

**Design Journal**

**Project : CAN Module**

**Description :**

CAN logging and wireless interface for data acquisition

**Author(s) :**

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**Brainstorm summary**

**2016/06/26**

Brainstorm points and ideas :

* Use UDP allors ease of connection
* Integrate SD card to wifi module for saving local traces
* Use Carambola 2 wifi module as standalone module (without MCU as it is programmable) and use a CAN to serial adaptor

**Requirements**

**2016/06/26**

DAQ module features :

* The module must send udp packets representing the received CAN messages
* The module must also have an SD card to log CAN traces
* The module must be able to transfer 1000 msg/seconds from CAN to Wifi without disrupts
* The module must be configurable from remote device (computer) for:
  + Configuring datarate
  + Start and stop capture
* The interface software on PC side is not part of the wifi module project

**Design Notes**

**2016/07/05**

**Module Wifi**

Surface mount vs Through holes?

* Both XBee® Wi-Fi and XBee-PRO® 900HP are through holes with similar traces
* We can put some headers when it’s through holes, it makes it easier to change the module between XBee® Wi-Fi and XBee-PRO® 900HP
* The best XBee-PRO® SX is just surface mount but XBee-PRO® 900HP seems just fine for our needs
* Surface mount takes less space but we have some through holes pins to test it anyway so it’s not a big deal

Overall the through hole option is the more flexible and easier way to switch between XBee® Wi-Fi and XBee-PRO® 900HP.

**Current consumption**

SD card : 100 mA

Xbee wifi : 100 mA

Can Transceiver : 50mA

**LDO 3.3V**