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# Pepper C1 module getting started guide

Document version: 1.0

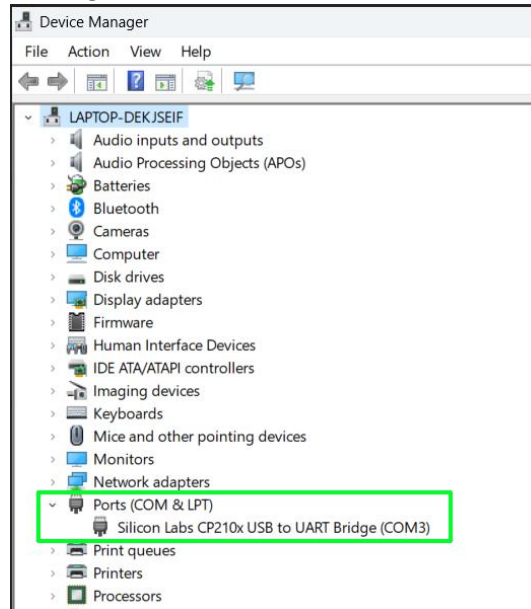
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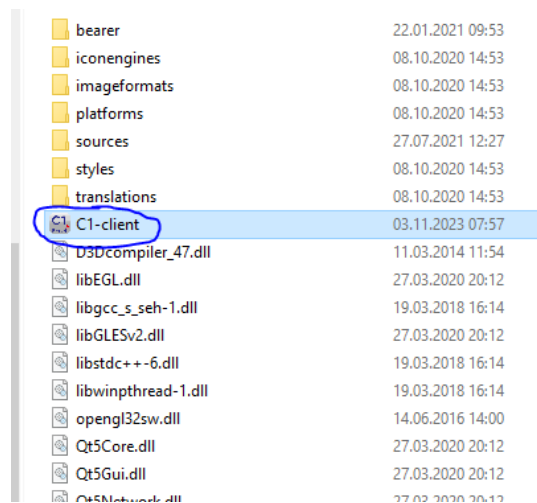
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## 1. The first steps

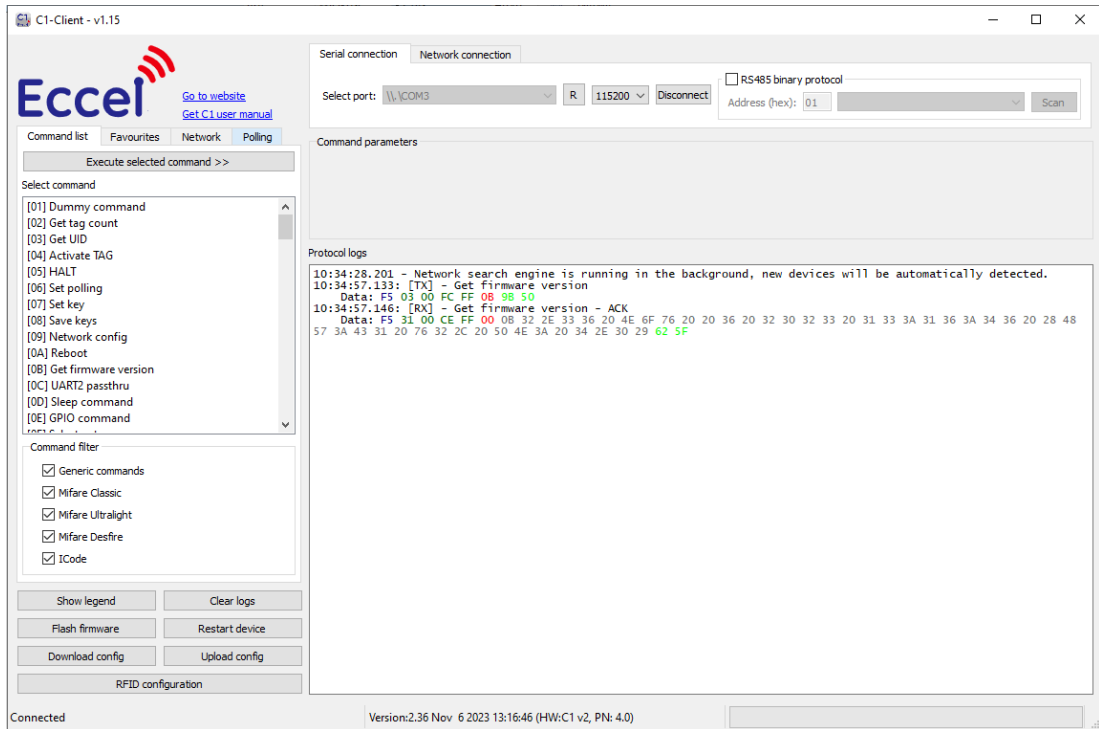
- Put the Pepper C1 module to the C1 module baseboard, and then connect the baseboard to your PC using a micro USB cable. If you don't have the baseboard, you will need a USB-UART converter to connect to UART0 pins (IO1 and IO3) – see section 4.
- Check which COM port is assigned to the board in the Device Manager (in our case COM3)



