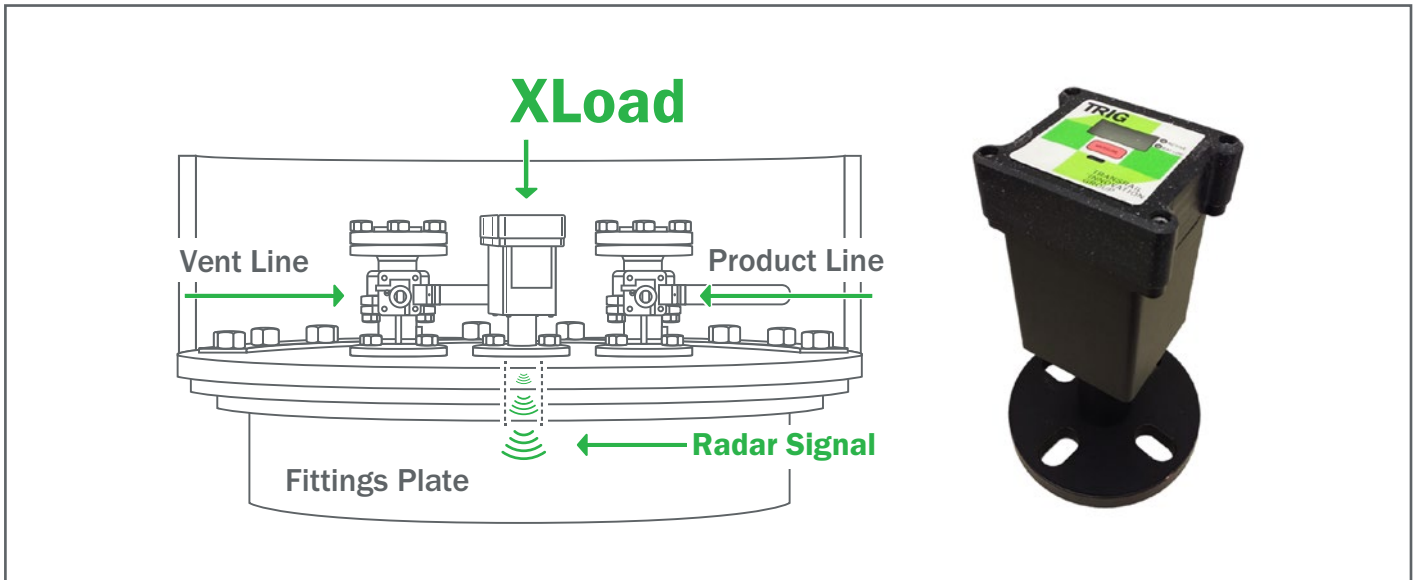


## XLoad: Maximizing Commodity Loading and Shipping Throughput



Every year over ~200 million tonnes of bulk liquid commodities are shipped by rail across North America, valued at hundreds of billions of dollars. To facilitate the shipping of these massive quantities, terminal operators and shippers require rail tank cars with modern, smart gauging.

- They need a durable, reliable and simple to use tool that is capable of maintaining regulatory compliance, keeping workers safe, increasing operational efficiency, and maximizing commodity loading and shipping throughput.
- TRIG's digital XLoad meets and exceeds the current industry gauge standard with greater durability and measurement reliability. And, it provides 100% greater value to shippers and terminal operators with automatic heel measurement, continuous volume measurement, critical high level alarms and automatic shutdown, and wireless digital data, all less than the cost of an installed mechanical gauge.

## Challenges Faced When Shipping Commodities on Rail

Rail shipping operations and logistics have inherent loss management issues, which include measurement accuracy and reliability, data consistency and accessibility as well as visibility among all members of the supply chain:

- Measuring valuable commodities during transloading requires skilled labour, is error prone, and requires some type of manual entry to view the information remotely.

Additionally, shippers experience challenges with effectively managing their assets, due to lack of real-time visibility of rail tank car location, status and availability:

- For logistics managers, there is limited information available to analyze and optimize overall system performance due to lack of timely digital data and;
- Without timely access to digital information, shippers must rely on carrier time estimates, which are often unreliable and inaccurate. This impedes their ability to efficiently manage logistics operations and business processes, especially in planning effective asset utilization.

# XLoad: Maximizing Commodity Loading and Shipping Throughput



## Connected Tank Car Solution using TRIG XLoad

XLoad provides real time level measurement to enable operations to build safer and more efficient closed loop transloading systems. TransRail Innovation Group will work with you to develop a customized, advanced connected tank car solution including designing and delivering applications for end to end tank car and load management, with location and BoL tracking.

### As part of our solution we will:

- Perform a site visit to analyze existing process performance;
- Engage with key stakeholders to determine appropriate configuration for XLoad installation, including engineering of fittings plate to accommodate the sensor and RADAR signal;
- Work with your engineering team to implement and commission the sensors, integrated with existing processes and data communication;
- Work with your terminal operations team to benchmark existing processes and, using insights gathered from the sensor data, adjust to enhance your transloading efficiency;
- Enable you to provide commodity and tank car data to all collaborators in your supply chain, at regular or event-driven intervals, with meaningful notifications of events, while your tank cars are in transport.

## Technical Data

Measuring Range	5 meters
Process Temperature	-40 °C to 100 °C
Ambient Temperature	-40 °C to 85 °C
Process Pressure	Non-pressure car: 11.4 Bar (165 PSI)
Accuracy	± 2.5 cm
Drop Dead Zone	30 cm
Materials	316L SS (Wetted) Virgin PEEK (Wetted)
Connections	4 Bolt Flanges with BHC of 3.25" and 4.125" Tongue & Groove Flat Face Raised Face
Seal Material	Silicone
Housing Material	Stainless or Carbon Steel
Rating	IP68
Outputs	900 MHz MLink
Battery	19Ah 7.2V
Approvals	AAR Service Trial Hazardous Locations (ia Z1/C1D1)
User Interface	LCD and membrane switch

## Control Software Variables

### Data Inputs

- Tank Car Serial #
- Strapping table
- Accumulated volume
- Flowing temperature
- Flowing pressure
- XLoad Level

### Output

- Heel
- Gross / Net Volume
- XLoad Offset from strapping table

