

IoT Lock for Telecom Services

Optical Cable Cross Connecting Cabinet

Based on Optical Cable Cross Connecting Cabinet Management requirement, Rayonics provide the application solution which have the functions of access control system, status monitoring and warning, maintenance records, cabinet resources management and data analysis processing. It can solve the big management problems of low security for mechanical locks; numerous keys are inconvenient to receive and return; Furthermore mechanical locks do not record for opening and closing, the problem can not be traced and ticket information can not be communicated in real time.

Rayonics application solution includes the passive smart locks, active smart locks, low-consumption BLT key, multi-function FSU controller and B/S structure i-cloud software. They can make the loose distributed dumb resources via intelligent devices management to complete centralized Informatization management, dumb resources online monitoring, operation and maintenance staff can efficiently manage, which can improve the work efficiency and ensures the outdoors cabinet and equipment security.

Optional Access Control Solution:

There are 3 kinds of solution available for ONU(Optical Network Unit) cabinet , they are Passive IOT Lock Option, Passive IOT Lock Monitoring Option and Real-time Monitoring Option, the details as following shows;

Available Option--Passive IOT Lock Option



Monitoring Platform



APP



IoT Locks

Mobile phone via App to apply the ticket permission, after audit it can authorized permission to smart keys, which can open the lock, and the information will return to the mobile phone by BLT, then upload to server.

Advantage: Cost-Effective and easy to install

Disadvantage: The cabinet status can not be monitored in real time

Available Option--Passive IOT Lock Monitoring Option



Monitoring device can monitor the ONU(Optical Network Unit) cabinet door lock/unlock status, operation event, temperature, vibration, incline, water logging, fiber plant status and so on. Mobile phone can apply the permission via the APP, and after audit, the mobile phone can open the lock directly or authorize the permission to keys, after open the events will be upload to monitoring platform.

Advantage: Monitor the cabinet by trigger, which can combined with camera

Disadvantage: The cabinet status can not be monitored in real time

Available Option--Real-time Monitoring Option



Monitoring device can monitor the ONU(Optical Network Unit) cabinet door lock/unlock status, operation event, temperature, vibration, incline, water logging, fiber plant status and so on. And it can open the lock and camera remotely, with three kinds of opening mode:
 Open Mode 1; Remote Open (Remote)
 Open Mode 2; Mobile Phone BLT Open (On site)
 Open Mode 3; BLT key Open (On site)

Advantage: Monitor the cabinet in real time, control of the access control and camera;

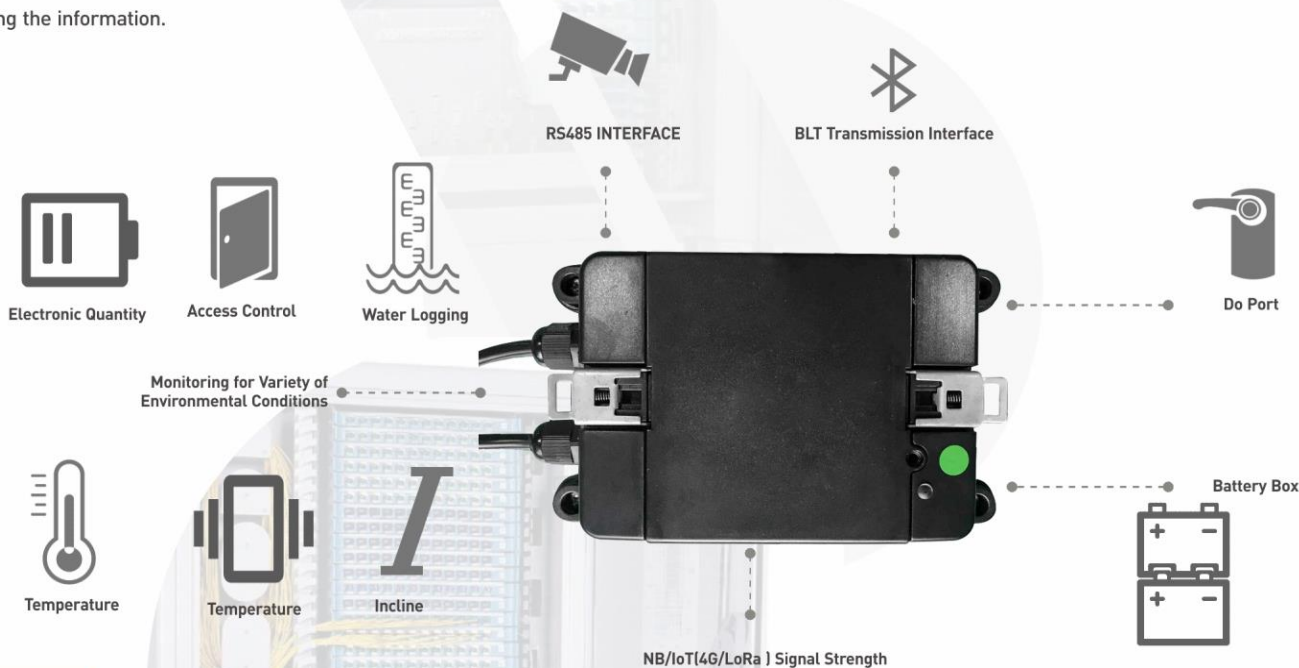
Disadvantage: High power-consumption and follow-up maintenance costs

