

# EMACSYS MODEM MODULE

## User Manual

### Introduction

The Modem Module is designed to work with the EMACSYS Control Module. It provides mobile network connectivity to the EMACSYS system. A SIM card and external antenna are required in addition to the module itself.

### Power Requirements

The Modem Module requires an external supply which should be common with the EMACSYS Control module. Power should be applied to both modules simultaneously. The 10 way interconnecting lead should be in place before power is applied. Under no circumstances should this lead be connected while power is applied to either the Control Module or the Modem Module.

Average current consumption is approximately 40mA but the supply should be capable of providing currents up to 1A for very short periods.

Voltage should be in the range 6 to 15 Volts.

### LED Operation

The on-board red LED will flash rapidly while the modem is acquiring the network and then will flash every 2 to 3 seconds once it is on the network.

### Antenna

The antenna should be connected to the SMA connector on the flying lead. It should be sited externally to any enclosure being used to house the modules. This is essential if the housing is constructed from metal. Most application interfaces have a facility to measure signal strength, see the documentation provided with the appware.

### SIM Card

The SIM card holder can be opened by pushing the beige retaining clip fully in and then lifting the top section of holder. The SIM card is inserted into the top section of the holder with the contacts closer to the board and the bevelled edge of the card towards the edge of the PCB. The holder is then closed and the beige retaining clip is pulled outwards.

The SIM card must be inserted before power is applied. If it changed while the modem is powered then the power must be cycled off then on before it will be recognised.

### Connecting Peripherals

The Ethernet Module is provided with a connection lead and this should be connected to the correct port on the EMACSYS Control Module. Check carefully that the correct port is selected before powering the Control Module.

**NOTE: Peripherals should not be connected with the power applied as this may cause damage to either the peripheral or the Control Module itself.**

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