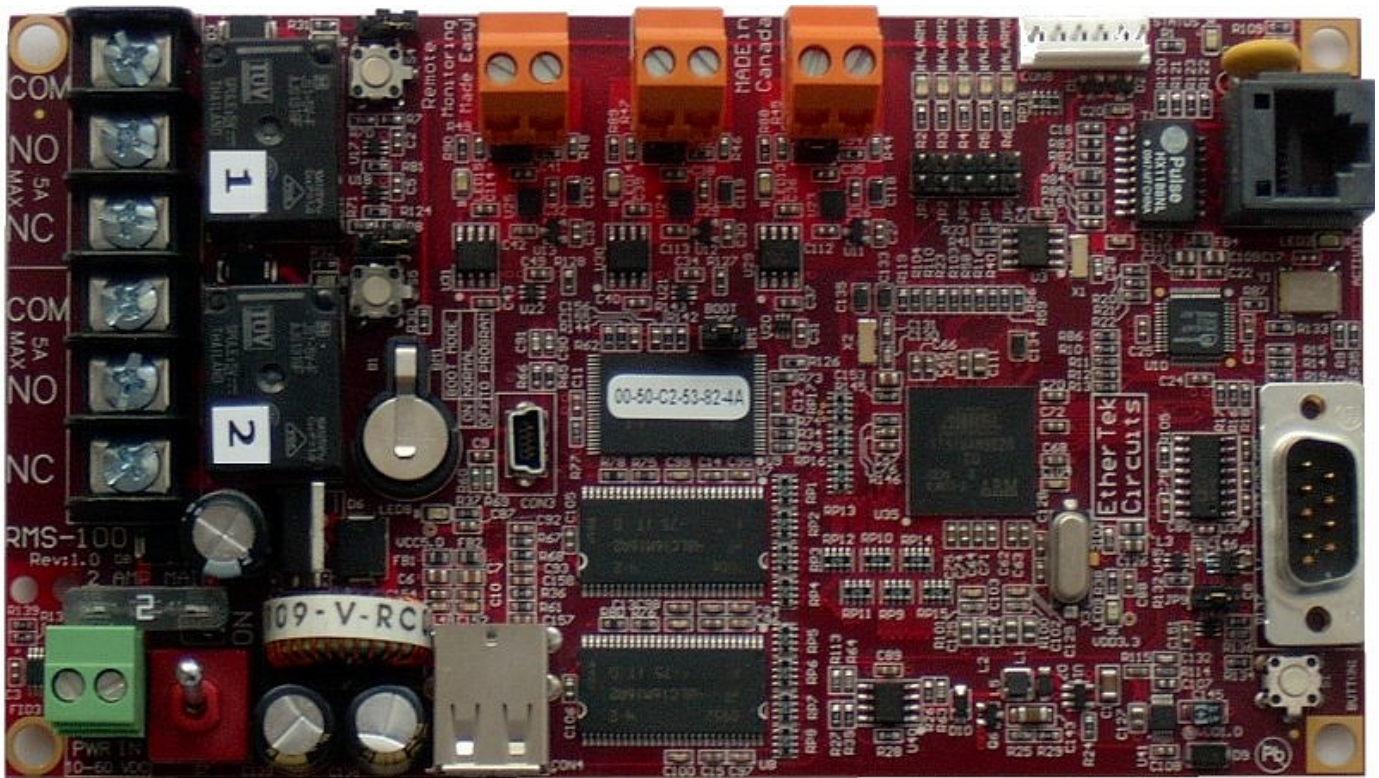


MS100

Monitoring System Single Board Computer



Introduction

MS-100, is a remote monitoring, data acquisition, and control device specifically designed for use with Battery powered wireless internet repeater sites, or other AC & DC powered remote equipment

MS-100 Has ultra low power consumption and won't put a drain on your power source. Uses only 1.2 watts!

