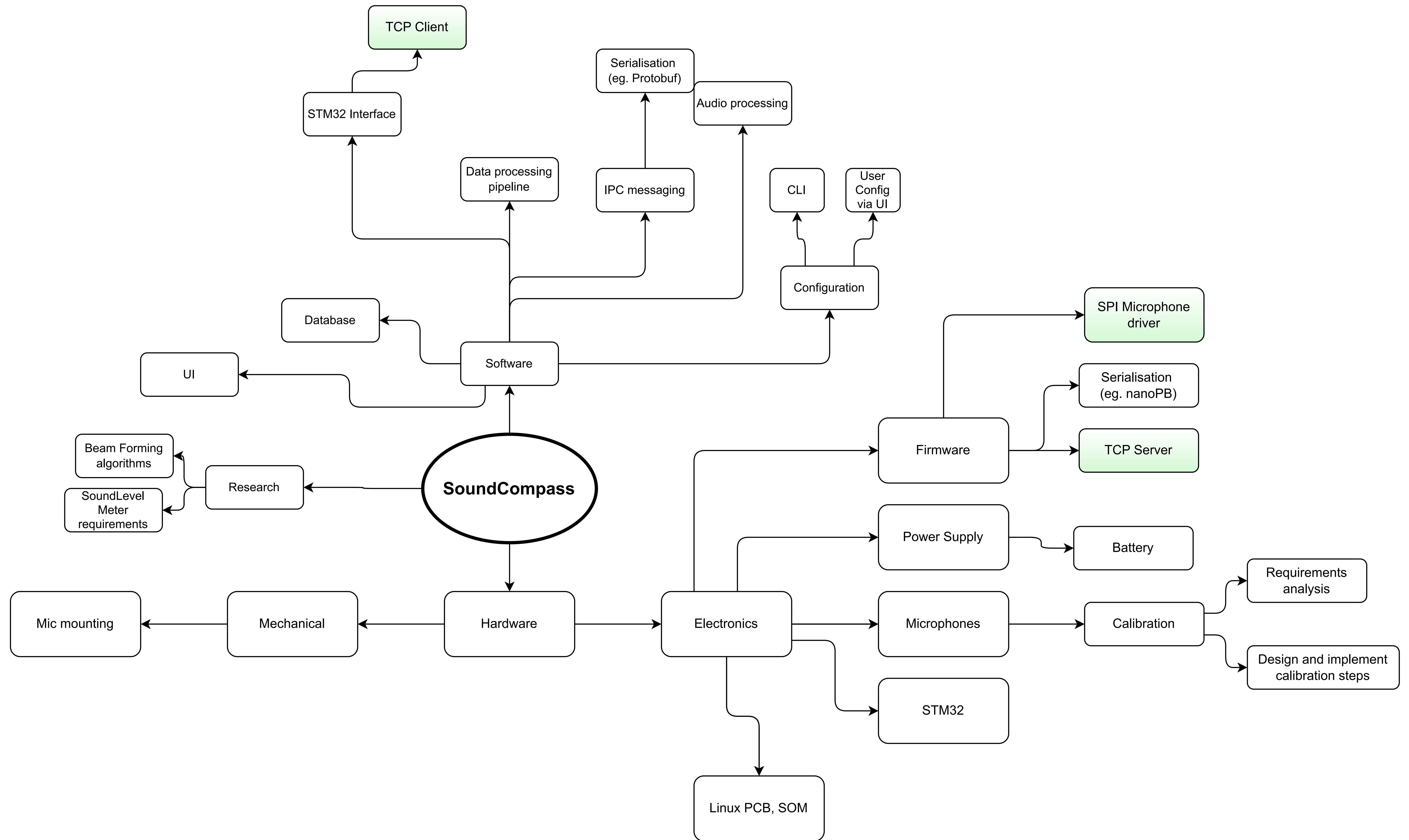
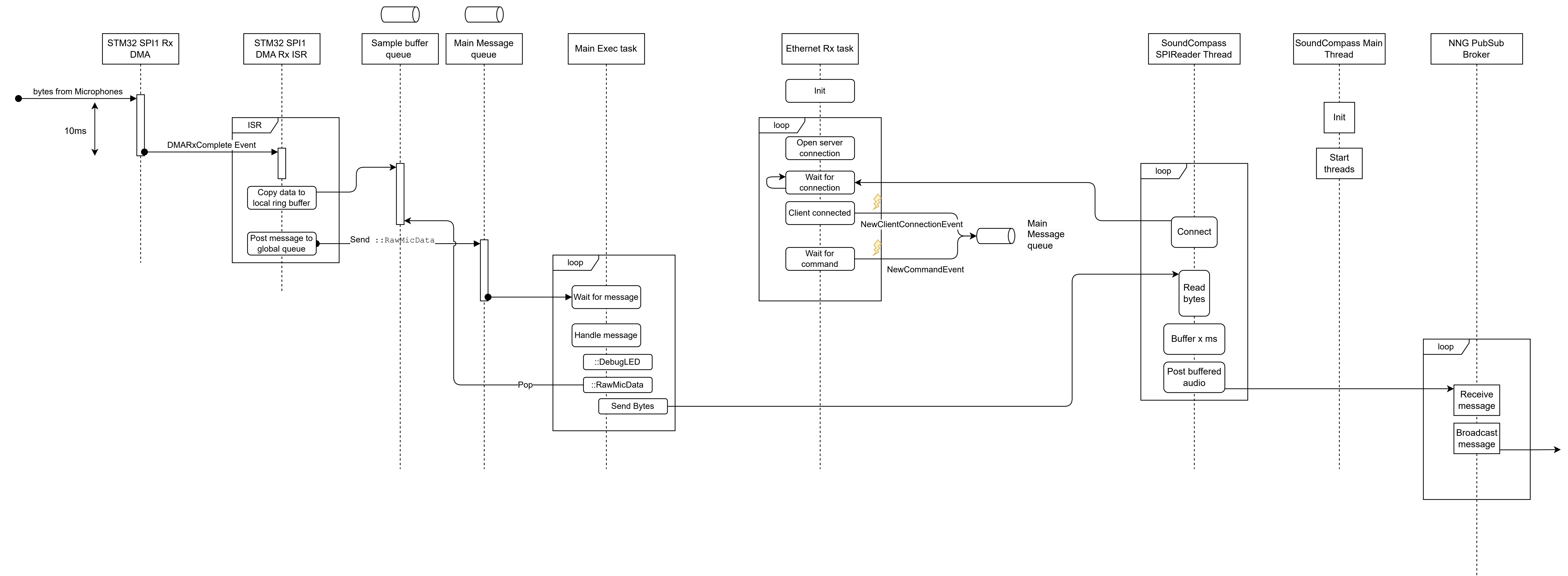
