

African for **E**ngineering & **M**anagement of **I**nfrastructure & **T**echnology

Hai Elshaty , Khartoum - Block 11, Building No. 30 - Tel: +249900716659 -
+249900716677 www.aemit.net



African for Engineering & Management of Infrastructure & Technology



- **AEMIT** is a private sector innovative developer in the field of PV solar energy infrastructure design, import, and installation.
- It was founded in 2018, as a subsidiary of the Arab African Company for Investment and Development (AACID).
- **AEMIT** is one of the largest and most innovative solar solution provider in Sudan.
- **AEMIT** installed several solar plants in different locations around Sudan, as well as installing affordable but highly reliable large and small business, farms and domestic solar units.
- **AEMIT** staff includes several highly experienced engineers, as well as professional and well-trained technicians. AEMIT engineers and technicians are well-trained and highly specialized in project planning, installation and aftersales technical support.
- **AEMIT** provide the highest quality and the most modern PV panels, batteries, and invertors.

AEMIT's Vision and Mission



AEMIT'S Vision is to be the most efficient in designing, developing, building and operating sustainable infrastructures in Africa and to be the most innovative in selecting the appropriate technology.



AEMIT's Mission To build and manage secure and valuable investment portfolios in Sudan and Africa for projects of a diverse nature, aiming to ensure maximum benefits, fewer risks as well as economic, political, and social benefits for Sudan and countries in the region.

Our Values

We have an Ambition to embrace and drive Change while building Trust for Innovative solutions that add value with Excellence.

Ambition

We want to be the reference group in professional solutions in our market, shaping a sustainable future for Africa.



Trust

We will always deliver what we promise, and we will never promise something we can't do.



Innovation

Our motto has always been innovation, not imitation, we turn creative and innovative thinking into reality, by introducing new ideas and solutions.



Excellence

We strive for excellence in everything we do and are passionate about delivering quality results



Change

we believe in positively changing our present for a brighter future.



Goals



Offering products, solutions and services designed and integrated to meet environmental challenges.

Employing appropriate technologies to overcome the lack of infrastructure in Africa.

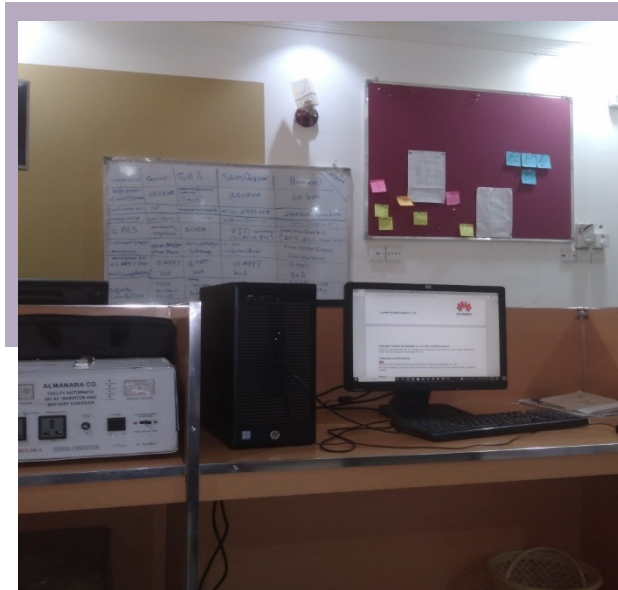
Affordable and Clean Energy.

Decent Work and Economic Growth.

Responsible Consumption and Production.

Engineering Staff of AEMIT

- ▶ AEMIT engineering department comprises a number of multidisciplinary professional and skilled engineers, including electrical power systems, electronic, mechanical as well as telecom engineers.
- ▶ All the staff were graduated from pioneer universities of Sudan, which are legendary in the field of engineering. Several of the staff have postgraduate qualifications.
- ▶ AEMIT staff has a laboratory for testing and development, which includes the required apparatus and provides a splendid training and learning environment.



Projects Implemented by AEMIT

Haj Eshaty - Khartoum - Block 11, Building No. 30
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Satellite HUB and Telecom COW

ACCID Premises



AEMIT Projects

45 Acre West Omdurman Farm

68 Trina solar panels

1 Inverter Micno 30 hp



15 Acre Bara Farm

8 Trina solar panels

1 Inverter VEICHI 3 hp



AEMIT Projects Cont.

