Re: DTMF dead?

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- *From*: Charlie Edmondson <edmondson@xxxxxxxx>
- *Date*: Thu, 12 Jul 2007 09:56:15 −0700

Nico Coesel wrote:

> "Joel Kolstad" <JKolstad71HatesSpam@xxxxxxxxx> wrote:
>
> > "Nico Coesel" <nico@xxxxxxxxxxx> wrote in message
> > news:469287fd.52824567@xxxxxxxxxxxxxxxx
> >
> > > That is a very valid argument. But there many reasons
> > > (wiring,
> > > connectors, transformers, code size, etc) why ethernet
> > > doesn't fit in
> > > this application.
> >
> > You can still use a PoE controller IC even if you don't have "real" Ethernet
> > anywhere... they're really just your standard switching converter ICs with a
> > simple "protocol" thrown on top to let the controller "handshake" with the
> > power provider system.
>
> But that still seems like an overkill for the project at hand. There
> is an ethernet connected device acting as a bus master. Using internet
> technology also comes with security issues so SSL or a similar
> encrypted tunneling technique is required. A proprietary bus is not easy to hack or interface (lets say it takes
> more than a laptop with ethereal) and thus requires less security
> measures. SSL alone takes about 90kB of flash and some processing
> power.

Nico,
If you have any choice, go with a standard cable, like a four twisted pair ethernet type, and then use PoE for your power, and then two of the pairs for your communications. DO NOT USE DTMF unless you have a full head of hair, and don't like barbers, as you will pull it all out. If you have that many nodes trying to

communication via DTMF, you will have no easy way of dealing with collisions, noise on the line from all the different termination points, etc. Go with a standard, like 422 or 485, and you can cook up your own protocol to get your data polled and comm'ed reliably. Also, you will quickly find, if you have that many nodes, that you do not want to send all the power from a single main source, but will need to break your network down into smaller groups that all power from relatively local supplies. Adding up even a low power node, say 4 mA, and you get 100 of them, with cable losses, and your start tracing your wire runs using an IR viewer!

And again, drop the DTMF. That is too slow a signaling method, and it really isn't that noise resistant in a multi−drop environment...

Charlie
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