ECOSUITE®

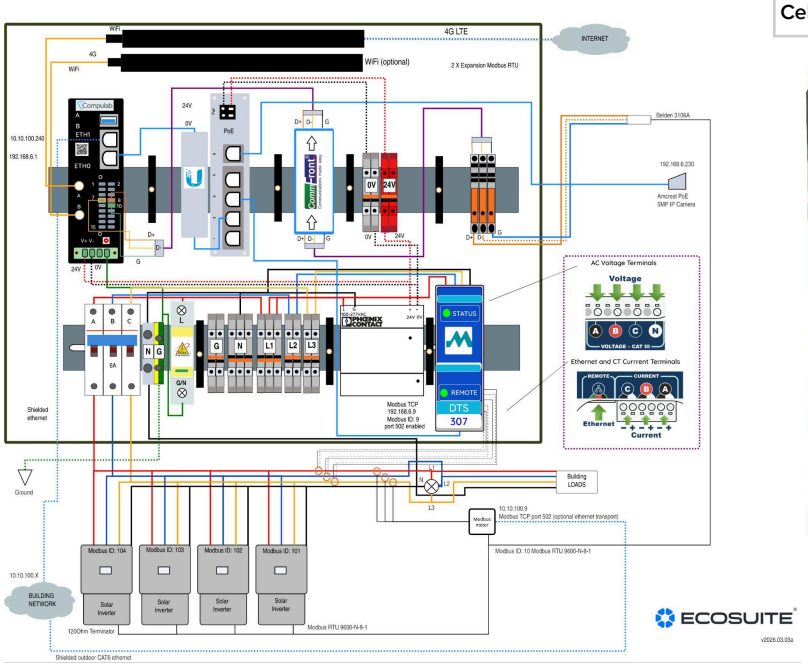
Standard ECN Technical Details

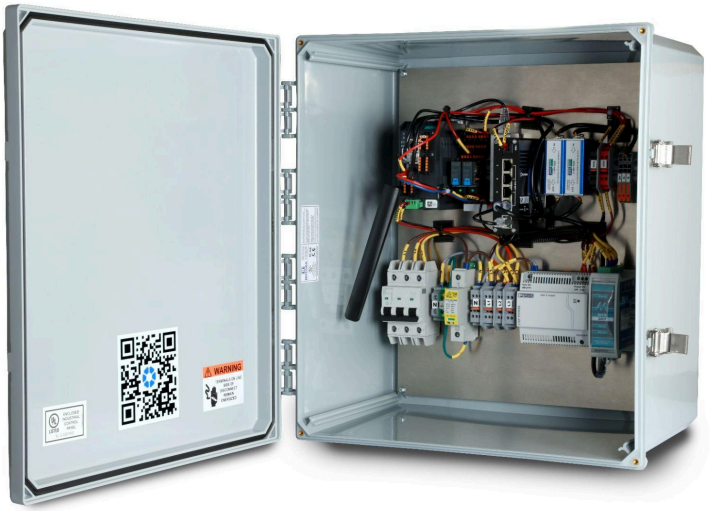
Electrical	
Power	24VDC @4A
Voltage Inputs	120 / 208 / 277 (480) VAC
Phases	Single Phase, Split Phase, 3-Phase at 50Hz or 60Hz
Current Inputs	Split-Core mA, mV or Rogowski Coil CTs, or Solid Core CTs

Physical	
Protection Rating	IP66 NEMA Type 4
Dimensions	18.63" x 14.69" x 7.22" (474mm x 374mm x 184mm) (L x W x D)
Weight	~5.40lb (2.45kg)
Enclosure Materials	UL94V-0 Self Extinguishing PPO and PC Material
Internal Mounting System	2 X DIN - rail: 35mm
Operating Temperature Range	-25 deg C to 75 deg C
Emissions	Complies with Part 15 of FCC Rules Class B
Compliance	Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU Health and Safety (Art.3(1)(a)) EN60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 EN62311:2008 Electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0Hz-300Gz) EMC (Art 3(1)(b)) EN55032:21012;EN55024:2010 (with reference to EN301489-1v1.9.2 & EN301489-17c2.2.1) SPECTRUM (Art 3(2)) EN300 328 v2.1.1 covering wide band transmission systems and data transmission equipment operating in the 2.4GHz ISM band
Warranty	Manufacturer dependent

