ZN241G & DM2200

Remote Control Mesh

By

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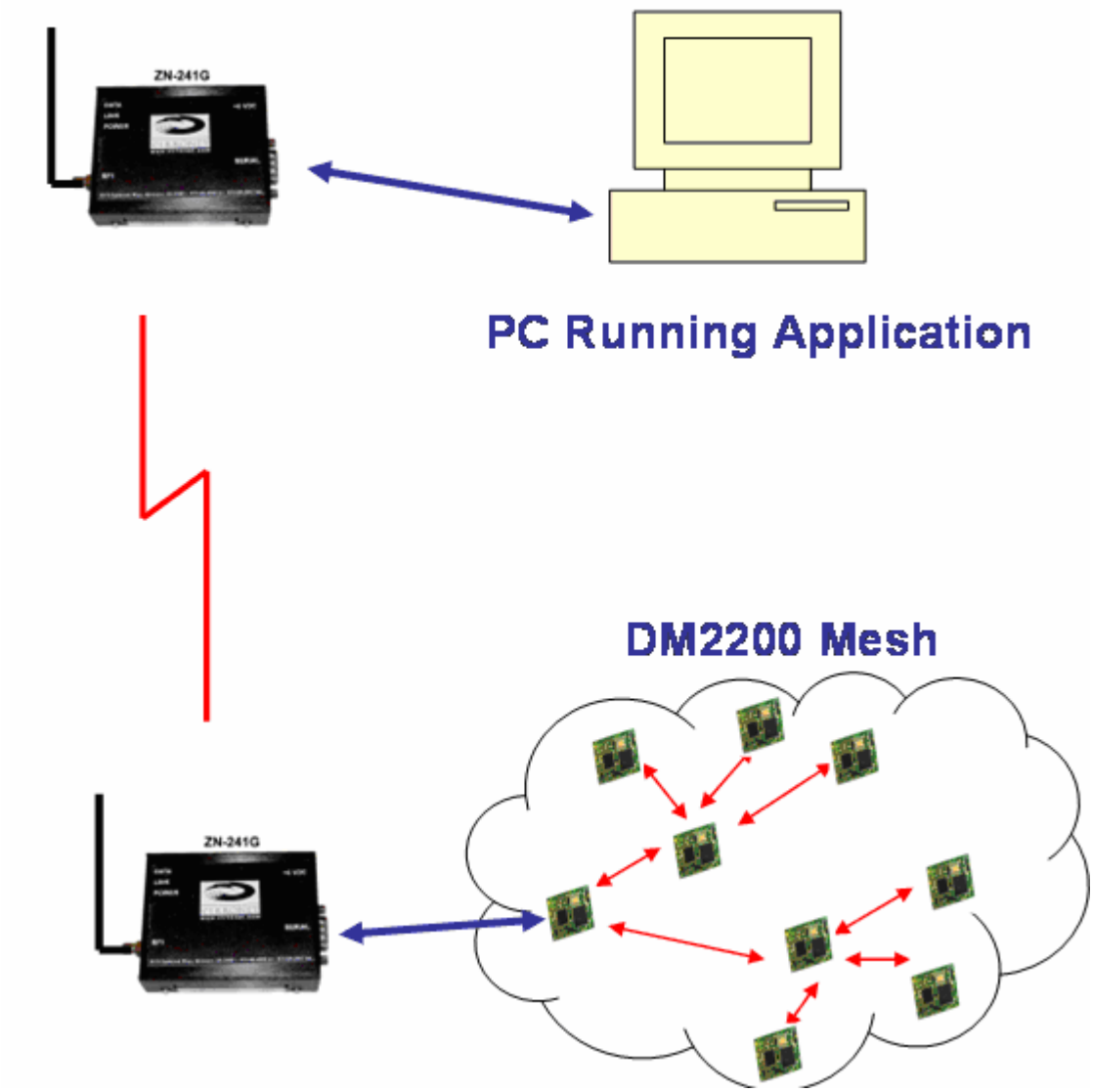
2/19/2007

Scope:

This application will demonstrate the ease of implementing a remote control Mesh network using our ZN241 point to point data radio and our DM2200.

