Architecture

i) Video Streaming

USB Camera → /dev/USB0/ → GStreamer

GStreamer → local video pipeline → Kinesis Video Stream

Credentials → Video Channel (Kinesis)

i) Dixell Data

XR70Cx → RS485 → ESP32 Feather → Serial Bluetooth

Serial Bluetooth → Jetson Nano (bluetooth) → Python Script → Parsed JSON

Parsed JSON → MQTT → AWS IoT Core → DynamoDB database

AWS IoT Core → Website / Dashboard