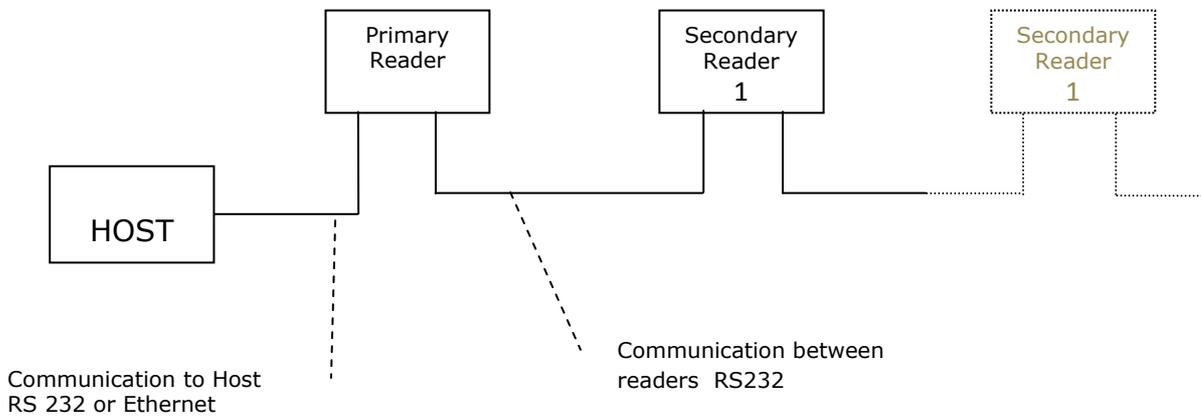# Guidelines on setting up a Daisy-Chain of Microscan readers
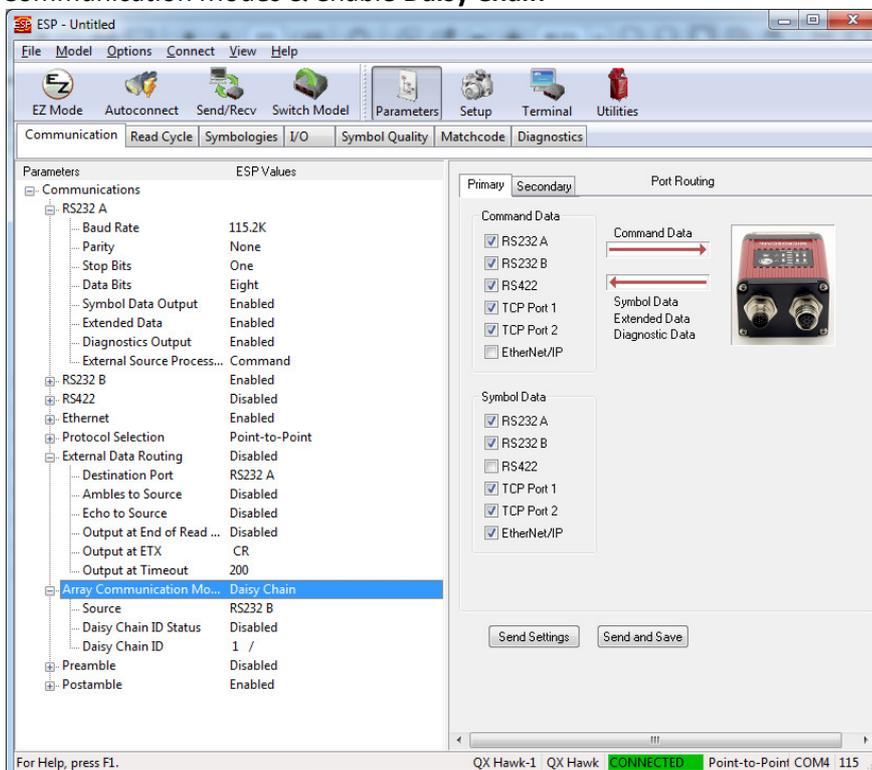
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Setting up Daisy Chain communications between Microscan readers is very simple. Frequently or the readers are identical but it is perfectly possible to mix models for example the Master reader can be a QX Hawk Datamatrix reader and the slave can be a QX 830 laser scanner.

Follow this procedure:

1. Connect using ESP and add to the Parameters/Communication section. Expand the Array Communication Modes & enable **Daisy Chain**

2. If you wish the data to include an identification header then enable **Daisy Chain ID**.
3. Develop the appropriate configuration for the Master reader using Microscan ESP. Load this into the Master scanner & save the file.

4. Set the Trigger Mode (in ESP Parameters/Read Cycle/Trigger/Mode) to **Serial Data**. This triggering mode is a temporary step.

5. Load this configuration into all the readers forming the Data Chain.
   Note this instruction only applies if all the readers are the same model. Clearly if different model readers are used there may be some differences in precise configuration.

6. Connect all the readers together

7. Send the command <K150DAISY> from the Terminal window. This will cause the entire Data Chain to be correctly configured, a reply back will confirm this.

8. Reconfigure the Primary reader to the desired trigger mode.

Principles of operation:
When the Primary reader is triggered (regardless of whether this is hardware or serial) it sends a serial trigger command to the Secondary 1 scanner which will in turn send a serial trigger command to secondary 2 (if fitted) and so on.
The <K150DAISY> command automatically configures the readers to be Serial Trigger mode with successively shorter time out periods to ensure that the reader at the end of the chain timesout first and the Primary reader timesout last ensuring that it has captured any data from the chain before it completes the read cycle.
Note: if the readers are configured in Multi-symbol mode (in Read-Cycle) then it is perfectly possible to read more than 1 code in a read cycle in the normal way.