

SPECIFICATION

General

This specification describes the functionality and specification for the Magus Electronics Remote Monitor and Controller V 1.0 (the "system").

The system consists of several component parts. A typical system will have the main CPU PCB together with optional input and output cards. Custom interface cards can be produced for exact specification if required.

The main CPU board contains a powerful processor together with flash memory and various features including display, custom programmable logic, server software and IPV4 / V6 LAN interface. Standard features also include real-time clock, three serial interfaces, on-board PSTN / Modem / GSM communication options, one wire interface and I2C interfaces for expansion. On this main board there is also eight 14-bit ADC channels. Digital IO is also standard.

Standard expansion boards include digital input and output, analogue input (14-bit), 4-20mA inputs, mains input and output.

Custom boards are application specific together with embedded software for unique control and reporting.

Examples of custom applications to date include waste compaction for air side use in airports, the CPU controls access via a card reader together with a camera for identification of operator, full control of the compactors cycle together with safety features and weighing of individual waste disposed. Reporting back to the site operator via on-board GSM, reports included customer details, logs of use, weight etc. together with compactor status and SMS messages automatically generated when attendance was required. All of this was achieved with standard off the shelf boards.

Another example was the monitoring charging and reporting on a secure cabinet containing up to 38 notebook PCs. As this required 38 channels of ADC, together with current control and tri-LED status indication for each position, a custom interface board was utilised. The overall system cost including cabling in the cabinet, mains power units for charging etc. was under £1,000.00 per system.

Major Features

Internet based monitoring and control with server software for standard browsing
Range of standard boards to suit the majority of applications
Low cost, rugged system
All standard communication systems covered - LAN, PSTN, GSM, GPRS, Modem, Internet
Standard expansion via one wire I2C parallel and serial
Real-time clock, flash memory, custom logic, display
Multiple serial interfaces
Camera interface and low cost camera module
Remote programming
Custom controlled software to suit application

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