# 4G CONNECTIVITY FOR TOLL ROAD AUTHORITIES

Cellular Hardware for Traffic Management

Many of our nations highways run through mountainous regions, open deserts, vast plains, and other remote areas with unreliable cellular coverage. A large number of toll collection facilities, still operating on legacy 2G and 3G cellular devices, are scattered along those highways. As older networks are taken off-line, reliable network connections will be even harder to achieve, unless those outdated devices are replaced - and soon.
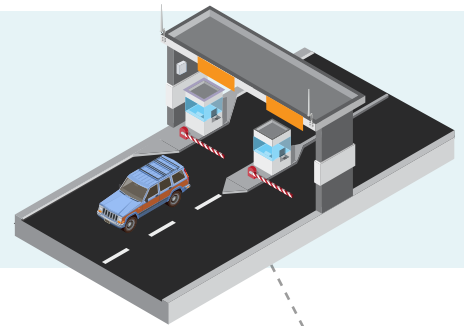
Challenges Faced | OUTDATED CELLULAR EQUIPMENT

State and County Toll Road Authorities manage hundreds of human and machine assets scattered across their respective territories. With many toll collection facilities operating with outdated cellular equipment, the reliability of their network connections has fluctuated. These organizations need as near 100% uptime as possible, otherwise traffic delays and lost revenues can result. They need newer, faster, and more reliable routers and antennas to keep their operations running smoothly 24 hours a day, 365 days a year.

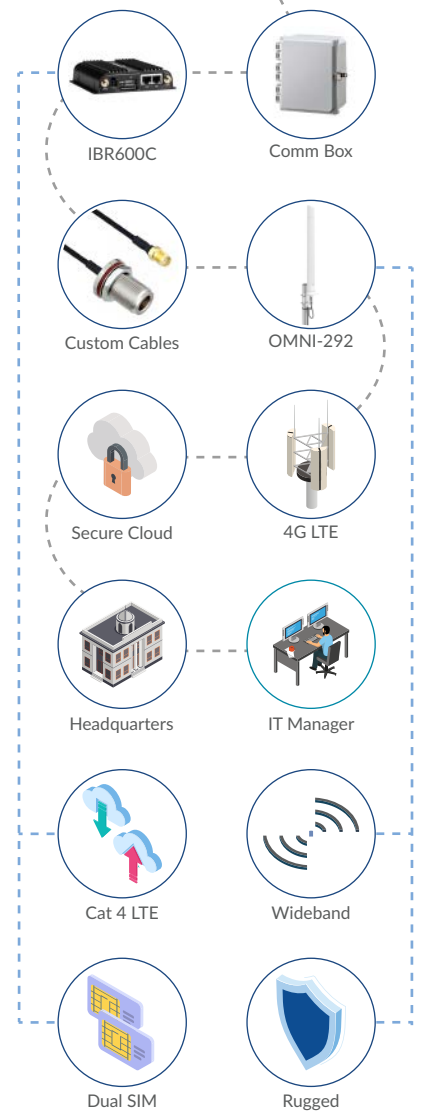### Router Solution | SEMI-RUGGEDIZED IOT ROUTERS

RTO has several clients who provide cellular equipment to government agencies like Toll Road Authorities. Many asked RTO to help them obtain hardware to replace their clients aging 3G hardware with more robust 4G solutions. Their clients needed easy to manage cellular routers to satisfy specific requirements and maximize system uptime. The team at RTO was able to provide them Cradlepoint IBR600C routers - delivering the auto-carrier selection, cellular failover, and WiFi functionality their various fixed applications required. And with NetCloud IoT Software their clients were able to register, configure, and monitor each IBR600C endpoint over-the-air easily.

Antenna Solutions | ANTENNA SELECTION BY APPLICATION

Our clients relayed that many of their clients reported varying connectivity issues based on the location of, and equipment being utilized within, their various toll collection points. Most facilities were located near cities, yet some were in remote areas. The proper selection of antennas makes a sizable difference in signal strength and reliability. After consulting with RTO, we were able to provide the right antennas for each use case - including variations of Poynting OMNI-292, XPOL, and LPDA antennas for their varied use cases.

Proven Results | RELIABLE 4G CONNECTIVITY

Every one of RTO's resale clients utilized our **DevProv+** suite of services to configure each new device to work within their customers existing network infrastructure. Additionally, they hired RTO to custom cut and crimp cables to meet their exacting specifications. Each of their customers toll collection facilities and assets, whether manned or unmanned, wired or wireless, saw vast increases in connection speed, strength, reliability, and overall uptime.

IoT Router:	Device Software:	Wideband Antenna:	Custom Cabling:
IBR600C	**NetCloud IoT**	**OMNI-292**	**N**(F) **to SMA**(M)

IBR600C	Comm Box
Custom Cables	OMNI-292
Secure Cloud	4G LTE
Headquarters	IT Manager
Cat 4 LTE	Wideband
Dual SIM	Rugged

CONTACT RTO TO ENGINEER YOUR CONNECTIVITY SOLUTION TODAY

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