250kW/645kWh

Case Study

24

1.5 93%

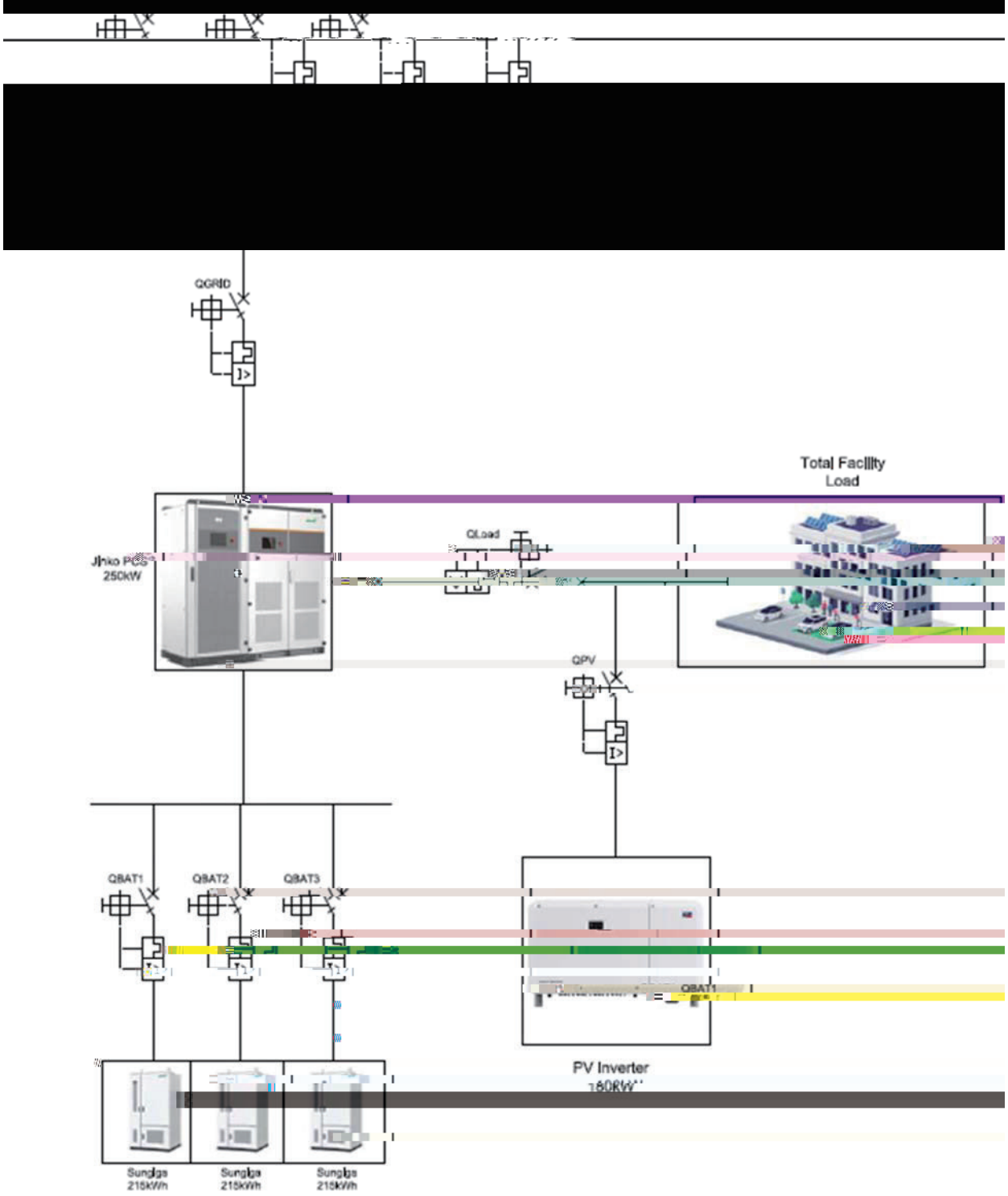
10 300

ESS

PV

DGs BESS

[redacted]


QGRID
Total Facility
Load
QLoad
Jinko PCS
250kW
QPV
QBAT1
QBAT2
QBAT3
QBAT1
PV Inverter
Sungja
215kWh
Sungja
215kWh
Sungja
215kWh