Arribe Farm (White Nile)

A solar power plant with a capacity of 15 hp, 11 kW was installed to irrigate 25-acre farm from a 40 meter-deep well using submersible pump.

A 15 hp inverter and 34 PV panels were installed, each with a capacity of 450 watts.



AEMIT Projects Cont.

Residential Multiplex Building at Safia, Khartoum North

68 Trina solar panels

36 Solar Panels (Trina Solar 450W)

52 Batteries: (AEMIT 100A-12V)

3 Inverter (Growatt 5kW)



AEMIT Projects Cont.

Residential Duplex Building at Kafouri, Khartoum North

12 Solar Panels (Trina Solar 450W)

16 Batteries: (AEMIT 100A-12V)

1 Inverter (Growatt 5kW)



AEMIT Projects Cont.

Residential Duplex Building at Mogtribeen, Khartoum North

24 Solar Panels (Trina Solar 450W)

24 Batteries: (AEMIT 100A-12V)

2 Inverter (Growatt 5kW)



Off-grid SGC

Off Grid SGC is a SMART, GREEN, Mobile Compatible Solution that provides renewable power supply and Communication solutions integrated into One unit.

Off Grid SGC is a fully customized, heat insulated and air conditioned mobile container that will act as THE solution for all Off grid industrial and agricultural applications power and communication needs.

Off Grid SGC is a fully integrated plug-and-play off-grid system a with 24/7 power supply and communication connectivity solutions that are integrated to serve many agricultural and industrial purposes. Its also designed for instant and immediate deployment.



Off-grid SGC Cont.

How it work

Off grid SGC is designed for necessary infrastructure for day to day energy supply in remote locations, it can provide the necessary power through a system of Solar panels during the day and system of solar batteries to work the night shift to make the most of your panels' daytime production.

Applications

1. Mobile Power Supply
2. Connectivity
3. Smart Mining
4. Smart Agricultural



Off-grid SGC Cont.

Description of the project components

1. The container is designed in an environmentally friendly manner, with communication services and all the necessities of modern life. It includes TV set communication devices, refrigerator, air conditioners, fans, and others.
2. On the surface of the container there are solar panels sufficient to operate all systems and the mill for gold extraction.
3. Three inverters installed to generate energy from continuous to PV cells to operate the systems.
4. Batteries to save for use in power platforms in the night-time.
5. A full operating Aquaponic Greenhouse powered by solar energy as well as poultry Farm.



Off-grid SGC Cont.

Container consists of

1. 48 solar panels: Trina Solar 450W
2. 3 Inverters: 10 hp
3. 32 Batteries: AEMIT 100Ah-12V
4. 2 Inverter: 5kW



Products Provided by AEMIT

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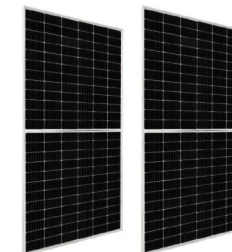
Products Provided by AEMIT

➤ **AEMIT** provides several high quality but affordable products that are manufactured by well-known and reliable vendors. Currently, the major products that are supplied by AEMIT for solar plants are:

1. Photovoltaic (PV) Panels
2. DC-AC Power Invertors
3. Lead-Carbon Batteries
4. MPPT Charge Controller
5. Solar PV panels mounts



JinKO



Lead-Carbon Batteries

- ▶ Design Life (years, 25)
- ▶ improve the charge acceptance ability, more suitable for the partial state of charge (PSOC) application
- ▶ easy installation, convenient maintenance.



Photovoltaic (PV) Panels

- ▶ Multi Busbar Technology.
 - ▶ Longer Life-time Power Yield.
 - ▶ Enhanced Mechanical Load.
 - ▶ Mono-crystalline cell.
-
- ▶ High Energy Generation.
 - ▶ High Reliability.
 - ▶ Higher Return on Investment due to the higher power output.



Jinko Solar

The logo for Jinko Solar features the word "Jinko" in a bold, green, sans-serif font, with "Solar" in a smaller, green, script font positioned above the "KO".

