



MCU

Monitor Control Unit for Integrated solutions

The Monitoring Control Unit is a Commercial Off The Shelf hardware solution for the transfer of information from remotely deployed Sensors and Instruments.

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Key Features

MCU provides:

- Interfacing for up to six sensors/instruments
- Certification to DEFSTAN 00-35/59-411 and Mil Std 810G for use on military platforms
- Option for Internal processing power for the connection of PC compatible interfaces
- Operates effectively either tethered or untethered to a range of platforms
- Options for connections to multiple communication bearers
- Options for increased connectivity by using stackable Component Assisted Modules (CAM)



Instrument Monitoring

The MCU in standard format is delivered to support up to six user defined sensors and instruments. Four Serial connections and two Ethernet via Mil Std 38999 connectors. The unit is also supplied with two Rugged Beam Fibre Optic Bulkhead connectors as a cabled communication fail safe.

Power Requirements

The MCU will operate from either 12/24 vDC or 110/240 AC external power supply. The unit can be supplied with a 12v Power Pack when operating off grid or alternatively to an AC source when available. All MCU outputs can supply DC power to the sensors or instruments if necessary using the supplied power and data cables.

Configuration

Each MCU can be configured to support differing sensors depending on the operational use case. A Command Post MCU for instance may differ from an MCU operating as a Measuring Unit (MU) on its own or as part of Multiple MCU's within a deployed sensor array. In either case, each MCU can be easily re-configured with the supplied sensor software application.

Operational Use

The MCU's can be integrated across a wide range of platforms including Naval Vessels, Military and Civil CBRN Reconnaissance Vehicles where reliability and flexibility are key.

Component Assisted Module

The Component Assisted Module (CAM) is an external device that allows additional connection of Sensors.

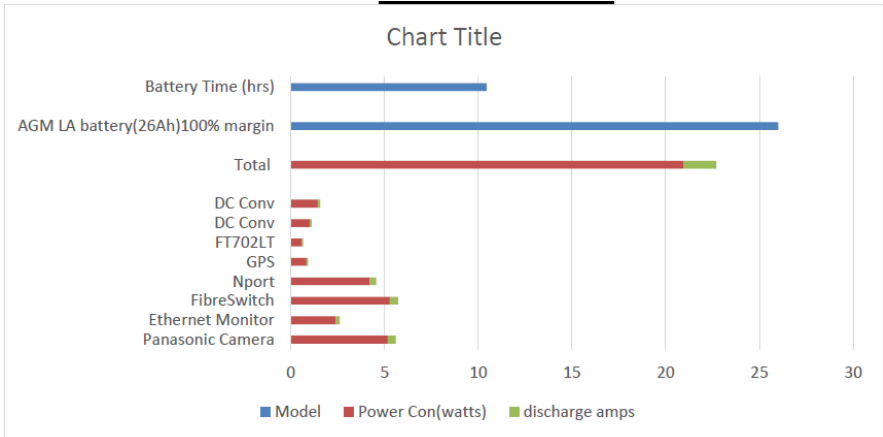


MCU Power Consumption

As already indicated the MCU can operate on multiple power platforms. The diagram below indicates the power required when the MCU is using the default internal and external hardware. The introduction of Communications equipment and the ability to power sensors through the MCU instead of using their own separate power supply's will have an effect on how long the system will run when using the MCU PowerPack.

| Item | Internal/External | Power Watts | Discharge amps | Remarks |
|--------------------------|-------------------|--------------|----------------|-----------------|
| DC Conv | MCU | 1.02 | 0.09 | 12v 8a out |
| DC Conv | MCU | 1.44 | 0.12 | 24v 4a out |
| Ethernet Monitor | MCU | 2.4 | 0.20 | DC Alarm |
| Fibre Switch | MCU | 5.28 | 0.44 | Fibre Interface |
| Nport | MCU | 4.2 | 0.35 | Serial Server |
| GPS | Default | 0.84 | 0.07 | 18x LVC |
| Camera | Default | 5.16 | 0.43 | Panasonic |
| Weather Station | Default | 0.6 | 0.05 | FT |
| Total Consumption | | 20.94 | 1.75 | |

Using a default Lead Acid 26Ah MCU PowerPack the following times can be achieved.



The MCU can be connected directly into a Vehicle power supply or via a generator. Consideration of the power consumption needs to be taken into account with any other equipment being run through the vehicle or generator.

MCU VIK

The MCU can be mounted directly onto a platform hull or into a 19in rack system. If required, Vehicle Installation Kits (VIK) can be supplied in two designs. The "Flat Top" VIK is a simple, bolt on system, where the MCU is bolted directly onto the VIK. The "Under Slung" VIK (show in the diagram to the right) allows the MCU to be locked into position and not bolted. This allows for ease of maintenance.

