



Deliverable Report

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Executive Summary

This document describes the development of the Summit-FP7 Trial model (PCB+ASIC+Software) and functional testing of the module level power management electronics .

The development is split up in three parts; the mechanical / contact part, the module electronics/ housing and the energy/ data network.

The trial model is designed, a functional model is build, functional and monitoring software made and tested. In this phase no special Printed Circuit Board is designed. This is only possible in close cooperation with the mechanical engineers who design the new junction box.

The large Summit solar module can be used in off-grid and on-grid systems . A 380VDC-bus is selected to transport the generated power. No country specific (AC grid) legislation is necessary . A standard inverter can be used to supply the power to the mains (on-grid) or act as a grid forming device. (off-grid with a battery).

By the size and application of the PV module in the built environment (frequently horizontal /vertical and random type of shades) a special sub string architecture will be used and also multiple MPPT's. (Maximum power point trackers) per module.

The Trial model of the electronic has proven the feasibility of the solution.

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http://cordis.europa.eu/fp7/cooperation/home_en.html

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