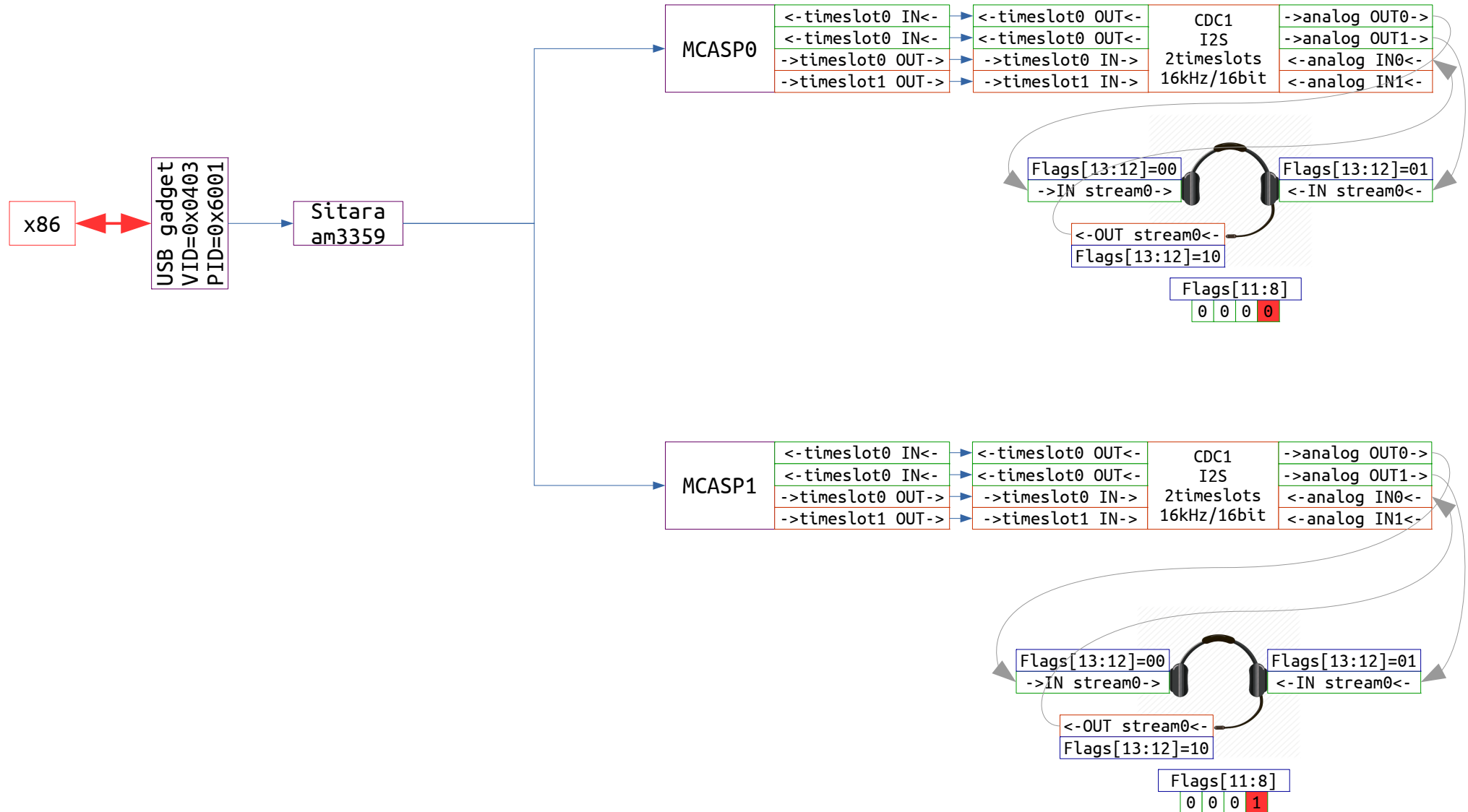LI-GW flags
[15:14] -> Proto. version.
          01 for the new SpeakingDevice.
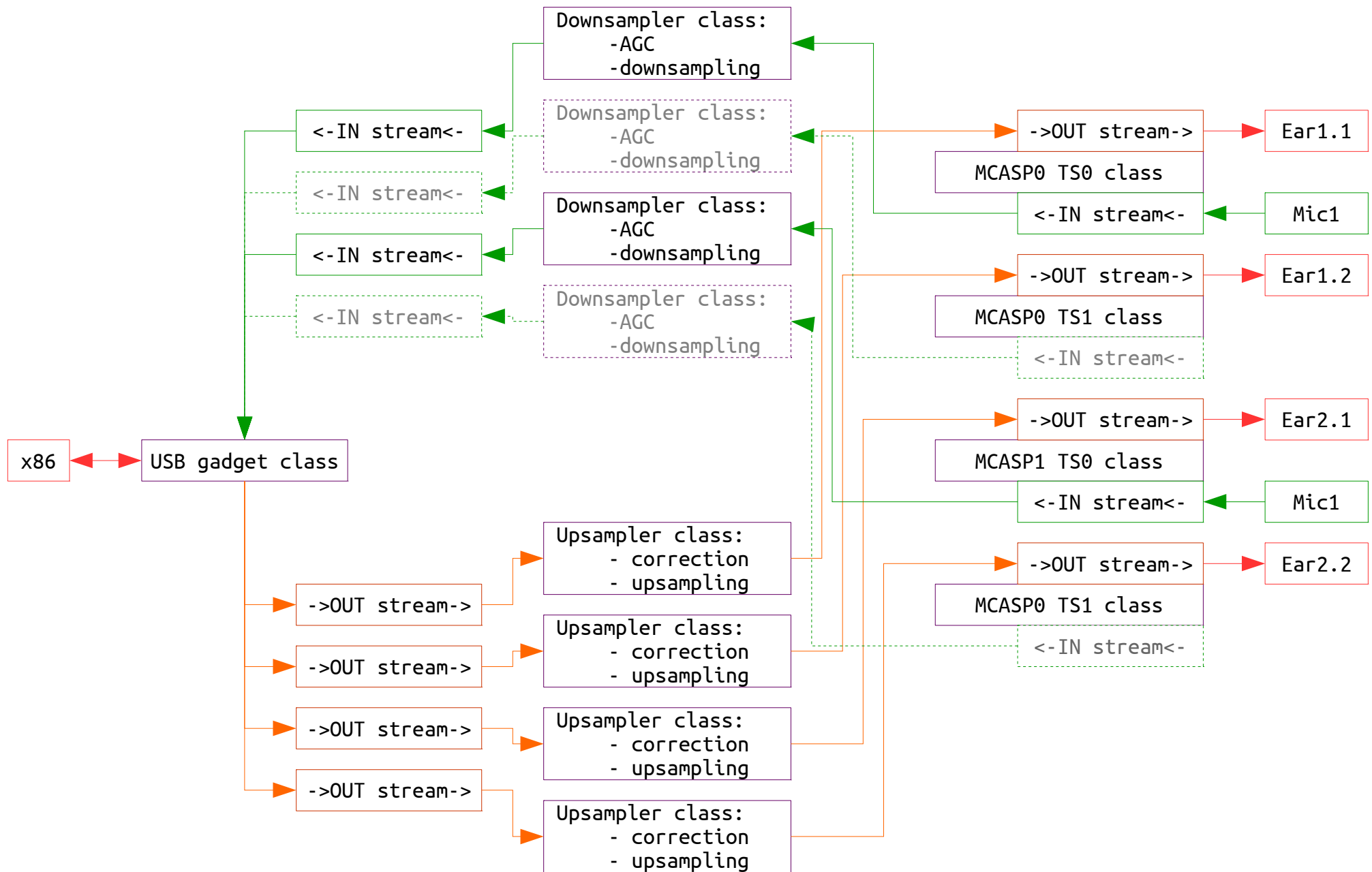[13:12] -> Stream number – see pic.