MS-100 Is powered by DC voltage from 10 to 60 volts.

MS-100 Uses embedded Ethernet technology for internet data acquisition and remote voltage monitoring.

MS-100 Uses the LINUX operating system for versatility, stability, and security.

MS-100 Gives you the situational awareness you need to keep your equipment operational and reliable.

Possible Applications

[A/C or Battery Powered Microwave, Telephony, Network Equipment](#)

Use MS-100 to monitor battery levels, room temperature, signal strength (RSSI) on radios and more. MS-100 has 3 onboard isolated voltmeters giving it the ability to measure DC voltage from -100 to +100 volts with 24 bit accuracy. MS-100 also has 2 power relays giving it the unique ability to turn on/off devices remotely using an Internet connection. Use the power relays to remote start a generator. MS-100 has 5 dedicated input pins used for door alarms, motion sensors, or to monitor solar panel trip wires. MS-100 has two USB 2.0 ports that support several USB devices concurrently using a USB hub. Control USB cameras, store data on USB flash drives, control USB speakers etc. MS-100 has input and output pins used to control your own custom devices. MS-100 can alert you via email or SMS messages when your battery bank is low. MS-100 has ping monitor software that allows you to monitor network devices and alert you to failure and possibly power cycle the device. Monitor all this information remotely over an Internet connection using an ordinary web browser. MS-100 gives you direct hardware control of fans, lights, computers, cameras, modems, radios, etc... No more guessing what your battery levels are. No more wondering if your signal strengths are at an acceptable level. No more long drives to reset a fussy radio. Let MS-100 do this all remotely via the Internet.

- Six layer PCB with Nickel Immersion Gold plating and red solder mask.
- 400 - MHz Arm Processor (500 Mips !).
- 256 - megs of Nand Flash. Create and store custom applications.
- 64 - megs of SD-Ram.
- Dual Low Noise Switching Power Supplies accepts 8 - 60 vdc input. Can be powered directly from 12, 24, or 48 volt battery banks.
- Battery backed-up, real time clock.
- One onboard temperature sensor -25c +100c.
- Three 24 bit isolated voltmeters (+/- 100 VDC). Each voltmeter has its own 24 bit Delta Sigma ADC.
- Each voltmeter can be put into low voltage shunt mode (+/- 2 VDC).
- Two Power Relays for devices using 1 – 240v -5 amps AC/DC current.
- One programmable push button.
- Four general purpose I/O pins.
- Five dedicated alarm pins.
- One console serial port.
- Two USB 2.0 ports for cameras, wireless clients, extra Ethernet, etc.
- Runs real Linux! 2.6.33 kernel.
- Send SMS messages, Email alerts, SNMP traps, Remote Syslog Messages.
- Ping watchdog, power cycle equipment after a set amount of ping timeouts.
- Command line utilities: ping, ftp, email, relays, etc.
- Flash new firmware over the internet.
- Dual Watchdog Reset circuits, processor integrated, and extra hardware.
- Control MS-100 via web page, telnet, ssh, or snmp.
- Full SNMP v1, v2, v3 support (default v3).
- Supports external USB relays and voltmeters.
- Hardware is user accessible from files on the board.
- Make your own utilities and scripts to upload. (Bash, PHP, Python, Lua)
- Pluggable connectors for ease of use.

MS100

Monitoring System Single Board Computer



[A partial list of programs and packages included:](#)

SQLite v3 database, Telnet ,Drop Bear SSH, Light Http and Https Server, Pro FTP, Cron scheduling agent, Busy Box, PPP, Net SNMP, NanoCom, Easy Edit, Nano, and Vi, Fping, SMTP email client, IPTables, Lrz and Lsz, Open SSL, Modbus Library, RRD Tool, USB Web Camera Support.

[A programmers dream:](#)

MS-100 comes with PHP, Python, and Lua. Make your own custom monitoring programs and upload them to the MS-100 board, or create your own branded interface!