

Multidimensional Sensing: Milesight 5G AIoT Camera Ensures Flood Prevention in Saudi Arabia

Location: Saudi Arabia

Location

Saudi Arabia

Industry Segment

Smart City

Related Products

5G AIoT 4X/12X Pro Bullet Plus Network Camera
Submersible Water Level Sensor (EM500-SWL)
Milesight VMS Enterprise

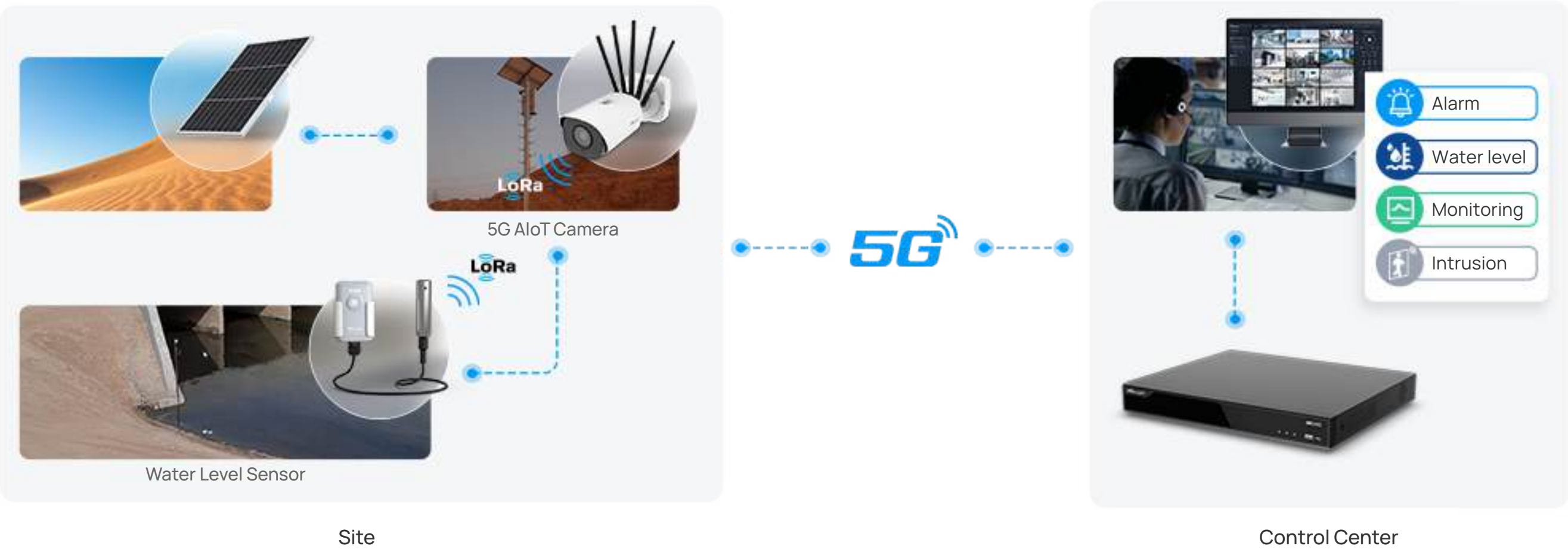
Background

In Saudi Arabia, despite its arid climate, intense seasonal rainfall can trigger sudden and destructive flash floods. Flood channels are essential for managing these events, yet they are frequently blocked by illegal dumping, reducing their effectiveness and endangering nearby communities.

These channels are often located in remote desert areas, where there's no access to electricity or internet, making it impossible for traditional systems to provide timely monitoring or alerts. A self-powered, connected, and intelligent solution is critical for effective flood prevention.



Solution



How It Works:

01 Solar-powered & 5G Technology for Remote Coverage:

Designed for off-grid locations, Milesight 5G AIoT camera could integrated with external solar module, enabling reliable operation in remote flood-prone areas. Combined with 5G connectivity, the system ensures real-time monitoring and data transmission even without wired power or network.



02 AI & IoT Enabled Real-time Detection:

EM500-SWL Water Level Sensor continuously tracks water level changes in flood channels. Simultaneously, the 5G AIoT Camera detects human or vehicle intrusion behaviors using built-in AI analytics, preventing unauthorized dumping or obstruction.



03 Water Level Data Transmission & Alarm:

Water level data is transmitted from the sensor to the 5G AIoT camera via LoRaWAN. Real-time water level data are displayed on the camera's OSD. When the water level exceeds a predefined threshold, the camera automatically triggers an HTTP notification to Milesight VMS Enterprise —enabling instant alerts even from miles away.



04 Visualized Data & Centralized Alarming:

The camera connects to Milesight VMS Enterprise through P2P, enabling operators to remotely monitor live video streams and water level alerts. At the same time, AI-powered intrusion detection events are centrally managed and recorded, enabling rapid response and effectively preventing illegal dumping or obstruction of flood channels.



Conclusion

By integrating Milesight 5G AIoT Cameras, IoT sensors, and Milesight VMS Enterprise, this smart flood monitoring solution delivers multidimensional sensing capabilities to proactively mitigate flood risks. It not only ensures real-time water level monitoring but also detects and deters illegal dumping, safeguarding both infrastructure and communities in Saudi Arabia.