645kWh Jinko SunGiga

645kWh

Battery Rack

BMS PCS

EMS

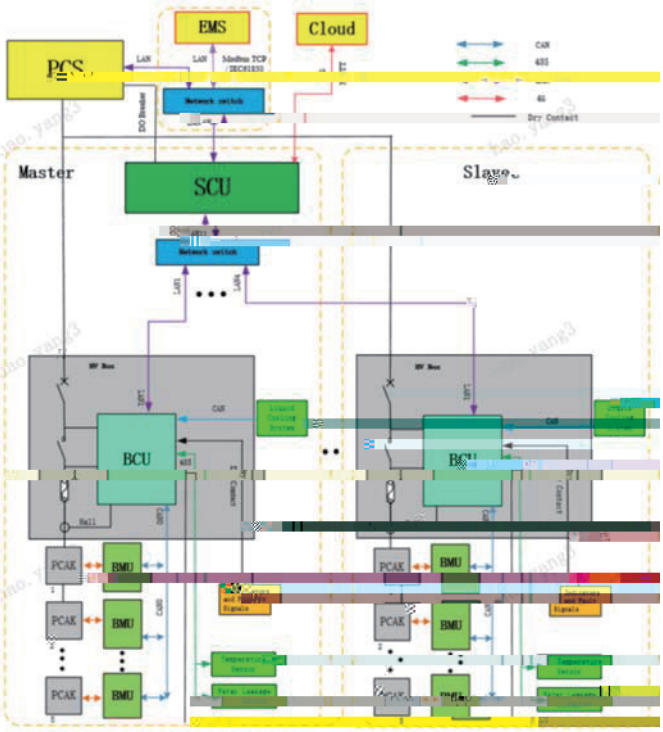
215kWh 5 153.6V

768V HVB

BCU

BMS CAN

BMU BCU



2 BMS

BMU

BCU HVB BMU

BMS

SOC SOH

PCS

250kW PCS

BMS

DG PV Inverters

Grid Following Grid Forming

