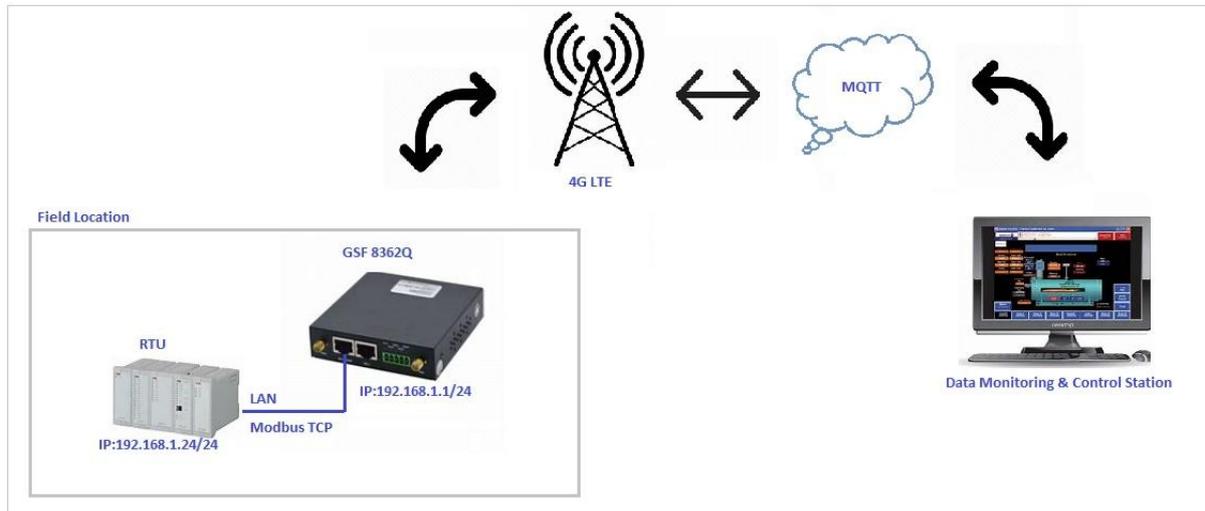


Application Note for GSF Series as MQTT Gateway

Setup:



The GSF 8362Q is a 4G cellular gateway designed to connect Ethernet and serial field devices to a cellular network. It supports:

- Modbus RTU (RS485)
- Modbus TCP (LAN)

The device operates as a Modbus Master, polling data from connected field instruments. In this application, the GSF 8362Q collects parameters such as Flow Rate, Totalizer, Valve Position, Tank Level, and Energy from Modbus slave devices. The collected data is converted into a JSON format and published to an MQTT broker at predefined intervals.

Control commands (e.g. valve operation) are sent from web-based software to the GSF device via MQTT. Additionally, GSF 8362Q provides an RS485 port for Modbus RTU communication with field devices.

JSON Data Frame Format

When connected to a Modbus RTU slave device with holding registers from 40001 to 40010, the GSF 8362Q publishes data to the MQTT broker in the following format:

```
{ "DeviceID": "1", "Date": "15072024", "Time": "123016", "P1": "1.0", "P2": "2.0", "P3": "3.0", "P4": "4.0", "P5": "5.0", "P6": "6.0", "P7": "7.0", "P8": "8.0", "P9": "9.0", "P10": "10.0" }
```

- Date format: DDMMYYYY
- Time format: HHMMSS

JSON Format for Control Operations

Commands for control operations are published in the following format:

```
{ "did": "FFC010958582", "content": [ { "pid": "1", "addr": "P7", "addrv": "1" } ] }
```

Field Description:

- did → Serial number of the GSF device
- pid → Modbus slave device ID
- addr → Parameter Data ID (e.g., P7)
- addrv → Value to be written to the corresponding Modbus register