

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																																	
Reset 0x00000000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
ID	R/W	Field	Value ID	Value	Description																												
A	RW	RFU10			Reserved for future use. Shall be 0.																												
B	RW	CASCADE			Cascade as defined by the b3 of SEL_RES response in the NFC Forum, NFC Digital Protocol Technical Specification (controlled by hardware, shall be 0)																												
C	RW	RFU43			Reserved for future use. Shall be 0.																												
D	RW	PROTOCOL			Protocol as defined by the b7:b6 of SEL_RES response in the NFC Forum, NFC Digital Protocol Technical Specification																												
E	RW	RFU7			Reserved for future use. Shall be 0.																												

8.13.14.74 PADCONFIG

Address offset: 0x6D4

NFC pad configuration

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																																	
Reset 0x00000001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
ID	R/W	Field	Value ID	Value	Description																												
A	RW	ENABLE			Enable NFC pads																												
					See GPIO port mapping section to find NFC pads.																												
		Disabled	0		NFC pads are used as GPIO pins																												
		Enabled	1		The NFC pads are configured as NFC antenna pins																												
					Also enables the protection for NFC pads.																												

8.14 PDM — Pulse density modulation interface

The pulse density modulation (PDM) module enables input of pulse density modulated signals from external audio frontends, for example, digital microphones. The PDM module generates the PDM clock and supports single-channel or dual-channel (left and right) data input. Data is transferred directly to RAM buffers using EasyDMA.

The main features of PDM are:

- Up to two PDM microphones configured as a left/right pair using the same data input
- 8 kHz, 16 kHz, 32 kHz, or 48k Hz output sample rate, 16-bit samples
- Supports digital microphone clocks at 768 kHz, 800 kHz, 1.024 MHz, 1.536 MHz, 2.048 MHz, 3.072 MHz, 1.28 MHz, and 2.56 MHz
- Selectable ratio of 32, 48, 50, 64, 80, 96, 100, or 128 between PDM_CLK and output sample rate
- HW decimation filters
- EasyDMA support for sample buffering

The PDM module illustrated below is interfacing up to two digital microphones with the PDM interface. EasyDMA is implemented to relieve the real-time requirements associated with controlling of the PDM slave from a low priority CPU execution context. It also includes all the necessary digital filter elements to produce pulse code modulation (PCM) samples. The PDM module allows continuous audio streaming.