Fujitsu Industrial Private Wireless Solutions:
Drone-Enabled Security Solutions

Fujitsu Enhanced Security Solutions
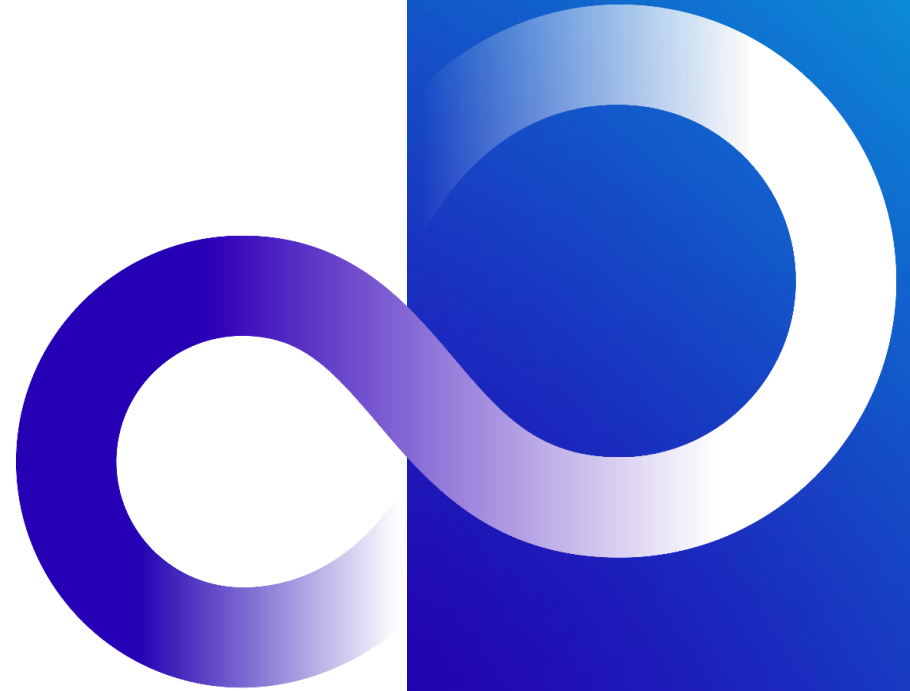
- ## Offer Description

  Built on Azure private MEC, Fujitsu leverages the CBRS "innovation" band to bring secure, reliable, and high-performance private wireless connectivity to enhance security at enterprise campuses.

  We will provide a package built on Azure private MEC with Azure Private 5G Core that includes the networking equipment and security devices needed for an enterprise to monitor large areas from a centralized location.

- ## Solution Benefits

  Fujitsu's CBRS-enabled security solution offers a number of unique benefits:

  - Our high-power radio provides a much larger coverage area than a Wi-Fi access point, allowing connectivity to be extended to more remote areas.
  - Our 3GPP-based technology provides proven communications security, performing both encryption and authentication. Each device is configured explicitly to access the network.
  - Unlike Wi-Fi, the spectrum used is resilient to interference, which allows reliable link performance.
  - Equipment can be solar powered, allowing placement where commercial power is not available.
  - A single security guard can quickly and efficiently surveil a large area without leaving their station
  - The system allows overlay of video analytics for intrusion detection and other applications