Trinasolar
The power behind the panel

The logo for Trinasolar features the word "Trinasolar" in a blue, sans-serif font, with a red dot above the "i". Below it, the tagline "The power behind the panel" is written in a smaller, blue, sans-serif font.

DC-AC Power Inverters

- ▶ Pure sine wave inverter.
- ▶ Configurable input voltage computers via LCD setting.
- ▶ Compatible to mains voltage or generator power.
- ▶ Smart battery charger design for optimized



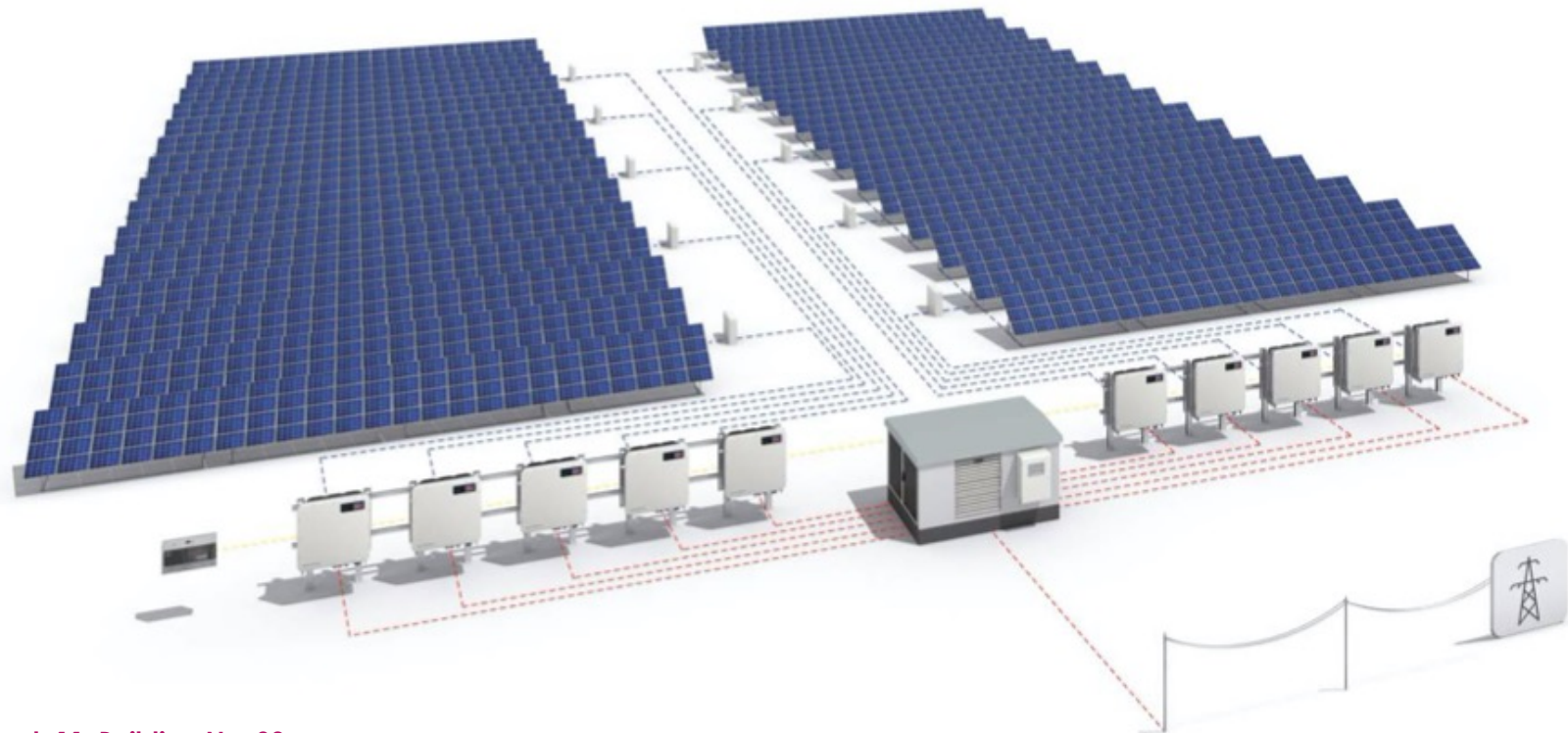
X MW Project in partnership with AACID Turkey



