

Off-grid Cold Storage Containers

A Remote Monitoring and Sensors

- Door openings
- Humidity and temperature
- GSM enabled for real-time updates

B Thermal Storage

- Phase change material embedded in the unit as thermal plates leading to over 24h autonomy
- Battery storage – battery sizing varies considerably by location

C Solar Array

- Typically positioned over the container to create shade
- Sizing ranges from 1.5kW to 8.9 kW
- Nominal voltage is either 24 or 48V

D Cooling Unit

Two types of Cooling Units predominate this space

- Augmented on the shelf split AC Unit – Several companies have developed a charge controller that overrides the lower limitation on a traditional AC unit allowing the unit to operate at the optimal temperature for a given produce
- Bespoke compressor based cooling unit
- Storage size ranges from 9 cbm to 90 cbm. Smaller units are usually deployed in markets

E Insulation

- Poly Urethane Foam (PUF) siding with Aluminum cladding 80-150mm thick
- Recycled shipping container retrofitted with Spray foam
- Clay Bricks with recycled plastic bottles

