

# DER Remote Site Gateway

## INTRODUCTION

DER Remote Site Gateway series is SunSpec Certified IEEE 2030.5 Gateways. The DER gateway is used to interconnect Distributed Energy Resource (DER) site with utility headend system, and DER Aggregators over IEEE 2030.5, DNP3 or IEC 104. Gateways can communicate with the DER devices on site e.g., smart inverter or Energy Management System (EMS) using any of the communication interfaces defined in IEEE 1547-2018 (Modbus, DNP3 and IEEE 2030.5). Common Smart Inverter Profile (CSIP) certified IEEE 2030.5 aggregator client support in the gateway help utility to monitor and control any DER locations regardless of the communication capability of the field devices there by reduces overall interconnection costs.

DER Remote Site Gateways come with comprehensive device management service through ASE/Kalkitech's kalki.io device management solution. It provides a secure, centralized device management service. Kalki.io service can be used to update gateway firmware, security patches, license, and configuration files to the gateway. It also acts as central repository for configuration, settings and logs retrieved from the field gateways. Kalki.io can also be useful for continuous monitoring of events and alarms from the gateway and helps user to take necessary actions on time thereby minimizing downtime and truck rolls.

Kalki.io remote device maintenance access service provides a role-based remote configuration and management access for field devices such as inverters, DER controllers, storage controllers or meters by extending connectivity from the programming port of the field device with the engineering and configuration tool situated at remote location over a public/ private network on a secured link.

## FEATURES

- SunSpec CSIP certified IEEE 2030.5 aggregator client used for utility integration
- Field device integration supported over -SunSpec Modbus, DNP3.0 Serial and TCP, IEC61850
- OPC UA, MQTT, IEC60870, DLMS, SNMP protocols are available on request
- Device is secured from the ground up including OS, kernel and applications software, user permissions, firewalls
- All software releases and patches are signed using manufacture specific PKI trust chains
- Role-based remote management and device maintenance access managed and maintained by ASE/Kalkitech-Systems PKI infrastructure
- Rule 21 PKI infrastructure approved by utility/regulator can be used for establishing IEEE2030.5 connection with utility DER Headend Server
- Secured remote device access for field equipment maintenance and updates (eg: Inverters or DER controller configuration)
- Basic digital and analog logic programming supported. Enhanced programming based on IEC 61131-3 is available on request\*

## HARDWARE MODELS

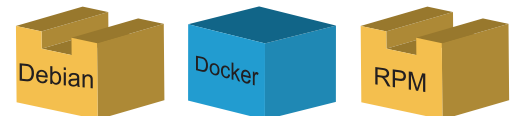
- SYNC2310-M1: DER Gateway for DER above 10 MW
- SYNC2310-M2: DER Gateway for DER up to 10 MW
- SYNC2310-M3: DER Gateway for DER up to 3 MW



