

LUMA Energy

Cloud Architecture Whitepaper

We have a special relationship to data

Data and data privacy is central to our hearts and we take big pride in raising the bar for real estate and property tech. We want to make you confident your data is safe with us all the way from collection, transmission to storage.

We store all the data in Europe, compliant with GDPR and you own all your data. We **never** store passwords in plaintext.

Design principle: Security by design - always

We **never** build **security by obscurity** trying to just hide data in a public space using wonky URLs just hoping no one illegitimate will find it.

Every way to access data from LUMA Cloud is protected by authentication unless you choose to share it publicly. All ways of accessing data is also encrypted.

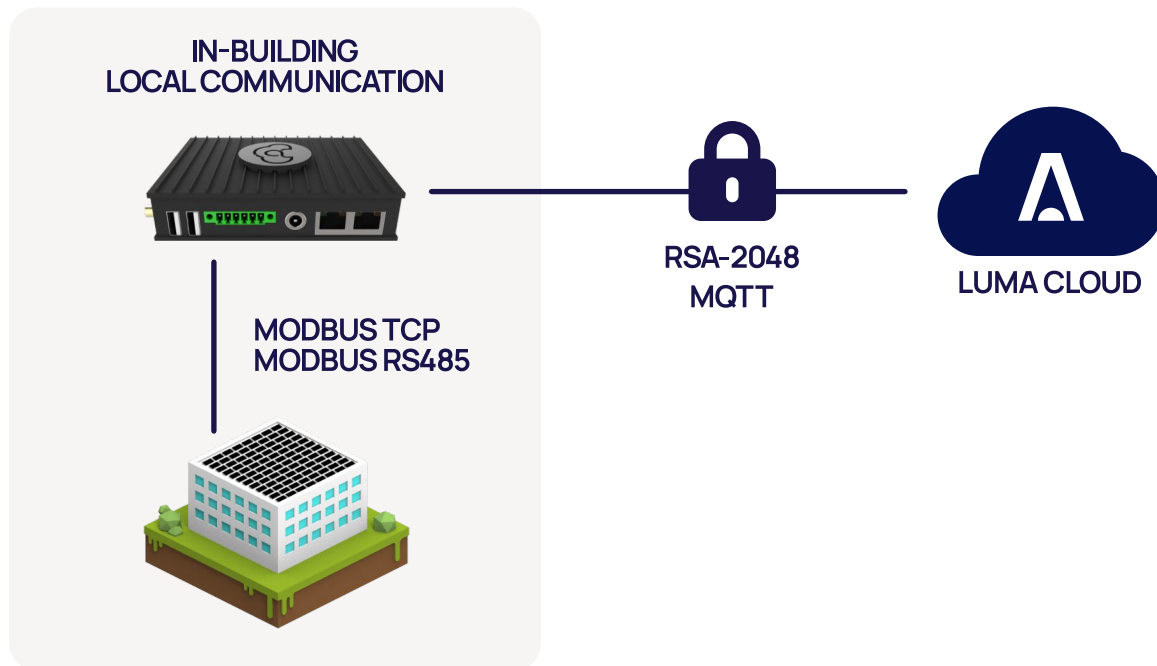
Our goal is to make you like us, not force you to stay

Do not fear we'll take your data hostage and make you stay, if you decide to leave, we'll export all of your data.

We don't want you to stay because you have to, but because you want to.

Let's get into details:

System architecture



We designed our platform to be end-to-end encrypted. This means that from the moment data leaves your building it's encrypted and inaccessible to anyone else. This is done by our local in-building device - the Powerlogger.

Local in-building communication uses Modbus, either carried by TCP/IP over ethernet or dedicated 2-wire RS485 cable. Detailed instructions on how to connect can be found at support.poweradmin.io.

We also designed the communication to be free from firewall hassle, it will just work on a typical network connected to internet.

For the nerds

Our in-building device, the Powerlogger, each has its own unique encryption key using RSA-2048. It relies on outbound traffic only. No port opening and forwarding, no public IP's needed. For detailed information on exact outbound hosts and ports needed, [see this guide](#).

Accessing data



All data access is permission based and encrypted using HTTPS connections via our APIs.

For the nerds

We implement RBAC on entity level, which means access can be provisioned on specific resources like buildings or systems.

Authentication and authorization is done via JWTs as bearer tokens in API call Authorization header. Machine to machine communication utilize revokable API keys in HTTP Authorization header. Both methods are scoped to specific resources.

Got further questions?

You're welcome to contact tech@luma.energy if you have any questions not covered in this document.

Please also give our knowledge base a glance at support.poweradmin.io

LUMA Energy

luma.energy