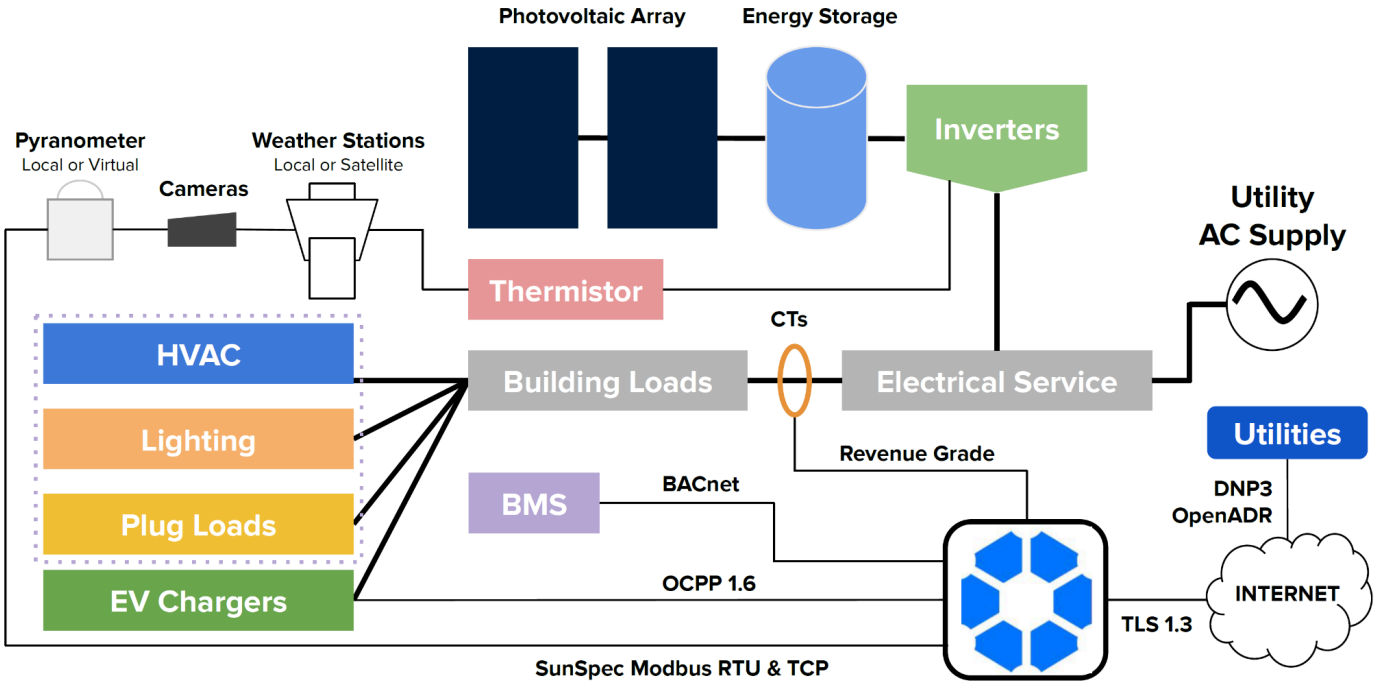
Communication / Software	
Communication Interfaces	USB 2.0, Ethernet, 802.11n WiFi, PoE+, RS485 Modbus RTU, TCP
Additional Protocols	Modbus, RS485. TCP/IP, SOAP, XML, JSON, RTSP, BACnet, DNP3
LAN	RJ45 10/100 Ethernet full duplex auto-polarity; 4 x PoE ports with DHCP routing capability
WiFi	802.11n with DHCP routing capability
Cellular	LTE - GSM 3G/4G
BlueTooth	Yes (supports Ecosuite App)
Networking	DHCP or Static IP, PoE, Voltage Spike Protection
Modbus TCP	Yes, SunSpec Modbus included
Modbus RTU	Yes, SunSpec Modbus included, Voltage Spike Protection
Security	HTTPS, TLS 1.2, X.509 Client Certificates, TLS 1.3
BACnet	Yes
RTSP	IP PoE Camera support
Media	4G, 8GB, 16GB eMMC or microSD INDUSTRIAL SLC 4GB, 8GB
Data Storage Interval	Configurable
Software	SolarNetwork on minimal Debian OS (Open Source, no hardware or software license lock-in)
Remote Instruction	Yes with receipt (SolarNetwork)
Remote Access	Secure SolarSSH command-line and web interface, apt package management

Components	
Datalogger	Store and forward, backfilling
Meter	ANSI C12.20 Class 0.5 revenue grade
DC Power	24VDC 4A, PoE
Cellular Router	4G LTE Quectel or SIM7600





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ECN: The Swiss Army Knife of DER Monitoring and Control

An Edge Compute Node (ECN) is a robust field tested panel that offers all of the functions of a Data Acquisition Server (DAS) and more. Able to persist data from a huge menu of solar inverters, kWh meters, pyranometers, weather stations, cameras and other hardware, the ECN is an incredibly durable datalogger for industrial telemetry made up of Commercial-Off-The-Shelf (COTS) components that can be swapped out.

An ECN embraces open standards, and supports the concurrent connection to heterogeneous devices using multiple interfaces, transport and protocols. ECNs can therefore collect and persist data from hardware old and new, preserving the value of existing investments. If a new device emerges on the market, the ECN can be configured to support that new device via its software plugin framework.

Additionally, the ECN can run logic locally in using live and historical data to control devices, set setpoints to effect changes in energy flows in optimum ways for the customer's site. Using machine learning (ML) at the edge, ECNs will soon be able to inherit incredible powerful abilities via trained models to spot equipment failures before they happen.

Standard i1 ECN BOM	
Category	**Description**
Camera	Amcrest 5MP IP Camera
Compute	Compulab IoT DIN (i.MX8 Plus) compute
Compute	Compulab DIN RS485 Addon
Enclosure	NEMA 4X Polycarbonate Enclosure 18x16x10
Metering	Measurlogic DTS-307 Ethernet Meter
Metering	Rogowski Coils
Network	Teltonika PoE+ Switch (5 Ports)
Power	Phoenix Contact 24Vdc Power Supply 4A
Surge Protection	Ditek 277VAC Single Phase 2W+G SPD
Surge Protection	Ubiquiti DIN-rail Ethernet Surge Protection
Surge Protection	RS485 DIN-rail Surge Protection
Thermistor	Elastel Back of Module thermistor
UPS Power Kit (optional, not shown below)	75W Supply + 38Ah 24VDC SLA Battery

