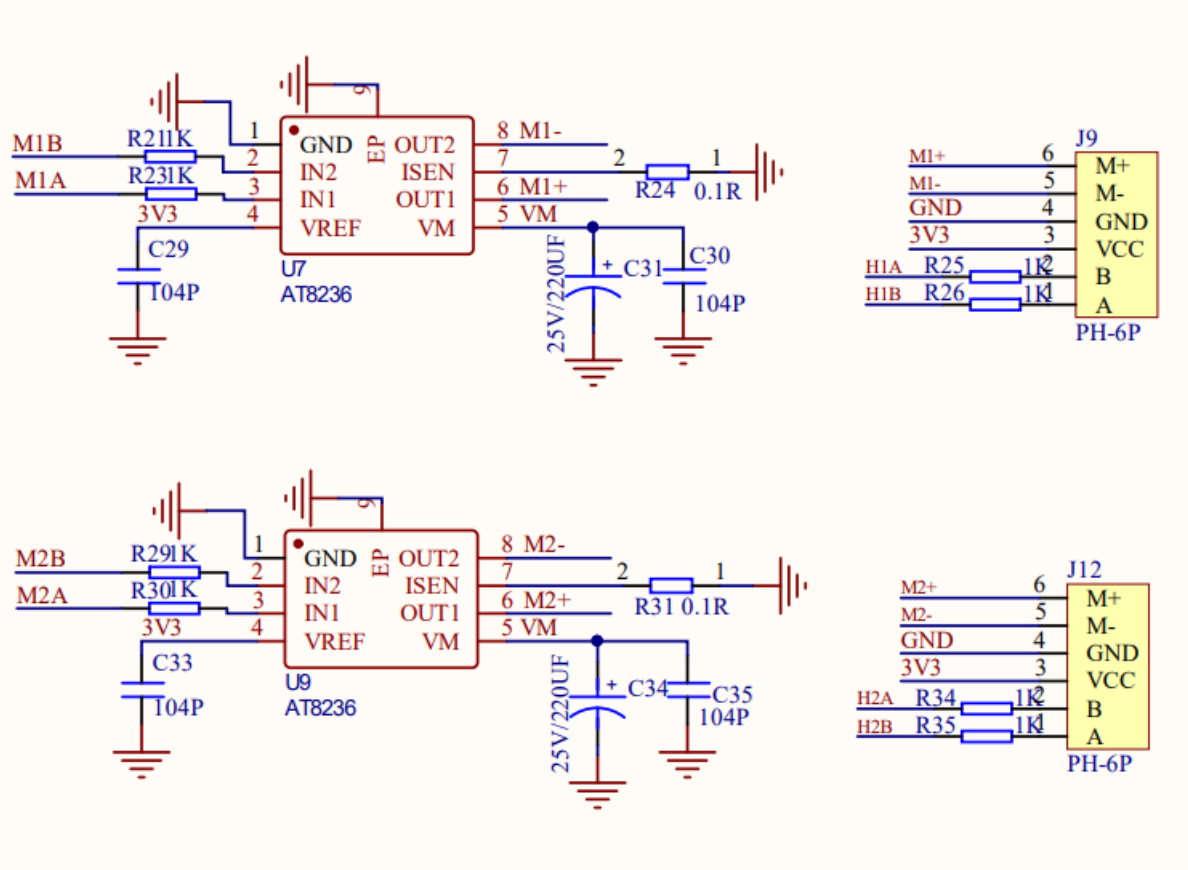
Motor drive circuit design

The development board integrates two AT8236 single-channel brushed DC motor driver chips for driving two motors.

Motor drive circuit

The AT8236 chip is a single-channel H-bridge motor driver that supports a wide voltage input of 5.5-36V; internal protection functions include over-current protection, short-circuit protection, under-voltage lockout and over-temperature protection.



H-bridge control

Input pins IN1 and IN2 control the output state of the H-bridge. The following table shows the logical relationship between the input and output:

IN1	IN2	OUT1	OUT2	Function
0	0	Z	Z	Coast, Sleep
1	0	H	L	Forward
0	1	L	H	Reverse

IN1	IN2	OUT1	OUT2	Function
1	1	L	L	Brake

When using PWM control to achieve speed regulation, the H-bridge can operate in two different states: fast decay or slow decay.

IN1	IN2	Function
PWM	0	Forward PWM, fast decay
1	PWM	Forward PWM, slow decay
0	PWM	Reverse PWM, fast decay
PWM	1	Reverse PWM, slow decay