

# **Driven Solutions** 5G Connectivity for Public Transit and Commercial Transportation









# Set the Future in Motion.

Transit systems are increasingly becoming technology centers. Wireless connectivity keeps bus, train, emergency vehicle and paratransit van communications and security systems operating efficiently as they move through urban centers. Yet in transportation, the digital transformation has only just begun. 5G's high speed and low latency are inspiring new, immersive transportation applications, and Digi offers go-to connectivity solutions that are fast, reliable, scalable and secure — and designed to dramatically increase performance while reducing cost and complexity.

**Keep Moving Forward.** Continue the journey and build on the progress you've already made. Our 5G-native solutions extend the longevity of current 4G LTE deployments, while providing a seamless path to what's next. Digi's transit solutions seamlessly shift between 5G and 4G LTE connectivity depending on network availability.



**5G** 

#### **MANAGEMENT SOFTWARE**

#### Digi Remote Manager®



Easily deploy, monitor, manage and secure your network all from a single point of command. Extend at scale with bi-directional, open integration and add intelligence to the edge with custom applications, Python scripts and APIs. All the while, software-defined security diligently safeguards your entire Digi ecosystem.

#### **CELLULAR ROUTERS**



Featuring the industry's most complete set of vehicle-grade features and certifications for transit and traffic management.



**Digi TX64 5G** 5G-native cellular router with 4G LTE dual connectivity and 3G fallback provides improved uplink speed and data throughput, plus other 5G advantages in buses, light rail

and paratransit vans.



**Digi TX64 5G Rail** Supports critical needs of subway, light rail transit operators and heavy rail systems with advanced features, including untethered dead reckoning GNSS.



**Digi TX54 FirstNet Ready**<sup>™</sup> Rugged and secure, designed to meet the needs of first responders and other critical systems such as city infrastructure and transportation services that are called to support public needs in an emergency.

# Achieve Your 5G Goals with One Solution.

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- Increase ridership. Offer passenger amenities such as mobile Internet service, as well as location and routing information.
- Improve communication. Keep riders and waiting passengers informed by remotely updating schedule and destination signage.
- Prevent breakdowns. Maintain reliable commuter vehicle operation by monitoring engine parameters and proactively addressing mechanical issues.
- Streamline vehicle operations. Get real-time insights into vehicle utilization and easily adjust vehicle count and routes for best rider experience at lowest operational cost.
- Streamline fare collection. Implement reliable and PCI-compliant data backhaul for your Open Payment System.
- Prioritize passenger safety. Operate and monitor high-definition security cameras in real time, and quickly backhaul data at day's end.
- Avoid bottlenecks. Provide real time bus, train and subway location status and seamlessly integrate data into transportation applications.
- Earn advertising revenue. Change digital signage remotely and frequently to increase revenue opportunities and provide greater messaging impact.

# ...And Be Ready for What's Next

Our 5G connectivity solution offers next-generation features that protect your investment and push obsolescence beyond the foreseeable future.



#### **BLOCK SECURITY THREATS.**

#### Cybersecurity is always our top priority.

- Digi TrustFence<sup>®</sup> is a built-in security framework that protects network connectivity at every level.
- Our defense-in-depth design combined with our cloud and edge computing applications provide best-in-class security, that is validated constantly by internal and 3rd party security experts so that you can focus on keeping your systems secure and going.
- For an extra level of security in passenger transit, use Digi's dual-radio technology to separate public and private data at the radio level.

#### TECH TIP:

Extend device life by updating software and installing new features over the air using Digi Remote Manager. It's like servicing your vehicle to keep everything running at peak performance.



#### MAINTAIN RELIABILITY EVERYWHERE.

### Digi's transit-specific routers are built to withstand challenging transportation environments.

- MIL-STD 810G shock and vibration
- Dual cellular modems offer seamless failover
- Digi SureLink<sup>®</sup> maintains persistent network connections ensuring rapid, always-on communication

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# Digi 5G Takes Transit to the Next Level.

Tap the amazing new potential of 5G. Digi transit routers include key features that help reduce the complexity, cost and risk associated with taking transportation IoT to the next level.



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#### HIGH RESOLUTION SECURITY CAMERAS

Capture better video images with HD and 4K security cameras. 5G's improved uplink and throughput levels allow high-definition security footage to be streamed in real time, from more than one camera.

#### **GNSS DEAD RECKONING**

Provides reliable vehicle location, even under difficult signal conditions. Digi 5G transit routers are equipped with untethered dead reckoning (UDR) GNSS, which uses algorithms and other tools to determine a vehicle's location. In places where obstructions commonly block the GPS signal, such as in tunnels or urban canyons, dead reckoning uses inertial sensor data on the router to maintain location tracking continuity and accuracy.