Private Wireless Use Cases
Security Camera Connectivity with Drone Enhancement

Security Application Example

- Provides security coverage of ~ 10 acre property
  - Allows a guard to surveil the property without leaving their station
  - Keeps guard available to respond to gate access requests
  - Cameras & CPE can be powered by solar where commercial power is unavailable
- Application requirements:
  - Broad coverage
  - Security
  - Interference protection
  - Seamless mobility (in larger configurations)
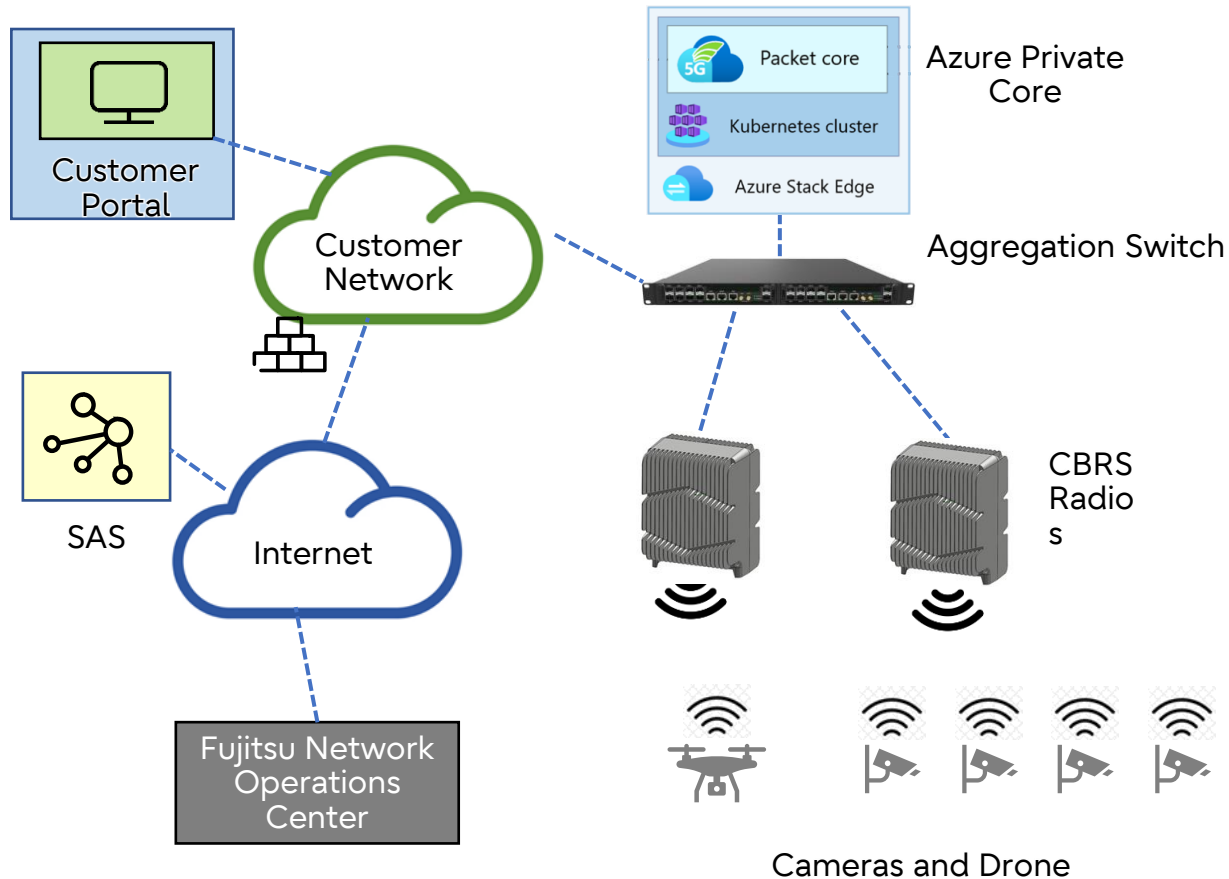- Single 4x5W CBSD placed on roof

▲ CBRS Radio   📹 Security Camera

🛸 Security Drone

Example BOM

- CBRS Radio with wall/pole mount hardware
- Omnidirectional Antenna
- GPS Antenna
- Cabling
  - Antenna cable
  - GPS cable
- Drone with CBRS connectivity
  - Drone battery & charger
- High-resolution security camera with CBRS connectivity

Architecture Overview

FUJITSU PRIVATE WIRELESS HIGH LEVEL SOLUTION ARCHITECTURE

Customer Portal

Customer Network

Azure Private Core

Packet core

Kubernetes cluster

Azure Stack Edge

Aggregation Switch

SAS

Internet

Fujitsu Network Operations Center

CBRS Radios

Cameras and Drone

FUJITSU END-TO-END PRIVATE WIRELESS SOLUTION

- ● **All Hardware and Software**
  - ● Private LTE & 5G NR Radios & Antennas
  - ● Azure Stack Edge device with packet core
  - ● Switching/Routing Devices
  - ● Spectrum Access System (SAS) service
  - ● Security Devices (Cameras and Drone)
  - ● Management Connectivity

- ● **All required services for site set up**
  - ● Site survey, design, installation & configuration services

- ● **Operational management**

- ● **SIM cards for customer-provided devices [optional]**

- ● **Customer training [optional]**

- ● **We work with customers to meet requirements**
  - ● Frequency spectrum acquisition
  - ● Equipment mounting locations
  - ● Power and data cabling to radios
  - ● Accommodating customer-provided devices, if any

Includes Much More Than Just the Boxes

Thank You