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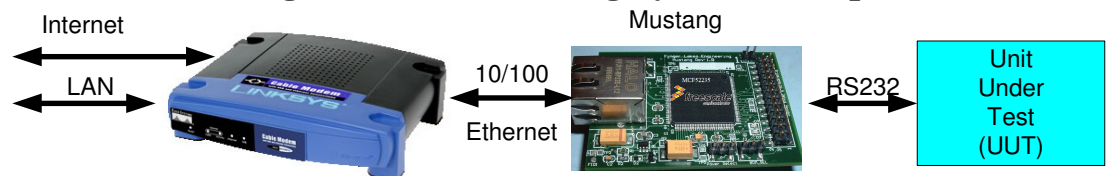
This case study shows a simple method to use the Mustang to implement a remote data monitor capable of Full-Duplex RS232 communication with a "Unit Under Test" (UUT). The UUT may be located in the next room or anywhere in the world. The Mustang and the contents of the Evaluation Kit provide a fast and simple method to allow remote connection/debugging/monitor of any RS232 device anywhere in the world.

RS232 is great interface standard. It's simple to use, it doesn't require any real protocol (certainly not like USB, Firewire, or 802.xxx). Furthermore, you really have to look hard for an embedded processor that doesn't have at least one UART. Typically, engineers and developers use at least one UART for debug/trace data or general system monitoring during the development of a new product. All you need is a small amount of embedded code, a serial cable, and a terminal program such as HyperTerm and you have a nice debug output.

There are a couple problems with RS232 interfaces, however. Most new PC's don't have RS232 ports and RS232 is really a point-to-point link that doesn't work too well for after about 15 feet of signal distance.

A great application for the Mustang is to utilize it's Ethernet↔Serial Bridge capabilities to create a super easy to use and install Ethernet based remote monitoring and debug system. With the Mustang Evaluation Kit, you can connect an RS232 port directly to the Mustang and map the UUT's serial port to a local LAN or to a directly accessible IP address on the Internet.

Mustang Remote Monitoring System Example



In order to create this system, simply follow these steps:

- 1) Connect the RS232 of the UUT to the DB-9 RS232 ports available in the Mustang's Eval Kit
- 2) Connect the Mustang's RJ45 to your Local LAN/Router
- 3) Power up the Mustang with DHCP/StaticIP
- 4) Open a telnet session to the IP : PORT (see application note MA-01) for the UART

That's all there is to do with the Mustang to create a simple Ethernet↔Serial Remote Monitor system. The Evaluation kit provides all the contents you need to implement this (except the router) and create two remotely accessible RS232 ports.

Furthermore, it's possible to open a WAN accessible IP:PORT combination, using the router settings, an expose the Mustang's RS232 ports directly to the Internet.

Using this method, you can now monitor/debug/access an RS232 port anywhere in the world.