

Re: Switching between RFID antennas – one reader 100 antennas – how?

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- *From:* "John Barrett" <ke5crp1@xxxxxxxxxxx>
 - *Date:* Thu, 22 Mar 2007 03:06:21 GMT
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<yvonne.vanderbilt@xxxxxxxxxxx> wrote in message
<news:1174503030.828602.213300@xx>

Hi,
I would like to connect multiple antennas (more than 100) to a RFID reader and switch between these antennas using a microcontroller. Can anyone point me to the right direction what type of switch can be used for this?

Thanks
Yve

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100 antennas for one reader is getting a little outa hand in my opinion -- you might consider independent readers with 4-8 antennas + a microcontroller (which you need anyway to handle antenna switching), and interconnect with ethernet or multi-drop serial. i'm assuming the antennas will be at least somewhat seperated, and you are creating a huge headache backhauling 100+ coax feeds, not to mention coax losses in the longer runs.

there are schematics and code online for building MCU based RFID readers for just a few dollars in parts, and adding an 8 channel multiplexor to the front end of one of those should be simple enough. RS-485 is easy enough to cope with for the multidrop connection, or get an MCU with on chip ethernet.

Personally -- I would consider some of those 900mhz data radio modules for the backhaul link -- thats the setup we are doing for a warehouse RFID system -- 4 antennas per reader with 900mhz RF backhaul -- 50 readers for a total of 200 antennas covering 20 dock doors, 5 fork lifts, and 25 key transit points throughout the warehouse. We had some real fun setting up so that the readers from one dock door didnt pick up traffic from adjacent

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doors :)