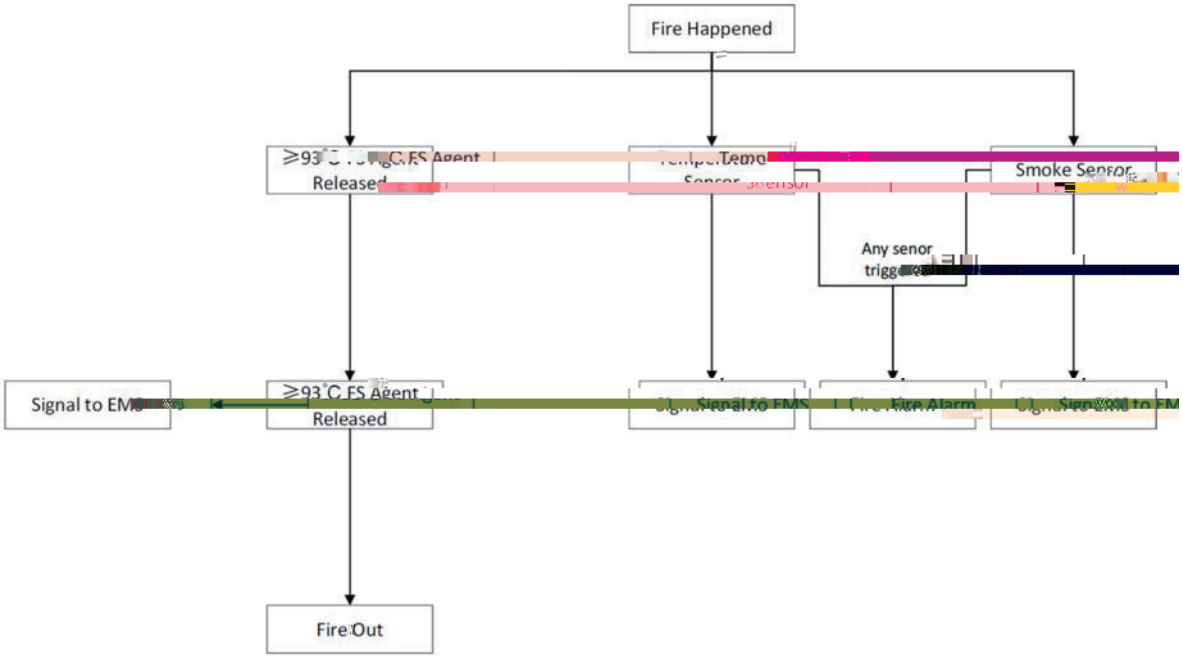
PCS DC-AC PQ DC-AC

4kW

VF DC-AC

ESS

ESS


Fire Happened
Smoke Senor
Any senor
Signal to EMS
Released
Released
Fire Out

3

DC BREAKER
EMC
EMC

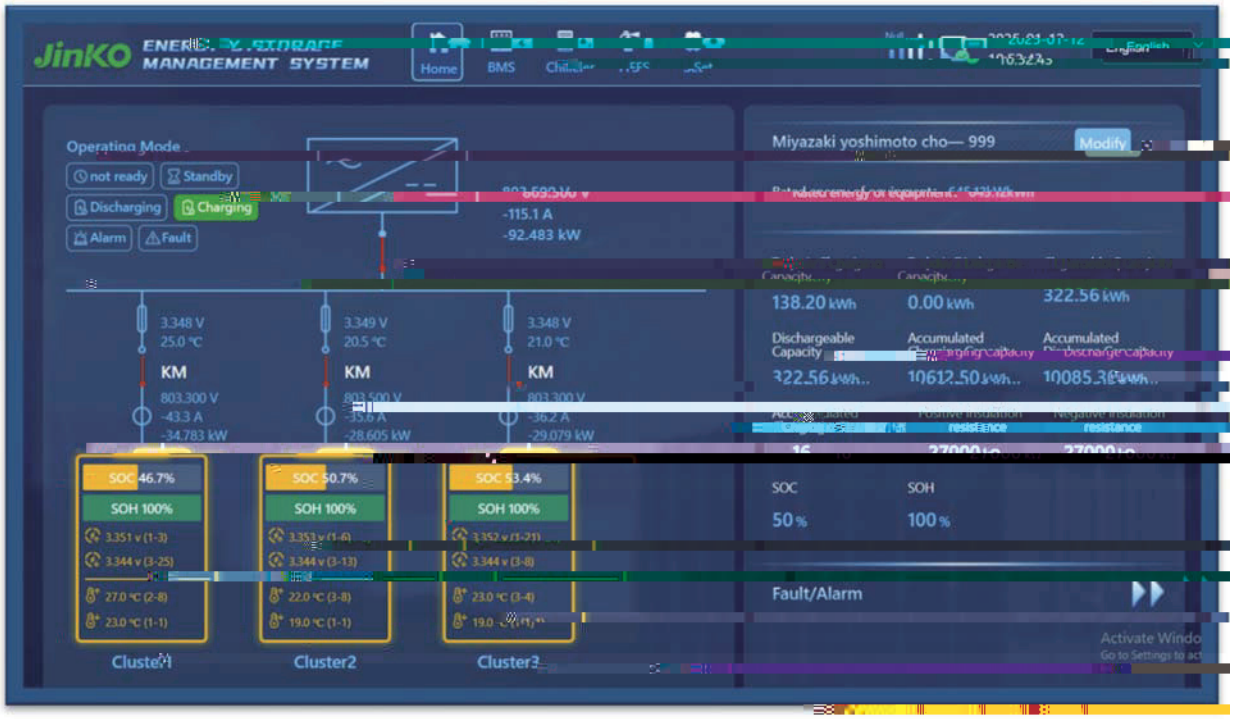
4 PCS

Setpoint