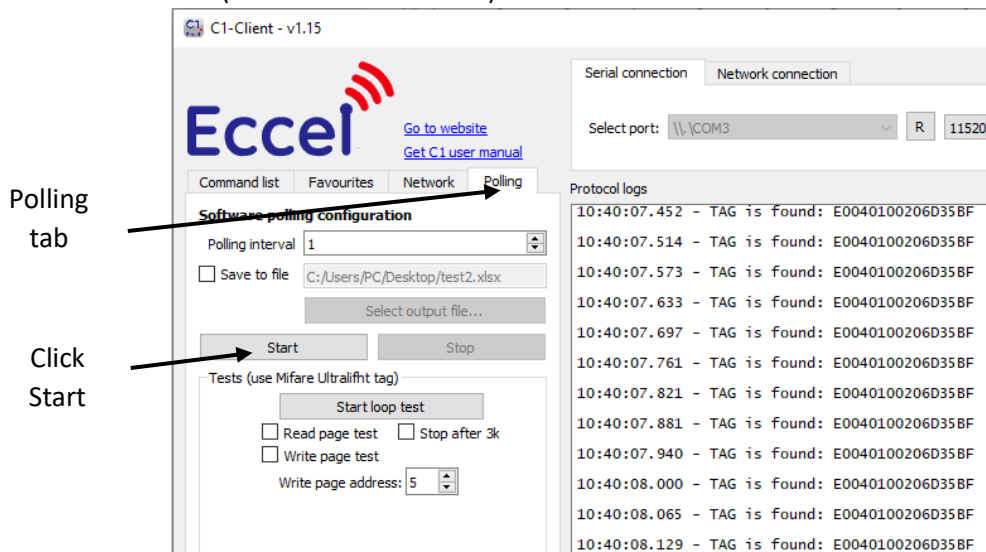
- Download the C1 Client from our website [<click here>](#).
- Unzip the downloaded archive.
- Click on the C1-client.exe to run the application.



- Select the proper COM port and click the “Connect” button. If the COM ports list is empty, please click the “R” button to refresh the list. The C1 Client should get a response from the C1 reader containing version information reported in the logs and on the status bar.



- To test basic RFID functionality with the C1 Client you can change the left-hand TAB to Polling and click Start. (see screenshot below)



- Now the C1 Client will constantly poll the Pepper C1 looking for any tags in range, and if one is found, its UID will be displayed in the log window.

## 2. Executing and testing C1 binary commands

The C1 Client is a demo/test tool to show how to use the binary command protocol with the Pepper C1 family products. Users can execute all commands described in the manual, test the output, check the format frame, checksum etc. If the command requires parameters, it will be displayed in the parameters area. Executing the command can also be done by double-clicking on the command.

Click here to execute the command

Select command from here

Optional parameters

Command logs/output

All parts of the binary command are coloured with different color to make logs easy to analyze:

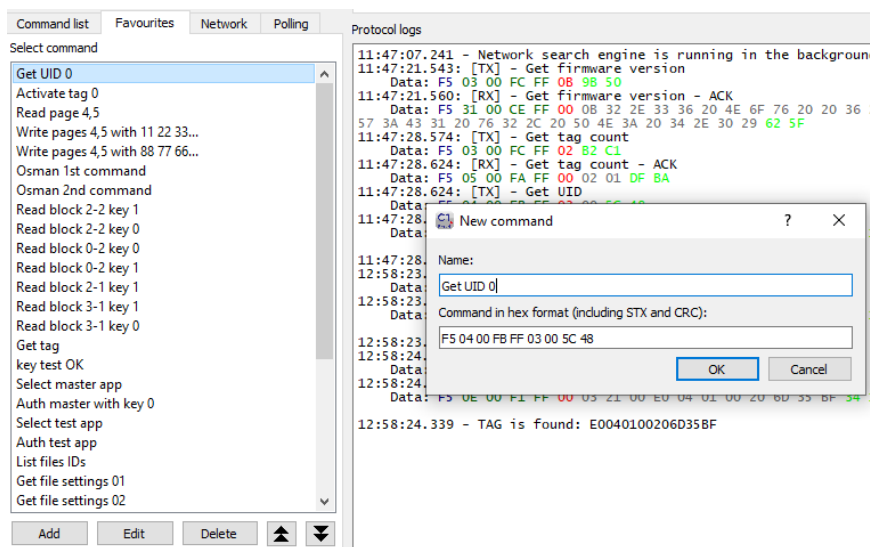
- **STX** - Frame start
- **Length** - Frame length + XOR length (Addr + Cmd + Params)
- **Addr** - Address, optional for RS485
- **Cmd** - Command number
- Params - Optional parameters
- **CRC** - (Addr + Command + Data) checksum

