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FEATURES

- Simple command support for all 1-Wire devices.
- Configurable security levels: Secure 128 bit SSL Encryption.
- Firmware can be flash upgraded from remote.
- Manages concurrent client connections safely and reliably.
- Debugging functionality helps simplify software integration.
- Integrated Real-Time Clock, with option to set periodically from a SNTP server.
- 3 convenient 1-Wire ports with independently configurable Vcc settings.
- Automatically provides smart strong-pull-up for 1-Wire sensors.
- 1-Wire MicroLan capacity of 2000 feet of cable, 100 devices.
- Built-in Search, Family Search, and Conditional Search, and much more.
- ESD Protection more than 27kV (IEC801-2 Reference Model.) on the 1-Wire bus.
- Block mode commands support all 1-Wire device functions.
- Automatic CRC16 for TMEX files.
- ABS enclosure. Available in either Panel mount or DIN-Rail mount versions.
- LED indicators for Ethernet link/activity, power, and 1-Wire activity.
- Low Cost.

SPECIFICATIONS

- Communications: *HTTP, HTTPS, Telnet, Multicast, DHCP, SNTP*
- Concurrent Connections: *Supports 6 simultaneous http/s connections.*
- Supply Voltage: *6-12 Volts*
- Supply Current: *300 mA*
- 1-Wire Devices: *100 devices*

DESCRIPTION

The HA7Net is a low-cost Ethernet to 1-Wire interface designed to simplify the integration of distributed 1-Wire / iButton networks into your application or system. Using the HA7Net, integrators and OEMs can substantially decrease development time and costs as well as installation costs associated with deploying systems based on Dallas Semiconductor 1-Wire technologies.

The HA7Net will allow you to use industry standard Ethernet products (switches, hubs, etc.) to build out the backbone of your 1-Wire based sensor / control system. This provides several important benefits: First, 1-Wire networks can be easily distributed over great distances without having to deal with the challenges associated with the installation of physically large 1-Wire networks. By distributing the 1-Wire networks, the individual 1-Wire MicroLans can be kept to a smaller physical size, thereby improving reliability and decreasing installation costs. Second, since the HA7Net communicates via TCP/IP over standard Ethernet, you can take advantage of existing corporate LANs, the Internet, and in-house MIS expertise for building out and maintaining the backbone of your sensor network. Another advantage is the number of readily available libraries and developer tools; which are widely available for common platforms, and can be used to communicate with the HA7Net.

Primary communication with the HA7Net is accomplished via the HTTP protocol, with optional 128 bit SSL data encryption. The actual data is exchanged in the form of html documents which have been designed to accommodate both human readability and 100% reliable machine parsing. This is accomplished through the use of unique, predictably named form fields that can be automatically parsed by most DOM parsers, and easily digested via regular expressions on lighter weight platforms. Data is passed to the HA7Net in the form of parameters placed in the URL. Since the result pages are human readable, both proof of concept and integration time is reduced as you can effectively interact with 1-Wire devices via the HA7Net using a standard web browser.



Additionally, a complete debugging / logging facility is provided via a built-in telnet server. A multicast listener has also been integrated to provide ease of discovery in dynamically configured networks.

The HA7Net can perform Search and Family search functions making it easy to acquire the unique 64 bit serial numbers of all connected devices. Many sensor devices require that extra power be delivered during periods of data conversions (DS1920 and DS1820 temperature sensors for example). The HA7Net automatically provides the extra current these devices require with a built in smart strong-pull-up. Dallas Semiconductor iButtons which store data in TMEX Touch Memory File format can be read or written with simple commands. The HA7Net will automatically generate and check the CRC16 error checks from Touch Memory File records. For a complete list of the 1-Wire commands supported, please refer to the API reference in the HA7Net user's manual.

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