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gnuradio.fcd

Provides a source block for the Funcube Dongle hardware.

`gnuradio.fcd.source_c(std::string const device_name) → source_c_sptr`

Funcube Dongle source block.

This class provides a Funcube Dongle source block by wrapping the USB audio interface and the USB HID control interface of the Funcube Dongle into one convenient source block.

The Funcube Dongle needs to have firmware 18f or later for the control interface to work properly. As of early 2011, FCDs still come with firmware 18b. You can use qthid 2.2 (not 3) to upgrade the firmware:

Constructor Specific Documentation:

Return a shared_ptr to a new instance of fcd_source_c.

This is effectively the public constructor. To avoid accidental use of raw pointers, fcd_source_c's constructor is private. fcd_make_source_c is the public interface for creating new instances.

Parameters: device_name –

`source_c_sptr.message_subscribers(source_c_sptr self, swig_int_ptr which_port) → swig_int_ptr`

`source_c_sptr.set_dc_corr(source_c_sptr self, double_dci, double_dcq)`

Set DC offset correction.

Set DC offset correction in the device. Default is 0.0.

`source_c_sptr.set_freq(source_c_sptr self, int freq)`

`set_freq(source_c_sptr self, float freq)`

Set frequency with Hz resolution.

Set the frequency of the Funcube Dongle with 1 Hz resolution applying the frequency correction set by `set_freq_corr()`.

`source_c_sptr.set_freq_corr(source_c_sptr self, int ppm)`

Set new frequency correction.

Version 1.1 FCDs (S/N 810 or later) need a correction of -12 ppm. Earlier FCDs need roughly -120 ppm (default for gr-fcd).

Ref:

`source_c_sptr.set_freq_khz(source_c_sptr self, int freq)`

Set frequency with kHz resolution.

Sets the frequency of the Funcube Dongle with 1 kHz resolution applying the frequency correction set by `set_freq_corr()`.

`source_c_sptr.set_iq_corr(source_c_sptr self, double_gain, double_phase)`

Set IQ phase and gain balance.

Set IQ phase and gain balance in the device. The default values are 0.0 for phase and 1.0 for gain.

`source_c_sptr.set_lna_gain(source_c_sptr self, float gain)`

Set LNA gain.

Set the LNA gain in the FCD. Valid range is -5 to

By default the LNA gain is set to 20 dB and this is a good value for most cases. In noisy areas you may try to reduce the gain.

```
source_c_sptr.set_mixer_gain(source_c_sptr self, float gain)
```

Set mixer gain.

Set the mixer gain in the FCD. Valid values are +4 and +12 dB.

By default the mixer gain is set to +12 dB and this is a good value for most cases. In noisy areas you may try to reduce the gain.