

Subject: Cascade Entelar Energy M3 Inverter with Huawei M3/M2 Inverter

Revision History
Version 1.0 – July 2024 - Initial release

Applicable products and models
EESOLAR-29.9/40/50KTL-M3
SUN2000-10/15/20KTL-M2
SUN2000-29.9/40KTL-M3

Description

To fulfill market demand to connect Entelar Energy M3 series inverters with existing/new Huawei M3/M2 series inverters in small-medium-sized C&I scenario in the New Zealand market, Entelar Energy is working with Huawei to allow selective Huawei products to be cascaded with Entelar C&I inverters.

Specific configuration and commissioning steps are required. This application note describes the typical scenario for mixed integration use of Huawei and Entelar devices.

1. Cascade via Dongles

<p>Application Scenario</p>	<p>Cascade Entelar Energy M3 series inverters with Huawei M3/M2 series inverters via Dongles.</p>
<p>Solution Description</p>	<p>Installers can cascade Entelar Energy M3 inverters (EESOLAR-29.9/40/50KTL-M3) with Huawei M3/M2 inverters (SUN2000-29.9/40KTL-M3, SUN2000- 10/15/20KTL-M2) via Entelar Energy WLAN-FE Dongle or Huawei 4G Smart Dongle.</p>
<p>Solution Diagram</p>	<p>The diagram illustrates the system architecture for cascading Entelar Energy M3 inverters with Huawei M3/M2 inverters via dongles. It shows a PV module connected to an EESOLAR Inverter (Master). This master inverter is connected via RS485 to a switch, which then connects to a SUN2000 Inverter (Slave). The system also includes a Load, a Smart Power AC/DC Sensor, and a connection to the Power grid. For communication, the EESOLAR Inverter (Master) is connected via WLAN to a Univers APP. The 4G Smart Dongle is connected via 4G to the Internet and Univers APP. The EEDongleA-05 is connected via WLAN to a Router, which is connected via Ethernet to the Internet and Univers APP. A legend at the bottom indicates: Signal cable (blue line), Power cable (red line), and Wireless communication (dashed blue line).</p>

<p>Solution Configuration</p>	<p>Communication Device:</p> <ul style="list-style-type: none"> Entelar EEDongleA-05 or Huawei 4G Smart Dongle <p>Supported Scenarios:</p> <ul style="list-style-type: none"> EEDongleA-05 + EESTORE-29.9/40/50KTL-M3 (Master) + SUN2000-10/15/20KTL-M2 (Slave) or SUN2000-29.9/40KTL-M3 (Slave) Huawei 4G Smart Dongle + EESTORE-29.9/40/50KTL-M3 (Master) + SUN2000- 10/15/20KTL-M2 (Slave) or SUN2000-29.9/40KTL-M3 (Slave) <p>Remote Monitoring:</p> <ul style="list-style-type: none"> Entelar WLAN-FE Dongle communicates to Entelar Management Platform via Wi-Fi or Ethernet Huawei 4G Smart Dongle communicates to Entelar Management Platform via 4G Network <p>Smart Power Sensor:</p> <ul style="list-style-type: none"> DDSU666-H/DTSU666-H 250A /DTSU666-HW... 	<p>Commissioning App:</p> <ul style="list-style-type: none"> Entelar Energy HiSolar <p>Management System:</p> <ul style="list-style-type: none"> Entelar Energy - Univers Management platform <p>Commissioning Requirement:</p> <ul style="list-style-type: none"> Domain: entelarenergy-emsportal.com Port: 27250 with 'TLS' enabled when using EEDongA-05; 27251 with 'TLS' disabled when using Huawei 4G Smart Dongle <p>For more details, please reference both Huawei and Entelar Energy User Manuals or contact local support.</p>
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2. Cascade with Huawei SmartLogger