AACID TURKEY INVESTMENT DIŞ TIC LTD ŞTİ

Buyukdere Street, Tekfen Tower, Level 8, No:209, Levent, 34394 Istanbul, Turkey

X MW Project Proposal



X MW Project



Inverters - PEAK3

1500 V_{DC}, 150 kW, compact design

PEAK3 stands for pure power. With its compact design, the inverter offers the highest

power density per device. The advantages: optimal performance in compact size. The result is cheaper transportation and easier installation. To achieve highest economic benefits, the PV array can be oversized up to 150 %. The Data Manager completes the system and enables it to fulfill all of the grid operator's requirements.



Solar Panels

Tiger Pro 72HC

530-550 Watt

MONO-FACIAL MODULE

P-Type

Positive power tolerance of 0~+3%

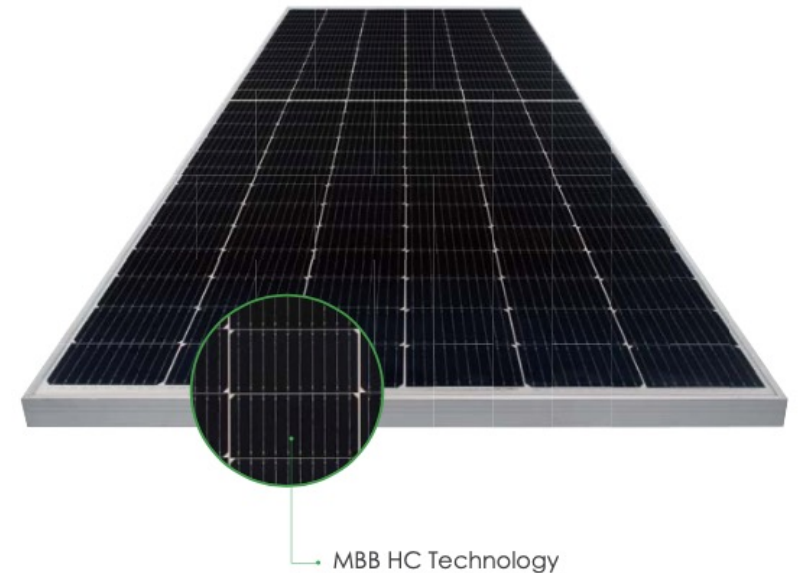
IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018

Occupational health and safety management systems



Solar Panels

Key Features

Multi Busbar Technology

Better light trapping and current collection to improve module power output and reliability.

Reduced Hot Spot Loss

Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.

Longer Life-time Power Yield

0.55% annual power degradation and 25 year linear power warranty.

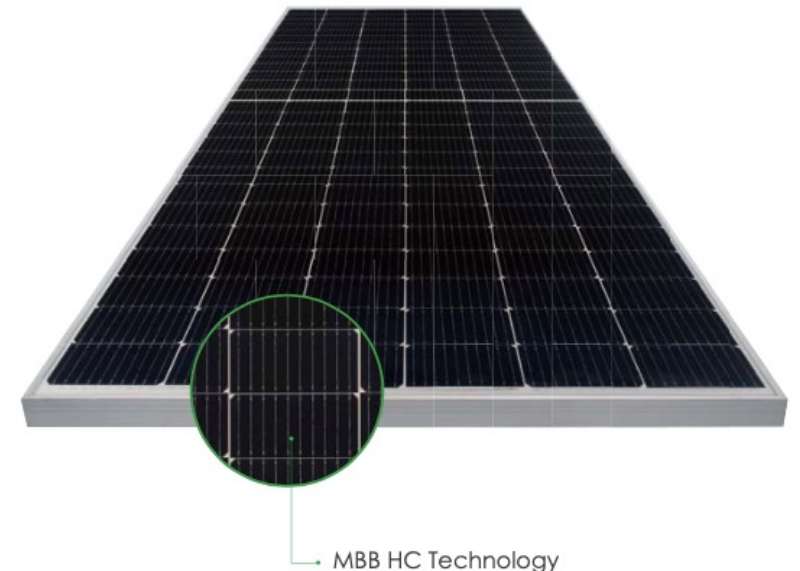
MBB HC Technology

Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.

