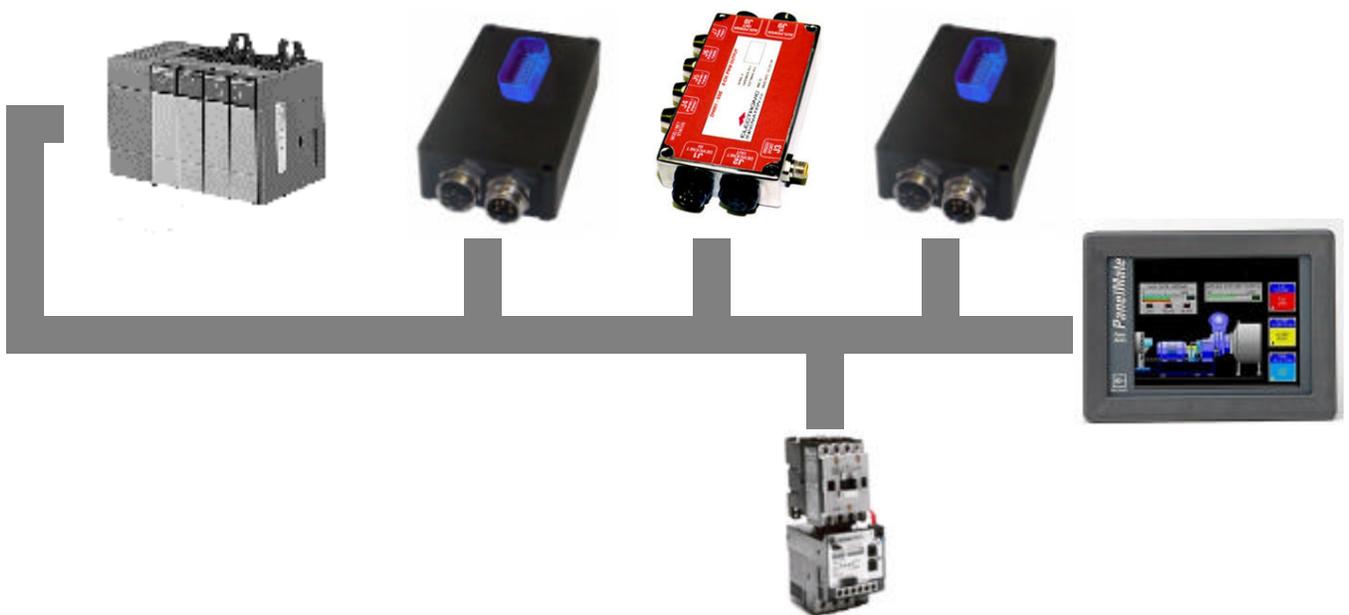
The control modules can be arranged as a cost effective line-of-site radio remote control system for any piece of heavy equipment. This system has the advantage of being able to accept electric boom, bucket and steer joystick controls, eliminating all of the hydraulic pilot controls normally controlling these functions. The DN007 wireless control module can be added to any DeviceNet network in order to provide wireless control.



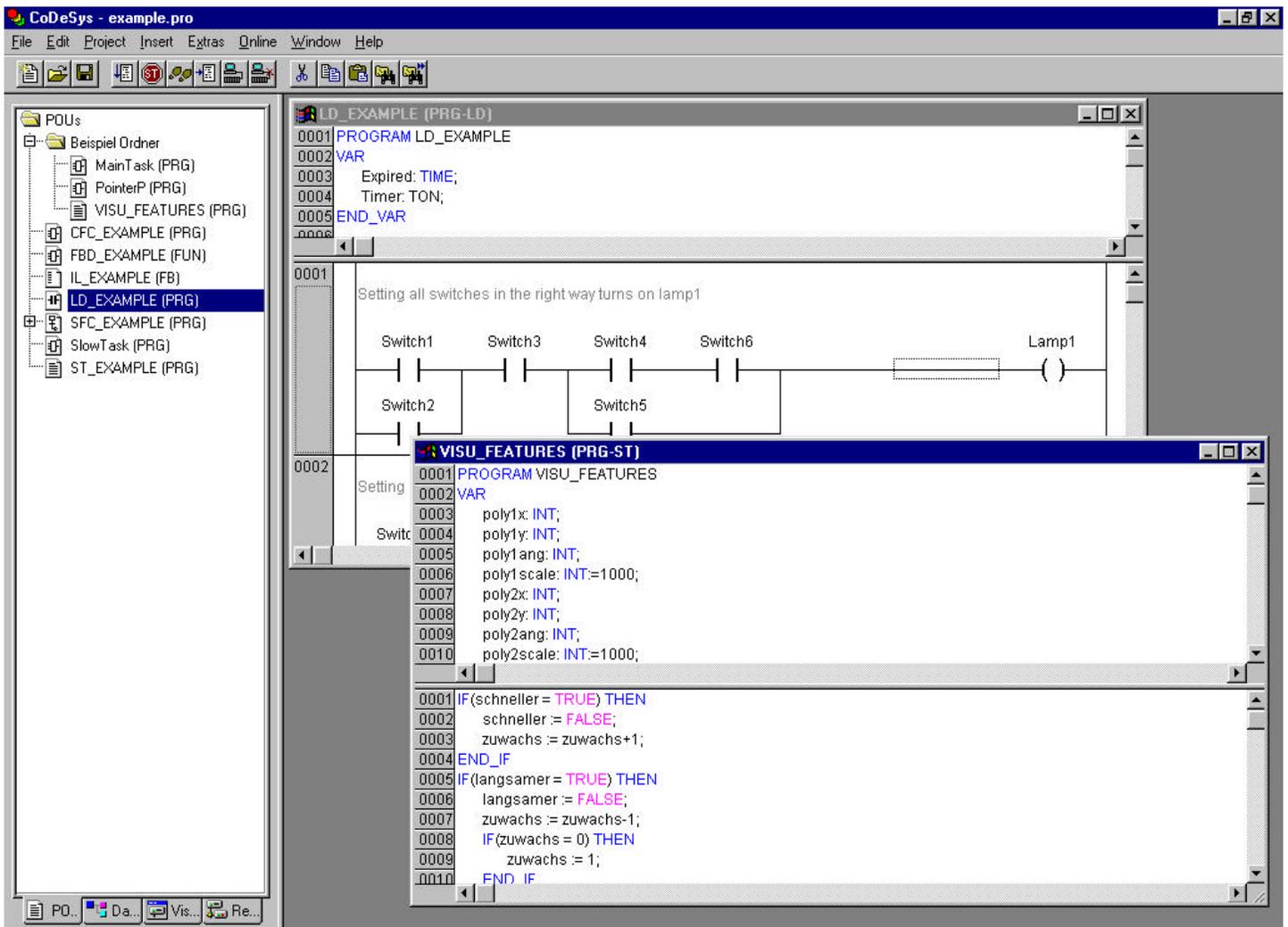
The system can be used as a replacement for hardwiring. The configuration shown would be suitable for controlling an articulated loader. The DN101 I/O is capable of interfacing to standard automotive sensors and gauges. No special interface circuits are required.



In larger, automated systems multiple I/O modules may be combined with either the DN100 or DN101 controller to provide advanced complex control functions.



Full DeviceNet compatibility allows the integration of third party controllers, I/O and other components.



An IEC1131 software package is available for the DN100 and DN101 control modules to enable OEM development of the control algorithms. This software provides the standard features of most PLC programming packages.