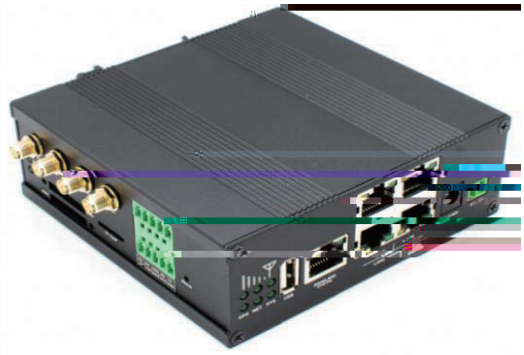
SCU

SCU 3

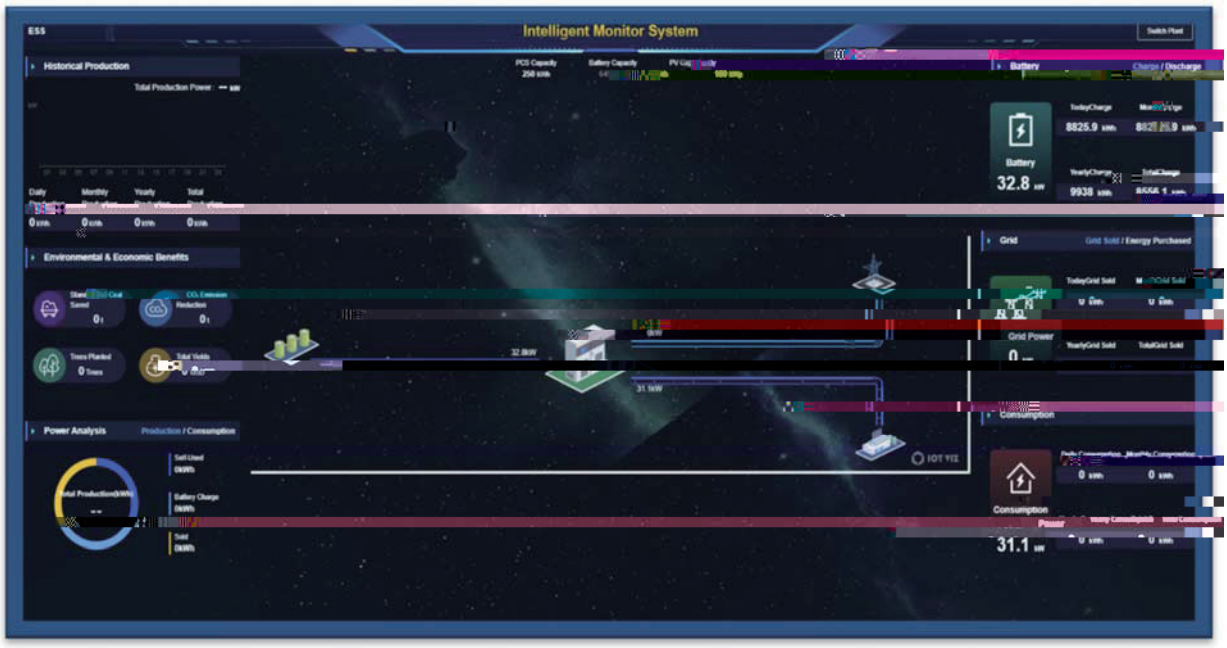
FSS BMUs BCUs



6 SCU



7 IoT



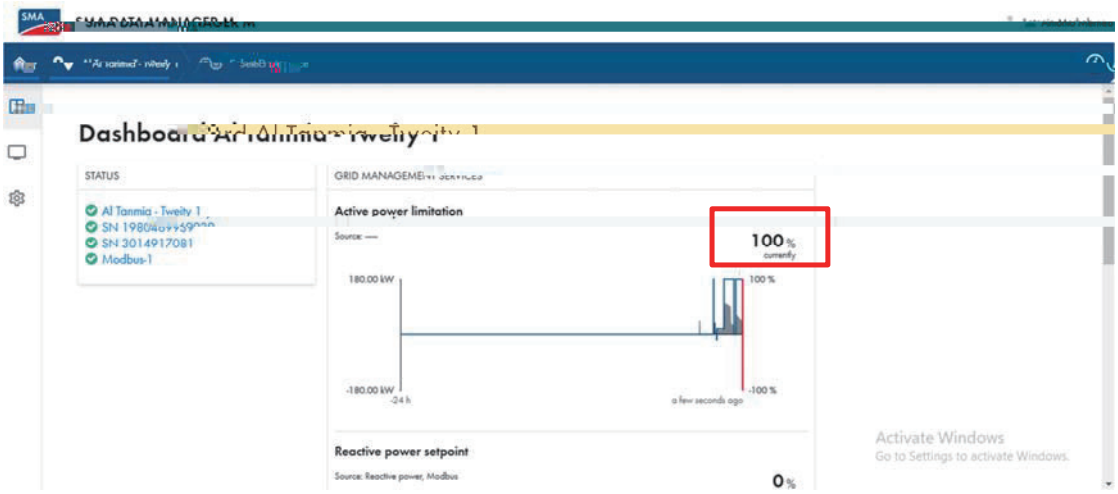
8 EMS

20% ≤ SOC ≤ 90

SOC

90% 100%

9



9 SMA EMS 100%

90% ≤ SOC ≤ 95

98% ≤ SOC

P

Gains
23526.3