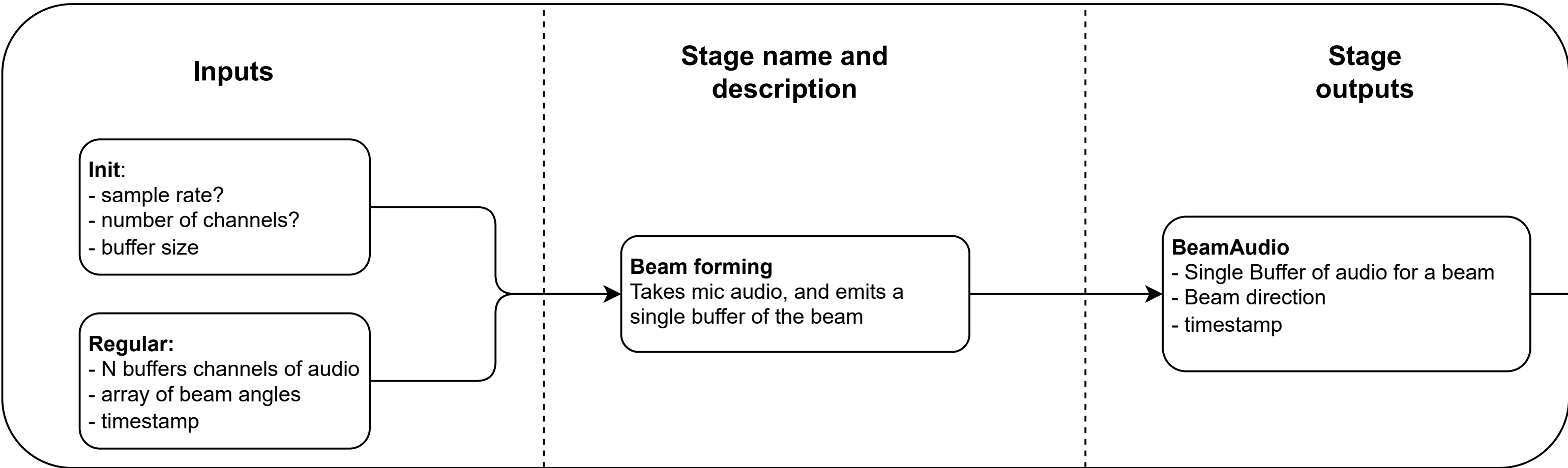