## SOFTWARE MODELS

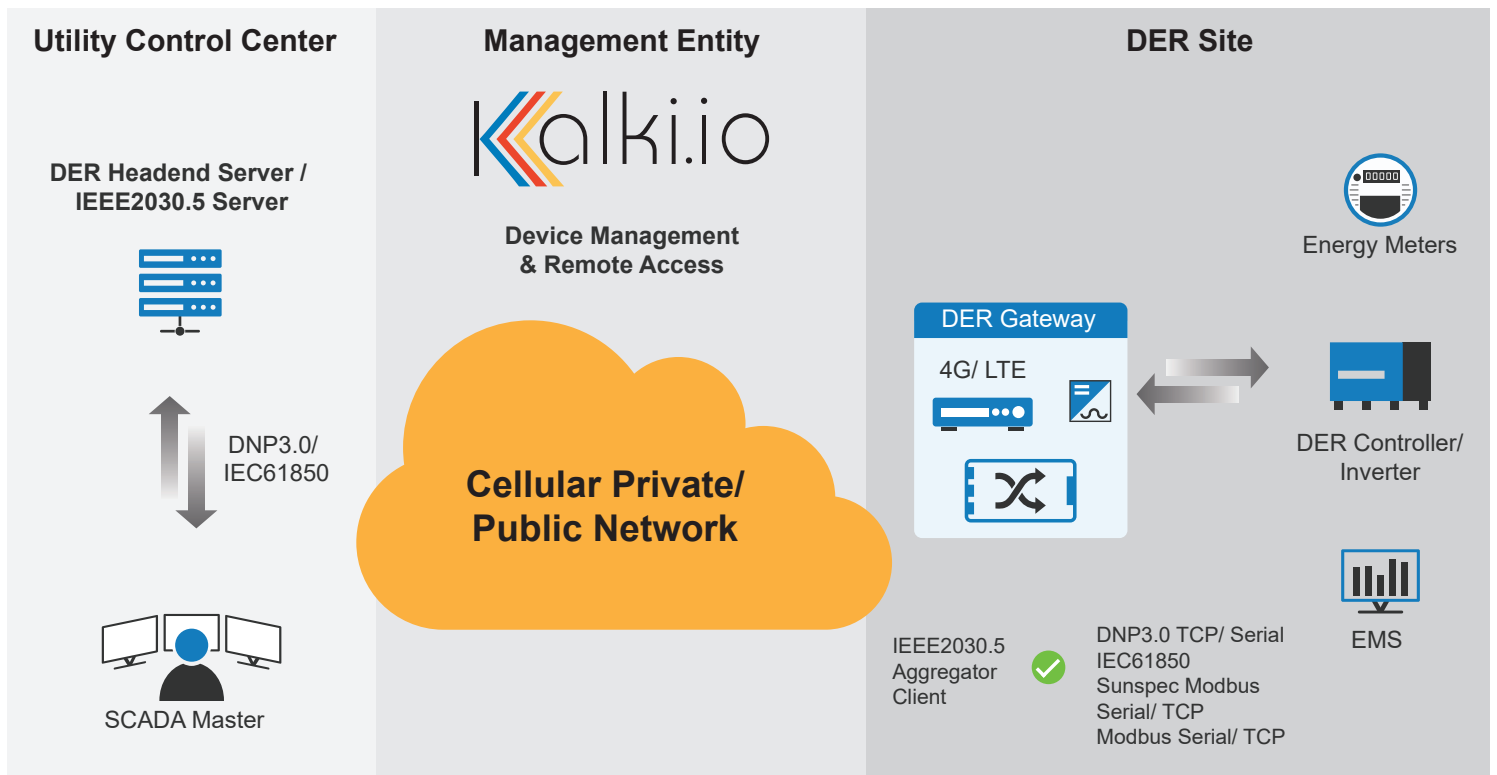
- KIOE2300-M1: DER Gateway for DER above 10 MW
- KIOE2300-M2: DER Gateway for DER up to 10 MW
- KIOE2300-M3: DER Gateway for DER up to 3 MW

## Packages



## SUBSCRIPTIONS

- Comprehensive Warranty & Updates
- Secure Device Management
- Secure Remote Access



	<b>SYNC2310-M1/M2/M3</b>	<b>KIOE2300-M1/M2/M3</b>	
<b>Gateway Type</b>	Hardware Gateway	Software Gateway	
<b>Hardware Platform</b>	Intel x86	NA	
<b>Gateway Management</b>	Device Management	Kalki.io device management support	
	Local Engineering Access	Windows based configuration utility	
	Remote Engineering Access	Kalki.io remote access support	
	Local Maintenance Access	Serial Console/ SSH (Local Engg access enabled/disabled through console)	SSH / Serial Console interface supported
	Watch Dog	Software watch dog support	
<b>Security</b>	Communication	SSL/ TLS 1.2 for IEEE2030.5 PKI, IEC 62351-3 for all TCP communication, IEC 62351-5 (DNP3 secure authentication)	
	Device	TPM2.0, Secure Boot, Application Sandboxing, Firewall	
	Configuration Access	OCSF/ Attribute certificate based on x.509 PKI standard	
	Device Access	SSHv2 with TOTP two factor access	
<b>WAN Interfaces (towards headend)</b>	Cellular Radio	4G LTE / FirstNet (North America)	Supported
	Ethernet		Supported
	Application Protocol	IEEE2030.5, DNP3, IEC 104, MQTT	
<b>LAN Interfaces (towards field)</b>	Serial Port	2 x COM port RS-232/485 (BIOS configurable)	Upto 16 Serial ports
	Ethernet	2 RJ45 (GbE port)	Upto 6 Ethernet ports
	USB	2x USB 2.0 + 2x USB 3.0	Supported
	Application Protocols	SunSpec Modbus, Modbus, IEC61850, DNP3.0 Serial & TCP	
<b>Power Requirements</b>	Supply Input	120-370VDC / 85-264VAC (43-60HZ)	NA
	Consumption	60W (peak)	NA
<b>Enclosure</b>	Type	Polycarbonate (NEMA 4 Compliant)	NA
	Dimension (panel)	437.90 x 387.10 x 222.25 mm	NA
	Mounting	Wall mounting	NA
	Security*	Door open sensor input (optional)	Configurable
<b>Environmental</b>	Operating Temperature	-30°C to 70°C (-22°F to 174°F)	NA
	Storage Temperature	-40°C to 85°C (-40°F to 185°F)	NA
	Humidity	Approx. 95% @ 40°C (non-condensing)	NA
<b>Certifications</b>	CE / UL / FCC Class B, CB, CCC, SunSpec CSIP	SunSpec CSIP	

\* On request  
NA - Not applicable