Next-Generation Connectivity for Public Transit Systems

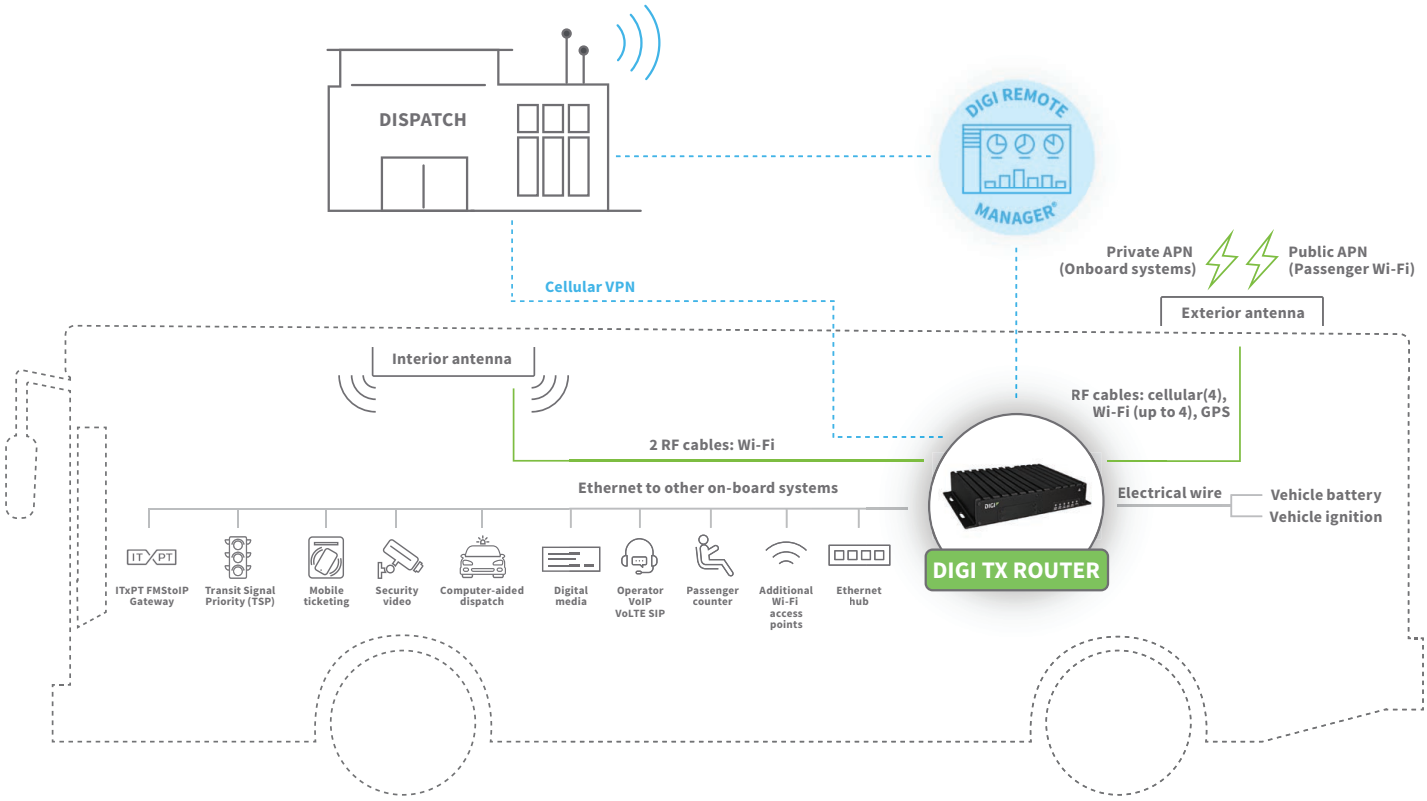
Always-on Internet connectivity that improves rider satisfaction, automates fare collection and gives you real-time mobile asset tracking

Digi TX: A Complete Solution for Modern Transit

Digi TX offers the next generation in connectivity for modern public transit — with complete, integrated solutions that include high-performance 5G cellular routers, remote monitoring and management, cellular redundancy and security.