### 3. Using the Favourites tab

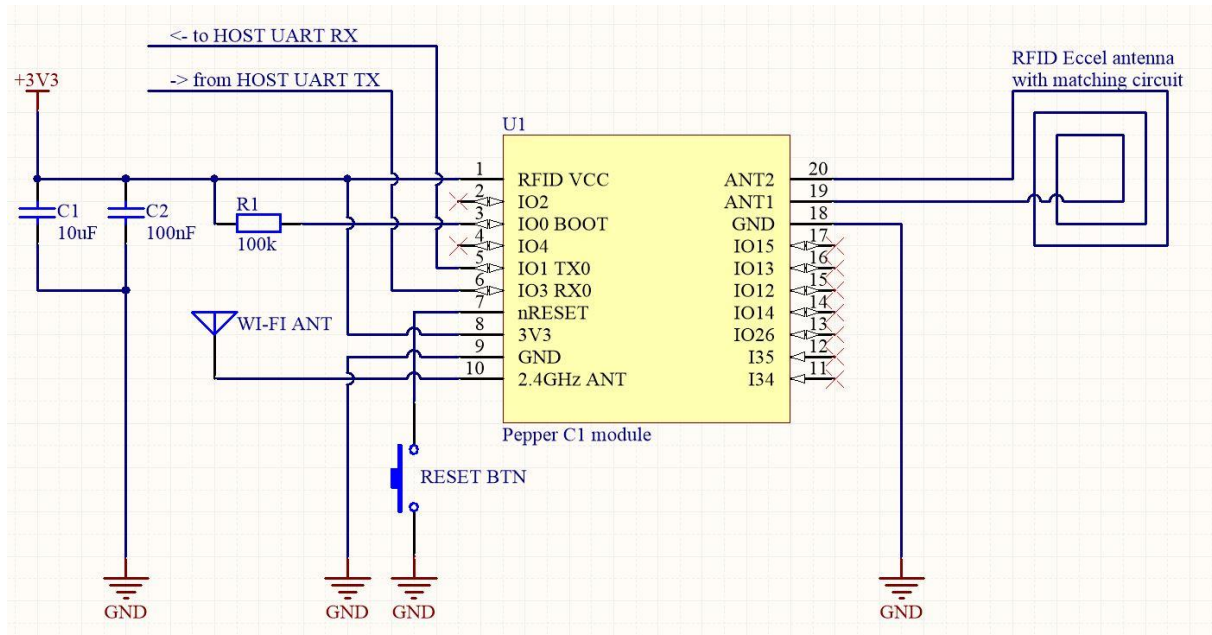
If users are testing or developing something requiring the use of repeatable commands, then the Favourites tab can be used to more easily execute these repeated commands plus parameters as a full binary frame sent to the Pepper C1 device if needed. To do this, the user first has to prepare and execute the command and then the command can be copied from the Protocol logs to the clipboard and then saved as a favourite.

- Copy selected command to the clipboard
- Go to the “Favourites” tab
- Click the “Add” button
- Enter your custom command name
- Paste the command body (full command starting from F5 up to CRC)
- Click the “OK” button

Now, this command can be executed by double clicking from the list.



## 4. Typical connection schematic



The user can also use a USB-UART converter and connect it to the module's pin: IO1 and IO3. Then the procedure is the same – Windows will assign a COM port number to the converter, and the user can connect with it using the C1 Client.

Another USB-UART converter can be used to see the console logs on UART2 (IO2 and IO4).

The default serial configuration for both: UART0 and UART2 is baud 115200, 8 bits, 1 stop, no parity. The default mode is Wi-Fi Access Point which requires a reasonable amount of current at startup so the power source should provide at least 500mA.