## PreFilter Categorizer RecBuf - freqSpecPtr: int\* - curSample : int\* - mem0 : fract16\* - lpCoef : int[][] - freqSpecSize: int - mem1 : fract16\* - tpr: int - lpMem : int[] - size : int - hpCoef : int[][] - currActiveBuffer : int - hpMem : int[] - index : int - dsSample: uint - analyzePtr : Analyzer\* - broadFreqHigh: uint - dsCount : uint + RecBuf(int) - recButPtr : RecBuf\* + storeData(fract16): void + init(int, int, int, int\*): void - initLP(int freq) : void - initHP(int freq): void - initDown(int factor) : void + sampleRdy(): void - lowpass(int): int **Analyzer** - downsample(): bool - checkBC1(): bool - highpass(int): int - recBufPtr : RecBuf\* - checkBC2(): bool - catPtr : Categorizer\* - freqSpec: int[] - tpr: int - smoothMem: int[] Statistician - splThresh: int - startIndex : uint - FIFO: uint8[] - recSize: uint + analyze(uint, uint): void - calcSPL(): int - calcFFT(): void - calcTPR(): void **TwoWireCom** - gain2dB(): void - smooth(): void - bc: int

- statPtr: Statistician\*
- broadFreqLow: uint
- dBroadThreshHighBC1: uint8
- dBroadThreshLowBC2: uint8
- dBroadThreshHighBC2: uint8
- firstPeakFreqBC1: uint
- secondPeakFregBC1: uint
- freqMargin: uint
- + Categorizer(Statistician\*, uint, uint, uint8, uint8, uint8): void
- + categorize(int\*, uint , int) : void

- twcPtr : TwoWireCom\*
- + calcSignificans(uint8): void

+ send(int): void