The ADC's SYNC_IN signal **must** be synchronous to the MCLK. If this is not possible, there are 2 options to pursue:

1. Send an asynchronous signal to nSTART, which will emit a synchronous signal out of SYNC_OUT
2. Use a SPI command to start the conversion, which will also emit a synchronous signal from SYNC_OUT

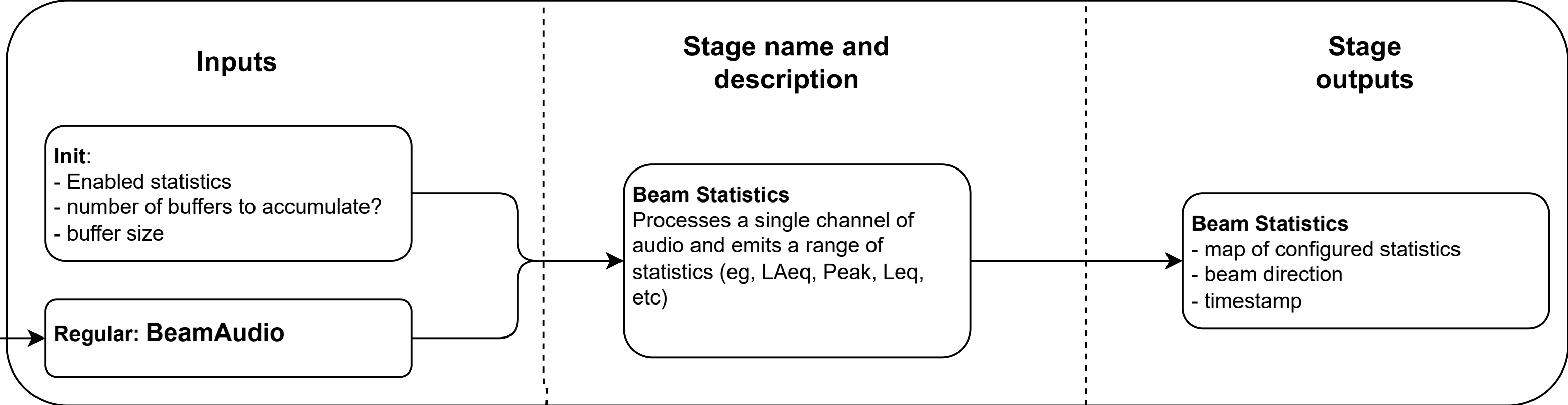
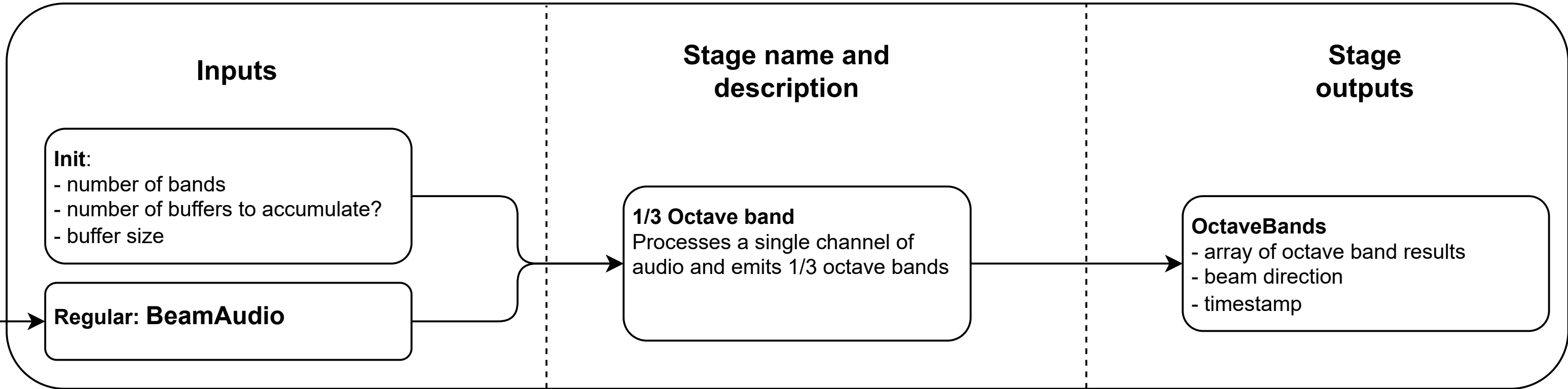






Messaging topology:
Instead of having a central PUB/SUB broker that broadcasts everything to everyone, each entity that can emit or listen for messages will be configured to listen *only* for the messages it cares about, and will broadcast to receivers who have specifically subscribed to the messages it emits.

The downsides are:
- quite a bit more configuraiton. Every entity will need to be configured with it's own identity, and the indentities of those to listen to.



Queue Broker

- Stage Manager
- Creates stages
 - Reads stage config
 - creates named queues if they don't already exist
 - passes a Rx and Tx channel to for the queues to the stage

