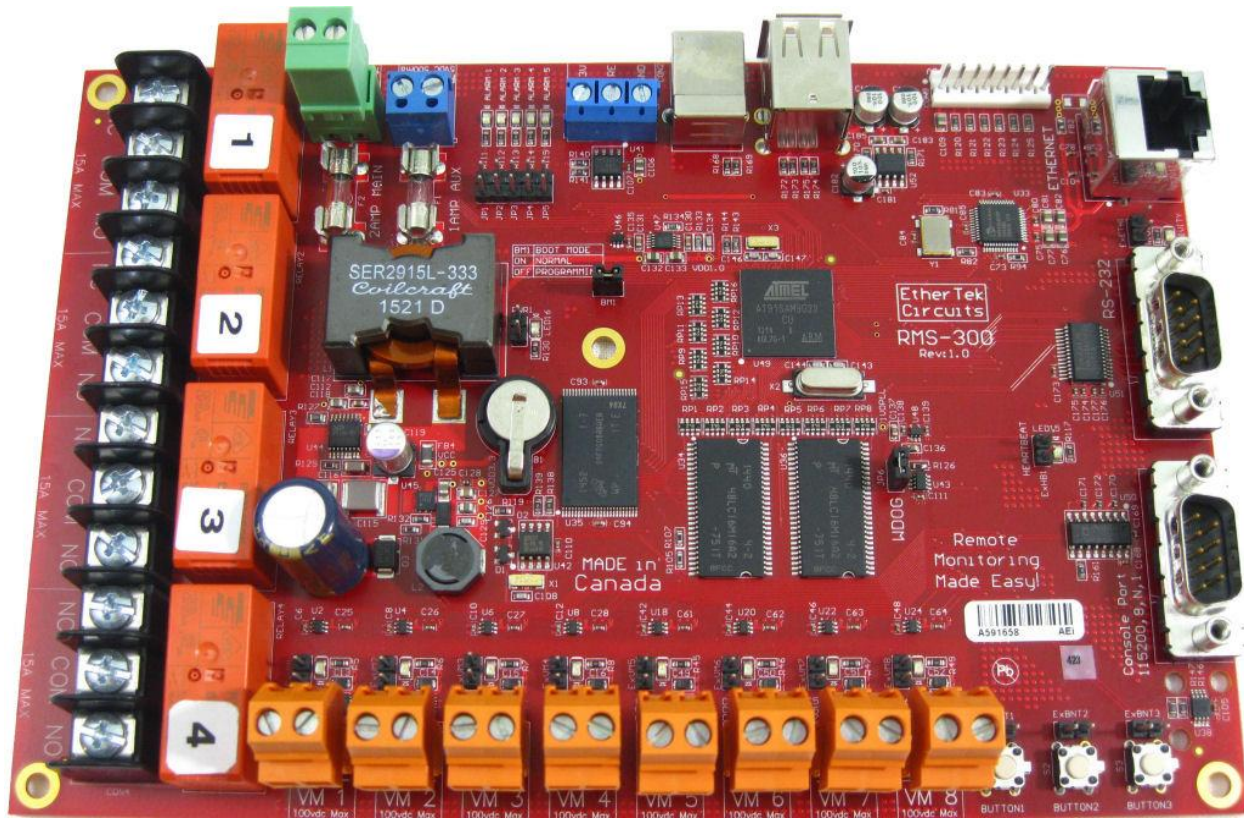


MS300

Monitoring System Single Board Computer



Introduction

MS-300 Is a unique 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-300 Has ultra low power consumption and won't put a drain on your power source. Uses 1.2 Watts.

MS-300 Is powered by DC voltage from 10 to 60 volts.

MS-300 Uses embedded Ethernet technology for internet data acquisition and remote voltage monitoring.

MS-300 Uses the LINUX operating system for versatility, stability, and security.

MS-300 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-300 to monitor battery levels, room temperature, signal strength (RSSI) on radios and more. MS-300 has 6 onboard isolated voltmeters giving it the ability to measure DC voltage from -100 to +100 volts with 24 bit accuracy. MS-300 also has 3 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-300 has 5 dedicated input pins used for door alarms or to monitor motion sensors. MS-300 has a full featured serial port, control modems, cell phones, gsm modules, and other devices that use serial communication. MS-300 has two USB 2.0 ports that supports several USB devices concurrently using a USB hub. Control USB cameras, store data on USB flash drives, control USB speakers etc. MS-300 has input and output pins used to control your own custom devices. MS-300 can alert you via email or SMS messages when your battery bank is low. MS-300 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-300 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-300 do this all remotely via the Internet.

Features

- Four 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.
- 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 $-25c +100c$.
- Eight 24 bit isolated voltmeters (± 100 VDC). Each voltmeter has its own 24 bit Delta Sigma ADC.
- Four Latching Relays for devices using 1 – 240v - 16 amps AC/DC current.
- Three programmable push buttons.
- Six general purpose I/O pins.
- Power output port, 5.0vdc (500ma).
- Power output port, 3.3vdc (500ma).
- One full serial port for controlling cell phones, modems, etc.
- One console serial port.
- 1-Wire interface for external temperature sensors.
- 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-300 via web page, telnet, ssh, or snmp.
- Full SNMP v1, v2, v3 support (default v3).

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- 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.

[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-300 comes with PHP, Perl, Python, and Lua. Make your own custom monitoring programs and upload them to the MS-300 board, or create your own branded interface!