CIrries®
5G FOR ENTERPRISES

A PRIVATE 5G NETWORK FOR YOUR ENTERPRISE

A new, better and faster solution

5G will allow new, industrial-scale networks privately built and maintained using its own dedicated spectrum to enable new devices such as real time asset tracking, video streaming, augmented reality, virtual reality, vision, image, video recognition and Internet of Thing (IoT) devices that support next generation industrial, commercial and safety applications. Unlike a public network, a private 5G network can be engineered to a location's specific application and radio coverage needs.

Many Enterprises will build and maintain their own 5G networks. Unlike a public network, a private 5G can place its own radio units where needed, especially indoors, for coverage quality. Dedicated, on-premise, right-sized core networks provide cost effective, non-shared, and highly secure network control. On-site Mobile Edge Computing clouds provide scalable, low-latency application platforms. Maintenance by onsite personnel enables faster response time to issues.

Real Time Asset Tracking

Video Streaming

AR/VR

Image/Video Recognition

Commercial IoT

4G ⟶ 5G

SPECTRUM - NEW, MORE, PRIVATE
10X SPEEDS
LOW LATENCY
MASSIVE IOT CONNECTIVITY
HIGH DELIVERY RELIABILITY
PARADYME SHIFT IN ARCHITECTURE

5G NETWORKS ENHANCED CAPABILITIES

5G will be capable of:

- **Connectivity of Gigabits per second** making remote visual inspection viable

- **A 99.999% reliability rate** equivalent to the performance of fixed Ethernet networks

- **Multipath transmission** enhances both speed and packet delivery reliability

- **Massive sensor density** up to a million per square-mile

- **Millisecond latency** when the Core, MEC and RAN are on-premise

ARE YOU READY TO ACHIEVE NETWORK EXCELLENCE?
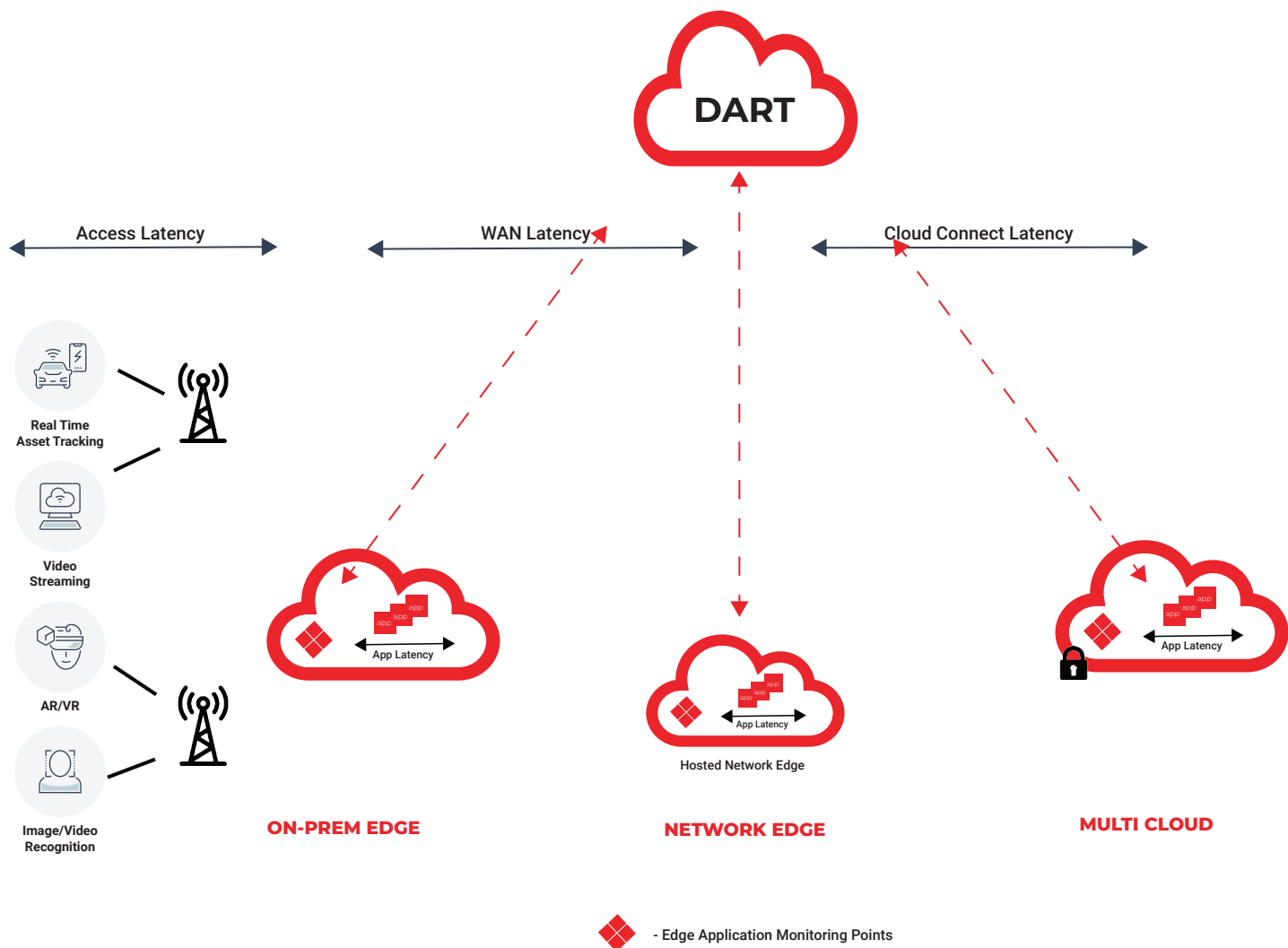
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These networks allow companies to develop proprietary, specialized solutions that cost less than buying services from a public network. One example is the growing use of autonomous service robots that will need 5G for precise indoor navigation and positioning. Many companies will choose to deploy 5G to eliminate a disordered mass of copper wires, Ethernet, fiber-optic cables and Wi-Fi equipment and their associated investment and maintenance costs.