<p>Application Solution</p>	<p>Cascade Entelar Energy M3 series inverters with Huawei M3/M2 series inverters via Huawei SmartLogger .</p>
<p>Solution Description</p>	<p>Installers can cascade Entelar Energy M3 inverters (EESOLAR-29.9/40/50KTL-M3) with Huawei M2 inverters (SUN2000- 10/15/20KTL-M2 or SUN2000-29.9/40KTL-M3 (Slave)) via Huawei SmartLogger.</p>
<p>Solution Diagram</p>	<p>The diagram illustrates the system architecture. PV modules are connected to Inverter 1 (Entelar) and Inverter n (SUN2000). Both inverters are connected to a SmartLogger via RS485 signal cables. The SmartLogger is also connected to a combiner box and a smart power sensor. The combiner box is connected to the power grid. The SmartLogger is connected to a Router via RS485 signal cables. The Router is connected to the Internet via a 4G Antenna. The Internet is connected to a Management system, which includes a SmartLogger WebUI, FusionSolar APP, and a Univers App. A Ripple Control Device is also connected to the Router via RS485 signal cables. A Smart power sensor is connected to the Router via a DI (Digital Input) signal. A legend at the bottom identifies the connection types: Signal cable (blue), Power cable (red), Wireless communication (dashed), and Ethernet cable (green).</p>

<p>Solution Configuration</p>	<p>Communication Device:</p> <ul style="list-style-type: none"> SmartLogger3000A01AU <p>Supported Scenarios:</p> <ul style="list-style-type: none"> SmartLogger3000A (Master) + EESTORE-29.9/40/50KTL-M3+ SUN2000- 10/15/20KTL-M2 or SUN2000-29.9/40KTL-M3 (Slave) SmartLogger3000A (Master) + EESTORE-29.9/40/50KTL-M3 + SUN2000- 10/15/20KTL-M2 or SUN2000-29.9/40KTL-M3 (Slave) <p>Remote Monitoring:</p> <ul style="list-style-type: none"> Huawei SmartLogger communicates to Entelar Energy Management Platform via 4G Network or Ethernet <p>Smart Power Sensor:</p> <ul style="list-style-type: none"> DDSU666-H/DTSU666-H 250A /DTSU666-HW... 	<p>Commissioning App:</p> <ul style="list-style-type: none"> Huawei FusionSolar App to commission the SmartLogger <p>Management System:</p> <ul style="list-style-type: none"> Entelar Energy- Unvers Management platform <p>Commissioning Requirement:</p> <ul style="list-style-type: none"> Domain: entelarenergy-emsportal.com Port: 27251 with 'TLS' disabled <p>For more details, please reference both Huawei and Entelar Energy User Manuals or contact local support.</p>
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Importance Notice:

1. Inverter and accessory configuration and integration compatibility is subject to change. Entelar reserves the right to alter future compatibility of devices and systems due to product and solution changes.
2. An independent EESOLAR plant without cascading to the existing Huawei SUN2000 plant is recommended if the plant is not subjected to Export Limit control or the client do not require single Management Platform view. If Cascading is necessary, the following Notes below applies:
3. EESOLAR inverter needs to be the Master inverter while SUN2000 cascaded as Slave inverter(s) when using dongles.
4. Existing Plant from Huawei FusionSolar PVMS needs to be deleted prior to upgrade or expansion.
5. The upgraded or expanded Plant with Entelar devices to be established on the Entelar Unvers Management server (Note: Historic data of Plant from Huawei FusionSolar PVMS will not be available).
6. Entelar Unvers platform will supports monitoring, O&M features and function settings that are different than Huawei FusionSolar PVMS.
7. Huawei devices in the system are still warranted by Huawei under your existing the Huawei warranty terms. Entelar devices will be warranted by Entelar T&Cs. Please contact Entelar for warranty claims for mixed Huawei and Entelar systems.

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Entelar Energy
 Level 3, 46 Sale Street
 PO Box 90314
 Auckland 1010, New Zealand