Optional Access Control Solution Comparison

	Items	Passive IoT lock Monitoring Option	Real Time Monitoring Option	Passive IoT Lock Option
1	Working Power	Electronic key+monitoring battery	Full self-carrying battery	Electronic key
2	Power Consumption	Zero energy consumption lock opening application+low power alarm monitoring	Monitoring applications with large power consumption	Zero energy consumption lock opening application + low power alarm monitoring
3	Networking Mode	Lock control: no lalarm information: GPRS netwering	GPRS networking	No
4	Unlock Mode	Mobile phone authorize electronic key to open lock	Mobile phone request remote opening lock	Mobile phone authorize electronic key to open lock
5	Door Status Information	Human and technology protection combination to present	Real-time presentation through technology integration	Human and technology protection combination to present
6	Comprehensive Installation Andmaintenance Cost	Very low	High	Very low
7	Environmental Adaptability	High	Very low	Very low
8	System Scalability	General	Very low	General

Monitoring Device

ONU (Optical Network Unit) controller will periodical upload information to management platform, it will show the information of the ONU cabinet door lock/unlock status, temperature, cabinet is inclined or not, water logging and battery capacity, Therefore the maintenance team will do the relative operation according the information.



Parameters

- 1.IP67
- 2.System Support active and passive locks
- 3.Open Interface and free SDK
- 4.Double Verification System

	Parameter	Indicator	Characteristic
1	Network Format	NB/IoT(4G/LoRa)	Locks and accessories have a good humidity-proof performance, to adapt to outdoor dust, exposure,rain-drenched environment;Terminal control box adopts low-power energy-saving design, built-inbattery capacity is up to 3 years; Lock can combine options of the platform long-distance remote control opening, Bluteooth near field opening and passive opening by an electronic key.
2	Operating Voltage	DC3-5V Input	
3	Battery Work Life	2years,Communication times>5000times	
4	Working Environment Temperature	-20°C~70°C	
5	Working Environment Temperature	-20°C~100°C	
6	Protection Class	IP 67	
7	Status Information Upload Time Length	≤60S	
8	Authorized Information Capacity	200	

Application Products



REIB-B03-005/REIB-B03-009



REHD-D08-001



REHD-D08-046



REHD-D07-023

Smart BLT Key

Integrated with rechargeable lithium batteries, the evoXS BLT key can open the lock according to permission which set in the software, and at same time to return the event in real time to server.

- Working Temperature: -30°C~+60°C;
- Rechargeable Battery: up to 3000 operations or standby up to 3 months;
- Data Capacity: 3000 events;
- Power Down Data Protection; more than 10 years;
- Integrated acceleration sensor,NFC chip;
- LCD Display shown the battery status, time and key status.

Active Cabinet Lock

- Working Voltage:DC12V;
- Strong compatibility: not subject to door thickness and door height, left/right opening restrictions, can support more than 80% of the locks;
- Structure description: Press button after the verification, the handle goes out and rotate to open;
- Lock structure: three-point lock,rack type steel bolt;
- High level of integration;
- Easy to installation and upgrade;
- IP Grade:IP68.



REIB-B17-001



REIB-B08-001



REIB-B09-002



REIB-B06-022



REHD-D08-035



REIB-B07-011



REHD-B07-012

Passive Locks

- Cylinder design compliance to EN1303,DIN18654;
- Adopt double verification and AES 128 encryption;
- IP Grade:IP68;
- Static Protection: 15KV contactless Static or 8KV contact static;
- Working Temperature: -40°C~+80°C;
- Data Capacity: 10 blacklists and 16 events per lock;
- Working Life: more than 50,000 times operation.