#### **MAC ADDRESS CAPTURE**

Improve route scheduling and safety with data collected using Digi's MAC address capture capabilities. Every mobile phone has a MAC address. As a vehicle travels through an area, a scanning tool can read the different MAC addresses of passenger phones and feed the information through the router's Digi Accelerated Linux (DAL) operating system.

**Privacy policy:** MAC address capture is anonymous. It does not collect information about the passengers.

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#### **PASSENGER WI-FI CONNECTIVITY**

Digi transit routers allow you to segment public and private data, with critical onboard systems taking bandwidth priority. We incorporate carrier failover so that if one carrier connection goes down, the device will automatically reconnect to a backup provider.

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#### **CERTIFIED FIRSTNET READY®**

Public transit systems are part of the "extended primary" category of users that are certified for use on FirstNet networks in any public emergency. This enables transit vehicles to maintain contact with their central operations for re-routing and other emergency instructions. Multiple Digi routers are FirstNet certified.

### INTEGRATED SYSTEM MANAGEMENT

Digi cellular solutions deliver innovative tools for transportation network managers, including the integrated Digi TrustFence<sup>®</sup> security framework and Digi SureLink<sup>®</sup> for resilient connectivity. You can also monitor data usage and traffic information in dynamic charts via Digi Intelliflow<sup>®</sup>. Our geo-fencing feature enables transportation managers to take certain actions once a vehicle is out of a certain radius. Digi Remote Manager is the hub that makes it all happen.

# Digi 5G for Transportation. We Are Ready to Roll.

Digi offers an ever-expanding set of 5G solutions designed to meet the needs of the transit sector. Here's what that means today.

### Digi TX64 5G/LTE-Advanced Cellular Router

High-performance cellular router with dual redundant communications for complex transit and transportation systems.



### Digi TX64 5G Rail Cellular Router

Railway-rated cellular router customized for on-board heavy and light rail railways and metros.

High-speed cellular radio with 5G NR and 4G LTE-Advanced Pro Cat 20 dual connectivity and 3G fallback

FirstNet Ready<sup>™</sup> for first responder communication

Untethered Dead Reckoning combines GNSS with inertial sensors for pinpoint location accuracy

Wired Gigabit M12 Ethernet (4-port) for on-board systems

High-speed, dual concurrent Wi-Fi 5 radios



### Digi TX54 FirstNet Ready™ Cellular Router

Robust performance for public safety applications including body cams, automated license plate readers, mobility tablets, vehicle cameras, location (GPS), LMR to LTE gateway, and passenger Wi-Fi.

FirstNet Ready<sup>™</sup> and global models available in single and dual cellular options

Capable of segmenting private and public data communication across dual 600 Mbps LTE-Advanced Cat 11 or LTE-Advanced Pro Cat 12 cellular modules

High-speed, Wi-Fi 5 radios for passenger Wi-Fi or depot offloading and optional dual Wi-Fi radios

Cryptographic co-processor with secure key generation



SECURELY DEPLOY, MONITOR AND CONTROL DEVICES WITH DIGI REMOTE MANAGER

### **Digi Remote Manager**

Transform a multitude of dispersed wireless devices into a dynamic, intelligent network. With Digi Remote Manager<sup>®</sup>, you can easily deploy, monitor and diagnose thousands of mission-critical devices from a single point of command — on your desktop, tablet or phone. All the while, its software-defined security diligently safeguards your entire Digi ecosystem.



### Digi: Your Go-To 5G Connectivity for Transit.

Get started today. Contact your Digi account manager.

#### FEATURES

- Schedule key operations including firmware updates and file management on a single device or on a group of devices, keeping your network functionality up-to-date and compliant with current standards
- Manage edge devices out-of-band via console terminal access
- Track device health and connectivity across device deployments of any size
- Create detailed reports and enable real-time alerts for specified conditions
- Integrate device data through open APIs to gain deeper insights and control with third-party applications
- Report and alert on performance statistics, including connection history, signal quality, latency, data usage and packet loss

#### INFRASTRUCTURE

- Hosted in a commercial-grade cloud server environment that meets SAC 1<sup>®</sup>, SOC 2<sup>®</sup> and SOC 3<sup>®</sup> standards
- Superior availability, operating to 99.9% or greater
- Open APIs available to support application development

#### SECURITY

- More than 175 security controls in place to protect your data
- Standard cryptographic co-processor with secure key generation and storage
- Member of the Center for Internet Security<sup>®</sup> (CIS<sup>®</sup>)
- Enables compliance with security frameworks like ISO27002, HIPAA, NIST and more
- Earned Skyhigh's CloudTrust™ Program highest rating of Enterprise-Ready



For more information, visit:

www.digi.com

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