YOUR ENTERPRISE 5G CONNECTIONS
Connect everything anywhere

DART

Access Latency · WAN Latency · Cloud Connect Latency

Real Time Asset Tracking · Video Streaming · AR/VR · Image/Video Recognition

App Latency

ON-PREM EDGE · Hosted Network Edge · **NETWORK EDGE** · **MULTI CLOUD**

◆ - Edge Application Monitoring Points

5G FOR ENTERPRISES

USE CASES

- **Real-Time Asset Tracking**
  5G offers support for large numbers of connected, low-power sensors used for asset tracking. Just knowing where specialized tools and equipment is located can lower quantities needed and improve response times, both of which contribute to the bottom line.

- **Video Streaming**
  The superior 5G radio bandwidth and coverage makes extensive video surveillance for production and security purposes easy and cost effective to install and operate. Better security lowers "shrinkage" and eliminates or mitigates accident costs.

- **Augmented reality (AR) and virtual reality (VR)**
  Equipment maintenance workers can receive automated assistance and up-to-date diagrams.
  Production workers receive specific visual assembly instructions.
  Warehouse workers receive mapped pick and place instructions for parts and products.
  AR/VR applications improve work accuracy and speed, reduce training cost and help assure that change orders and procedure updates are implemented immediately. Faster and accurate production and maintenance flows through to the bottom line.

- **Automated Optical Inspection**
  Using Image processing for in-line manufacturing quality control has been shown to reduce scrap rates by as much as 40% through instant recognition of a faulty part or assemble process. More sophisticated applications can make use of image processing ML and AI to not only detect quality faults but to recommend process changes and eventually implement these changes to correct the manufacturing process.

- **IoT**
  This class of device is typically simple sensor or actuator that many times runs on battery power. The bandwidth needs of these devices are small. 5G provides a protocol that supports massive quantities of these low power simple devices that allows them to conserve battery power. Expect factories to use these devices to read temperatures, pressures and flow rates, detect open/close or on/off status and provides simple actuator contact closures.

- **Autonomous vehicles**
  Material transport on the shop floor or in the warehouse is currently a labor-intensive job. Prior autonomous vehicles have followed fixed tracks programmed in the floor but a new class of intelligent vehicles are being introduced which are more self-aware of their surroundings. These autonomous vehicles receive over the air task instructions and provide dynamic feedback to its controller on factory.

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