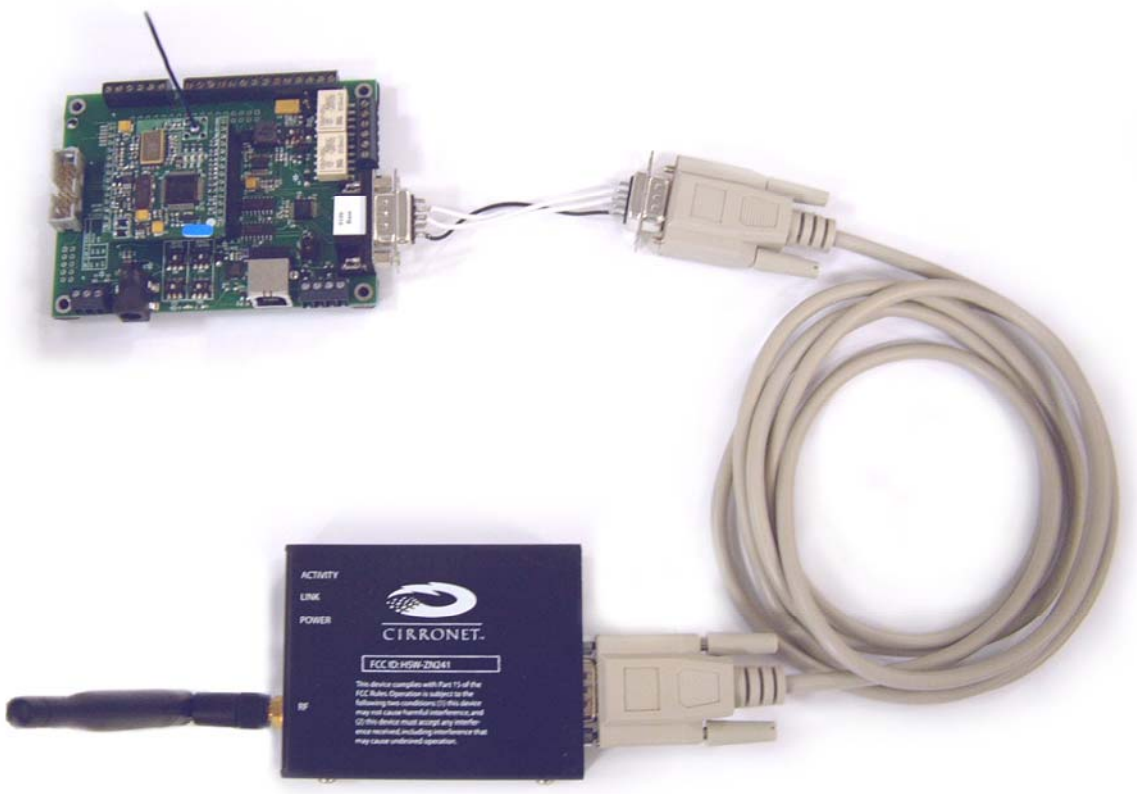
While using the ZN241 you can establish and control a DM2200 Mesh network remotely. The ZN-241G is built on standard 802.15.4 radio technology operating DSSS in the 2.4GHz band which allow side by side operation of the ZN241 and the DM2200. The DM2200 is build around RFM'S 3G ASH technology for low power and small size for long battery life and ease of implementing.

