MIDAS-Micro (Energy Unit)

Software Defined Radio Platform **Version EU-2GV10PB (Revision 1.0)**

MIT HAYSTACK OBSERVATORY

MIDAS-Micro (Millstone Data Acquisition System) Energy Unit is an integrated solar power controller and battery charger for RAPID project software radio systems. The unit accepts up to 140W of solar panel input and uses this energy to provide power to a 12V DC battery and load. A custom IP67 power cable is used to connect to compatible software radio data acquisition units. A sealed lead acid battery (SLA) is used with the energy unit to provide power when solar energy is not available. Battery size is limited by dimensions and typically may be up to 75 Ah in capacity. This version of the unit uses a charge controller from Genasun corporation which is specifically configured for use with sealed lead acid batteries. Power inputs and outputs are fused and provide fault protection for the solar panels and the load.

Note : **<u>The battery is shipped separately from the unit</u>**

MIDAS-Micro Energy Unit / EU-2GV10PB Specification

Solar Power Input	**Dual panel up to 140W at 34V**
Load Power Output	**12V DC @ 6.0A maximum**
Battery Type	**Sealed Lead Acid (AGM SLA/VLRA type)**
Battery Voltage and Capacity	**12V DC at up to 75 Ah**
Controller Efficiency	**98.3 % with MPPT**
Standby Power Consumption	**0.9 mA (night time)**
Enclosure Rating	**Outdoor IP67 Rating**
Operating Temperature	**-40 to 70C**
Dimensions (L x W x H)	**42 cm x 39 cm x 17 cm**
Unit Weight	**2 kg (without battery, 25 kg battery installed)**

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RAPID Radio Array of Portable Interferometric Detectors