



What gets deployed?

A JANiiT deployment includes 3 components: Cloud, Cloud Edge, and/or Controller with Metering. Each of these components can be stand-alone, offering flexible and deployment options fit for the application.

Cloud

Predictive control and forecasting algorithms run in the JANiiT Cloud. This is a predictive time series environment built on reliable cloud infrastructure. A network connection is required to connect hardware to the cloud environment.

Components:

- Cloud Database
- Customer Dashboard
- Optimization and Forecasting

Cloud Edge

JANiiT Cloud Edge can bring AI models and optimization to the data source for low latency and data restricted applications. JANiiT edge also interfaces with data producers on site to store and compress data locally.

Components:

- Edge Database
- Edge AI Models
- High Fidelity Data

Controller and Metering

Deterministic and high reliability applications require a JANiiT Controller to run local, real-time control and interface to a meter control signal. The controller can run independent of the Cloud in event of network outage or intermittent.

Components:

- Real-Time Controller
- Revenue Grade Power Meter
- Managed Control Network

Services Support

Behind-the-Meter

- Self Consumption • •
- Demand Charge Management • •
- Time-of-Use Management • •
- Demand Response • •
- Backup Power •
- Real Time Pricing • •
- Time-of-Use Pricing • •
- Non-Wires* • • •

Front-of-Meter

- Coincident Peak Reduction • •
- Energy Arbitrage • • •
- Capacity • •
- Virtual Demand Charge Reduction • •
- Distribution Loss Reduction • •
- Transmission Real Time Pricing • • •
- Frequency Regulation* • •

Virtual Power Plant

- Non-Wires •
- Frequency Regulation* •
- Demand Response •
- Transmission Real Time Pricing •

*Market Dependent

• Cloud • Cloud Edge • Controller and Metering



Technical Specifications		
Hardware Support		
DERs	Solar Inverter, Battery Energy Storage System, Backup Generator	
Protocol Support	REST, MQTT, Modbus	
Battery Inverter Support	BESS inverters supported with local gateway controller	Cloud-Only deployment available for Solis and Enphase
Solar Inverter Support	Inverters with Sunspec Modbus	Cloud-Only deployment available for Enphase, SolarEdge, SMA, Solis
Backup Generator	Supported through Modbus gateway	
Network	4G Cellular with 3G Backup	
Local Control Network	Wired LAN	
Cloud		
Utility Integration	DERMs, ADMS, and SCADA integration support through API	
Real Time System Monitoring	State of charge, voltage, current, real & reactive power, system alerts, site demand	
ISO Support	CAISO, NYISO, NE-ISO, PJM	
Optimization	Online, 5 minute intervals	Solver latency <1 sec
Forecasting	Probabilistic forecasting model of demand, generation, and market pricing.	Short term forecasting of 12-24 hours
Cloud Edge (Optional)		
Data Control	Export control, edge database	
Cloud Edge hardware	AI PC, Linux OS	Automatic over-the-air updates
Cloud Edge software	Local GlobalForecast, FlexOpt, Flex-Predict, local data cache and storage	Local, real-time inference
Controller		
Real-Time Control	Deterministic, load following, <40ms execution	
SCADA Integration Support	Modbus or discrete IO signal	
Control Modes	Cloud, Local, Manual (Service), Stand-by, Fault	
Fault Handling	Fall-back controller (Local Mode), cloud watchdog	