[11:08] -> Device number – DIP switch.
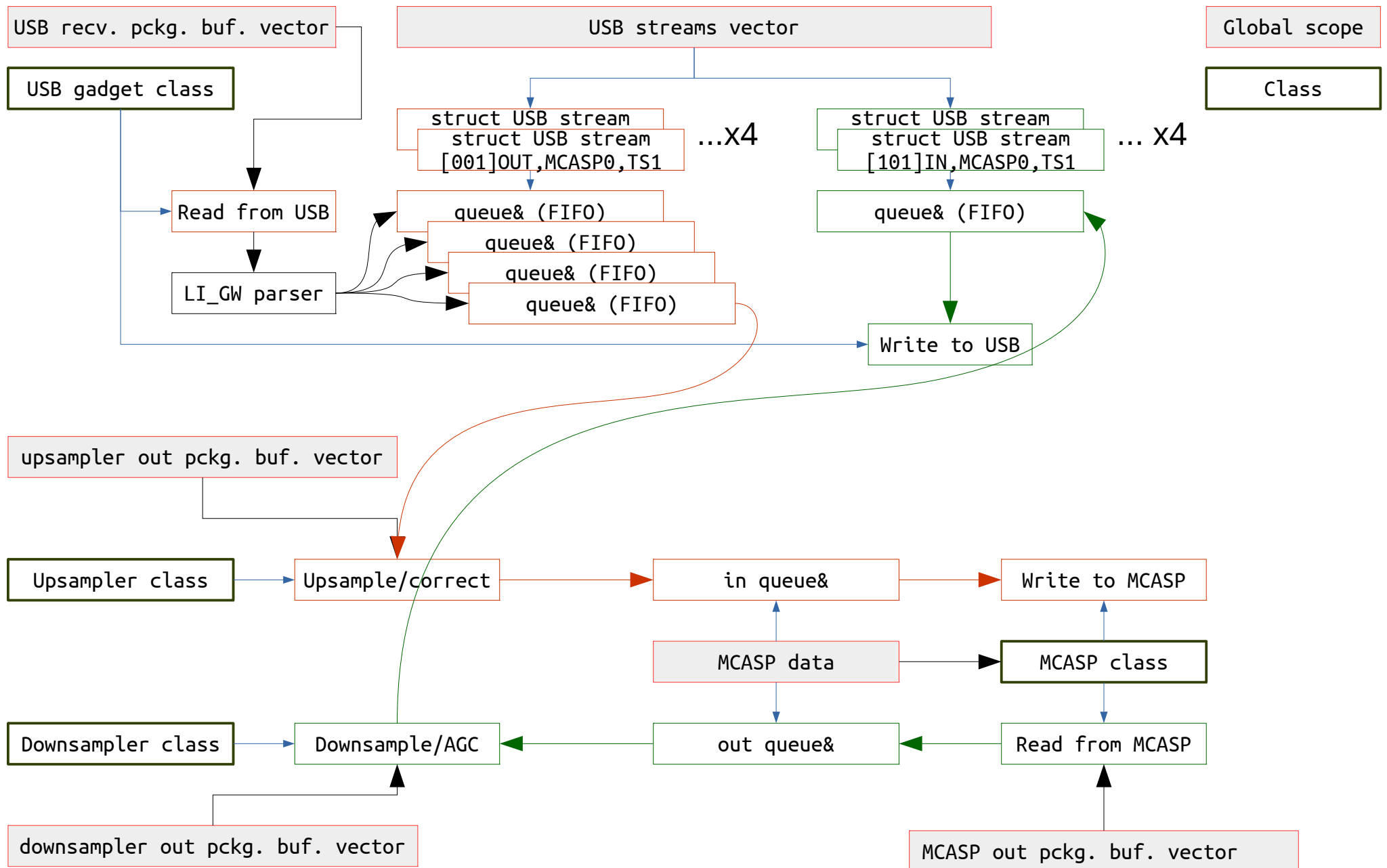[07:00] -> DeviceTypeCode.

```
x86  <-->  USB gadget      Sitara
           VID=0x0403      am3359
           PID=0x6001
```