Block Diagram:

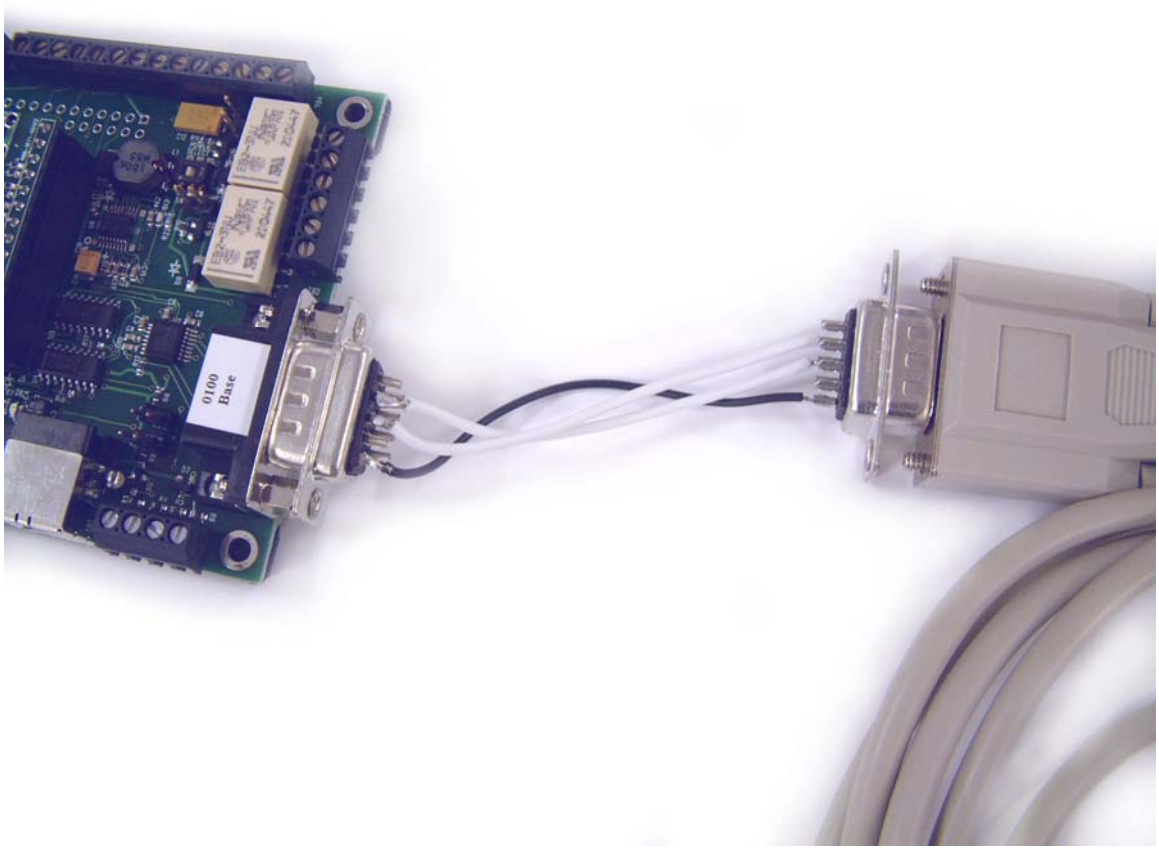


Theory:

The DM2200 is controlled remotely by using the ZN241 data radio. The ZN241 is programmed to operate at 19.2kbs modem using no flow control. The key in using the ZN241 is to set no flow control or you can use a 3 wire adapter (TX,RX and Ground) to the ZN241 on the PC side. Also on the DM2200 side you need to do the same. See photo below.



The above picture shows the complete connection at the remote location. You could use a 3 wire adapter instead of the hand made as soon below.



A closer look shows the Twist of RX and TX data lines, pin 2 to pin 3 and pin3 to pin 2. This connects the TX of the ZN241 to the RX of the DM2200 and the TX of the DM2200 to the RX of the ZN241. The black wire is ground. No flow control is used so no other connections are required.

This make for a very simple range extension to be able to control a Mesh network from as far away as a mile or more outside line of sight.

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2/19/2007