

LoRa Advantage

Comparison of different wireless solution



| Transmission way Item | LoRa | BLE (2.4G) | WIFI (2.4G) | FSK | Zigbee (2.4G) |
|--------------------------|---|--|---|--|--|
| Distance | Anti-jamming, strong stability, gateway and door lock communication distance more than 1 km | Shorter distance between door lock and gateway | shorter communication distance | Easy to be disturbed, easy to have no signal when encountering obstacles | 2.4G, Weak signal after get through wall |
| Cost | Single gateway can cover 48 set locks | Can connect few door lock about (4-8 pcs door locks) and need more gateway | Cover narrow for route connect wifi have limited node | In case obstacles, need to be deployed more gateway | Need more zigbee gateway to transmission |
| Deployment Speed | For wide coverage, rapid deployment | Multiple gateways need to be deployed | need deployed more gateway | need deployed more gateway | need deployed more gateway |
| If need Wire | Door lock and power switch no need wiring installation | wireless | Door locks require power and wires | no wire | wire + wireless |
| Consume Power | lower consumer, static consumption is less than 40ua | Less, while use mesh will have high consumption | High, need electricity supply power | Low | high |
| Security | high, Multiple encryption | Susceptible to interference, 2.4G | Susceptible to interference, 2.4G | Higher Private Agreement | Susceptible to interference, 2.4G |
| Expansibility | scan QR will add gateway and lock | need bind | have limited IP | need bind | add node will be difficult |