MCASP0
<-timeslot0 IN<-	<-timeslot0 OUT<-	CDC1	->analog OUT0->
<-timeslot0 IN<-	<-timeslot0 OUT<-	I2S	->analog OUT1->
->timeslot0 OUT->	->timeslot0 IN->	2timeslots	<-analog IN0<-
->timeslot1 OUT->	->timeslot1 IN->	16kHz/16bit	<-analog IN1<-

Flags[13:12]=00   Flags[13:12]=01
->IN stream0->   <-IN stream0<-

<-OUT stream0<-
Flags[13:12]=10

Flags[11:8]
| 0 | 0 | 0 | 0 |

MCASP1
<-timeslot0 IN<-	<-timeslot0 OUT<-	CDC1	->analog OUT0->
<-timeslot0 IN<-	<-timeslot0 OUT<-	I2S	->analog OUT1->
->timeslot0 OUT->	->timeslot0 IN->	2timeslots	<-analog IN0<-
->timeslot1 OUT->	->timeslot1 IN->	16kHz/16bit	<-analog IN1<-

Flags[13:12]=00   Flags[13:12]=01
->IN stream0->   <-IN stream0<-

<-OUT stream0<-
Flags[13:12]=10

Flags[11:8]
| 0 | 0 | 0 | 1 |

Streams in the system

Data exchange

USB recv. pckg. buf. vector

USB gadget class

USB streams vector

Global scope

Class

struct USB stream
struct USB stream
[001]OUT,MCASP0,TS1 ...x4

struct USB stream
struct USB stream
[101]IN,MCASP0,TS1 ... x4

Read from USB

LI_GW parser

queue& (FIFO)
queue& (FIFO)
queue& (FIFO)
queue& (FIFO)

queue& (FIFO)

Write to USB

upsampler out pckg. buf. vector

Upsampler class

Upsample/correct

in queue&

Write to MCASP

MCASP data

MCASP class

Downsampler class

Downsample/AGC

out queue&

Read from MCASP

downsampler out pckg. buf. vector

MCASP out pckg. buf. vector

Synchronization mechanism :
read from USB -> upsample[**xx**] -> write to MCASP**x** TS**x**