

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----|------------|-------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Bit number | | | | 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ID | | | | B A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reset 0x00000000 | | | | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ID | R/W | Field | Value ID | Value | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | RW | OPERATION | | | Mono or stereo operation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Stereo | 0 | Sample and store one pair (left + right) of 16-bit samples per RAM word R=[31:16]; L=[15:0] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Mono | 1 | Sample and store two successive left samples (16 bits each) per RAM word L1=[31:16]; L0=[15:0] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | RW | EDGE | | | Defines on which PDM_CLK edge left (or mono) is sampled. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | The right channel is sampled on the opposite edge of the left channel. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | When EDGE is set to 1 (LeftRising) and stereo input is used the right and left channels are swapped relative to EDGE set to 0 (LeftFalling). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | LeftFalling | 1 | Left (or mono) is sampled on falling edge of PDM_CLK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | LeftRising | 0 | Left (or mono) is sampled on rising edge of PDM_CLK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

8.14.7.19 GAINL

Address offset: 0x518

Left output gain adjustment

| Bit number | | | 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----|-------------|---|----------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ID | | | A A A A A A A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reset 0x00000028 | | | 0 1 0 1 0 0 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ID | R/W | Field | Value ID | Value | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | RW | GAINL | | | Left output gain adjustment, in 0.5 dB steps, around the default module gain (see electrical parameters) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x00 -20 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x01 -19.5 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | (...) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x27 -0.5 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x28 0 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x29 +0.5 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | (...) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x4F +19.5 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 0x50 +20 dB gain adjust | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | MinGain | 0x00 | -20 dB gain adjustment (minimum) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | DefaultGain | 0x28 | 0 dB gain adjustment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | MaxGain | 0x50 | +20 dB gain adjustment (maximum) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

8.14.7.20 GAINR

Address offset: 0x51C

Right output gain adjustment