

By focusing on the unique needs of each customer, Central Railway Manufacturing has worked with leaders in the freight transportation industry to turn their analytics and remote data offloading requirements into a reality.

## Locomotive Network Interface

Central Railway Manufacturing's equipment portfolio includes the LNI and the LCR, the Locomotive Communication Router. The LCR is a fully featured bridge for any communications based LDARS application, capable of connecting any serial port peripheral to modern Ethernet on-board networks. The LNI adds high-powered, low cost and simple wireless routing capabilities to the LCR with dual cellular and WIFI modems in an ultra-compact form factor.

### Insight into LNI and LCR technology...

The LCR employs a versatile communications architecture that bridges two fully featured and software defined serial ports to a rail-hardened Ethernet switch with advanced QOS, VLAN, and port isolation features. The LCR can convert any locomotive protocol between serial ports or through the Ethernet switch, enabling a wide range of customer applications from serial-to-Ethernet equipment monitoring to Ethernet-to-serial control:

- RS-232 Asynchronous
- RS-422/485 Synchronous/Asynchronous
- 3 x 10/100/1000 Ethernet
- Digital and Analog I/O expansion capabilities

The LNI includes two cellular modem expansion slots that are optimized to allow upward migration from 4G/LTE operation to next generation cellular platforms with an industry standard footprint. The LNI also supports an optional 802.11 b/g/n modem.



### Your data at your fingertips...

The LNI and LCR are part of the CRM Enabling Technologies suite of products whose focus is to allow customers to leverage their own networks and data mining infrastructure to connect to on-board networks. The LNI and LCR are designed as a cost-competitive and space-sensitive approach to conventional chassis-based communications systems.

Where the LCR can bridge local locomotive networks and legacy peripherals to existing customer wireless connectivity platforms, the LNI is a powerful standalone locomotive wireless-to-local routing platform that boasts a state-of-the-art quad-core applications processor capable of hosting Linux customer data mining, analytics, routing, and locomotive configuration management applications with up to 32GBytes of user storage.

Both the LNI and LCR are supported by CRM's powerful on-board application suite focusing on customer-directed data management and transport development capabilities that range from remote equipment access to real time data-streaming.