Enhanced Mechanical Load

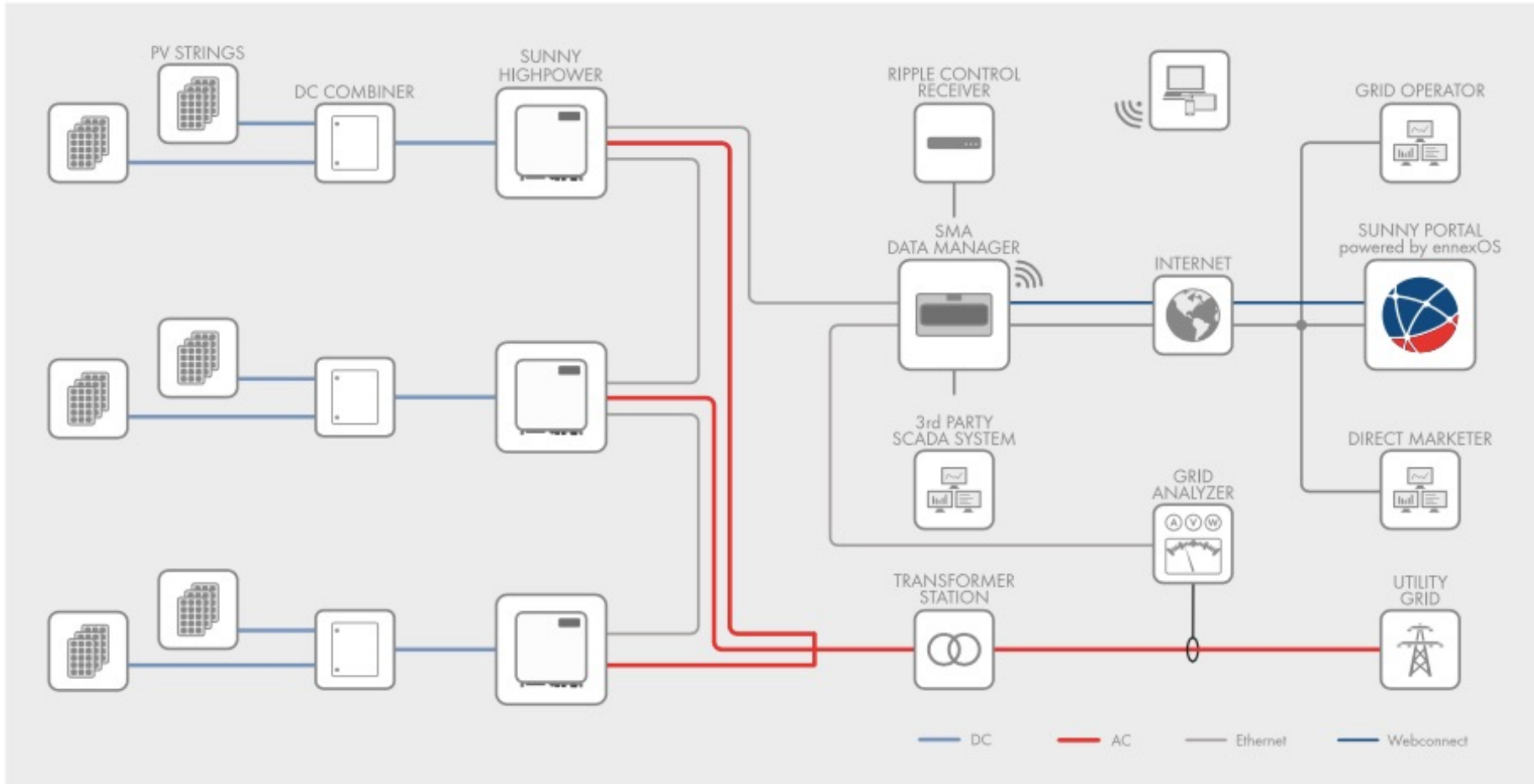
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



Solar Mounts



Layout



Optimum system layout recommendation

THANK YOU!



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