Billion M100
Advanced Industrial 4G/LTE Router

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# Case Study: Natural Gas Operation

## Executive Summary

Transmitting information in the gas field can be a critical issue if there's any minor incident occurs, for instance gas leaking from the pipeline leading to dangerous explosion. Thus, real-time monitoring of data mining is extremely needed. As the foremost and largest natural gas company in South America, Billion provides hundreds of M100 as an intelligent communication support for controlling and managing the entire pipeline area. Billion provides an exceptional 4G LTE industrial router suitable for oil & gas field application supporting seamless connectivity to overcome any significant problems and eventually put gas field owner at ease.

## Challenge

Reliable and robust internet connectivity is indispensable particularly for gas sector in harsh terrains with inadequate network coverage. Natural gas entity aims for a high availability and secured communication to obtain time-critical decision in real-time. Therefore, system integrator was looking for 3G/4G LTE solution that can handle in hazardous environments, such as oil and gas field, which won't cause ignition and explosion of the specified flammable gas or vapor-air mixture and proposes a continuous operation to optimize the site performance.

## Solution

Billion M100 is an industrial-grade, compact broadband communication router with flexible input voltage range 9~56V DC and wide operating temperature -20 to 60 º C (-4 to 140 º F). Billion M100 has passed the UL Class I Division 2 certification assuring it' s application in hazardous zone which no sparking effect to any specified flammable gas or vapor-air mixture. With EWAN and 4G LTE wireless connection functionalities, M100 ensures a

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seamless and auto failover internet connectivity for 24/7. Supporting robust VPN protocols, including IPSec, PPTP, L2TP, GRE, and OpenVPN, M100 secures data transmission over the public network.

Billion M100 supports RS-232 serial ports and Modbus, a serial communications protocol, which can directly connect to SCADA (Supervisory Control and Data Acquisition) equipment and transmit essential data collected from sensors and instruments from field for remote control and critical decision making. M100 key functionalities are real-time surveillance data transmission and security system even in limit connectivity such as in underground natural gas site which needs uninterrupted rapid internet connection to understand the critical equipment and achieve maximum performance.

## Result

By employing M100, real-time field metrics is easily traced only by sitting back at the office through ultra-rapid, consistent, and safe connectivity. M100 provides the most cutting-edge communication capability to work with SCADA equipment for gas field that can intensify operation efficiency, markedly reduce the labor cost, and raise long-term profit.

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