The Digi TX solution supports all of the vehicle's onboard connectivity needs:

- ✓ **Passenger Wi-Fi (two radios)**
- ✓ **Computer-aided dispatch/automated vehicle location (CAD/AVL)**
- ✓ **Video management system (VMS)**
- ✓ **Automated fare collection (AFC)**
- ✓ **Automatic Voice Annunciation system (AVA®)**
- ✓ **Advanced Traveler Information System (ATIS)**
- ✓ **Global Positioning System (GPS)**



For more information, visit:

www.digi.com

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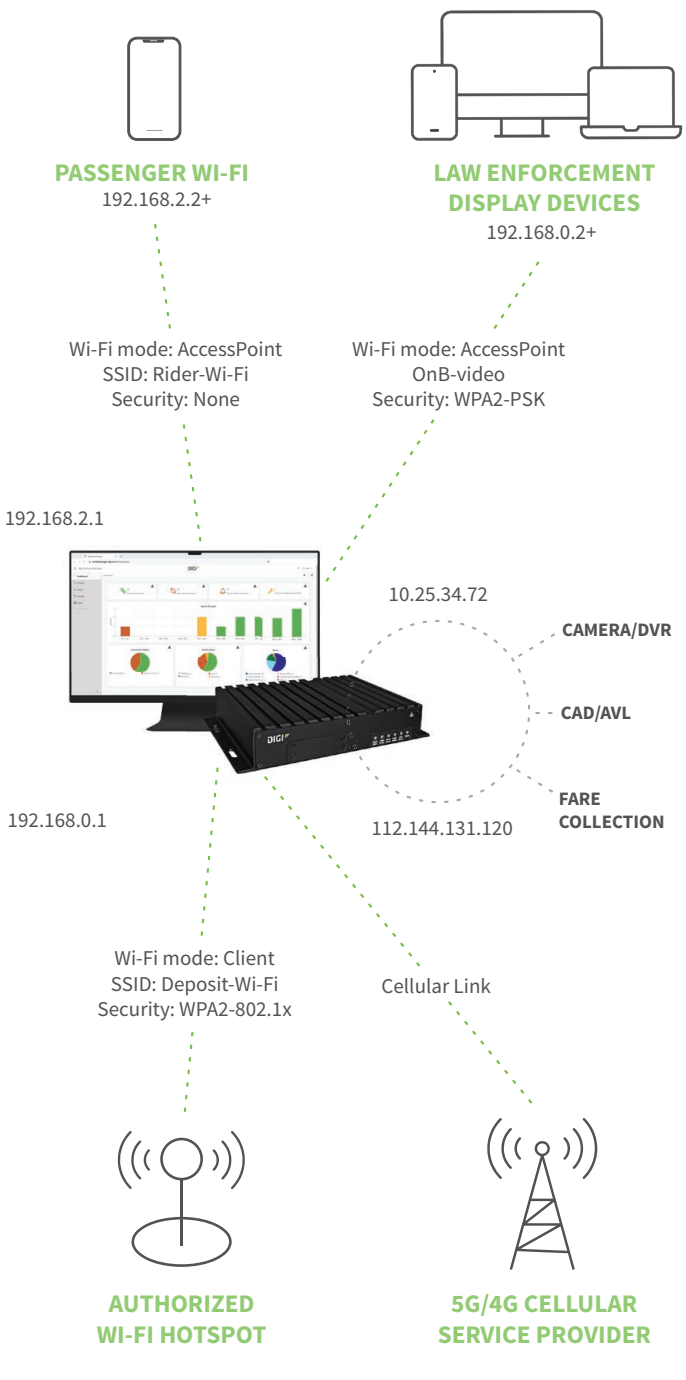

DATA TRAFFIC MANAGEMENT

Using open systems Differentiated Services (RFC 2474), critical data traffic receives priority over non-essential or less time-sensitive data traffic. The method involves setting the importance in the IP header, specifically the 6-bit differentiated services code point (DSCP) value. This gives data traffic from onboard systems the lowest latency and highest priority over Wi-Fi traffic, for example. The method is universal, so an IP packet receives priority throughout its journey beyond the cellular network to routers/switches in private or public networks.

PASSENGER WI-FI

Internet access for passengers is managed securely and without impact to onboard systems. A captive portal and splash page capture terms acceptance and deliver agency branding. Potentially objectionable content and video streaming is blocked by web protection services such as SafeDNS, through a DNS redirect established in the Digi router. Onboard systems retain priority and any remaining bandwidth is made available to passenger traffic. Internet users must re-authenticate after an adjustable time limit and are blocked from onboard systems by the stateful firewall. First Responder vehicles may also utilize the Wi-Fi access point during an active situation onboard.

DIGITAL VIDEO BACKHAUL

The video management system (VMS) server connects to onboard video recorders to retrieve stored digital video and to initiate live video streaming during safety/security incidents. At a network level, this can be complicated because the bus connects at each depot with a different IP address (DHCP protocol), and when en route with possibly a dynamic cellular IP address. The Digi router simplifies this with its DNS update implementation, where every IP address change is automatically re-associated with the router's singularly unique hostname. The VMS is shielded from this complexity and accesses the onboard video recorder using the router hostname and port forwarding.

To learn more about Digi transportation solutions, visit or browse our TX line at www.digi.com/products/networking/cellular-routers/transportation

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