

## Register Map

Memory Address(DEC)	HEX	Register Name	Read/Write	Non-Volatile	Auto reboot after change	Factory Default	min	max	Description
1	0x01	ESTATUS	R	-	-	0x00			Encoder status Bit [7-1]: Unimplemented Bit [0]: 0b0: Not detected reference(Z phase), 0b1: Reference was detected. When reference is disabled, always return 0b0.
2	0x02	CRST	W	-	-	-			Counter Reset If 0xFF is written to the register, reset following values. - Counter value - Reference value - Reference detect flag.
3 - 6	0x03 - 0x06	CVAL	R	-	-	0	-2147483648(int32) 0(uint32)	2147483647(int32) 4294967295(uint32)	Current count value of Encoder *1. The data type depends on the ECONF[5]. This value is updated every 1ms.
7 - 10	0x07 - 0x0A	RCVAL	R	-	-	0	-2147483648(int32) 0(uint32)	2147483647(int32) 4294967295(uint32)	Count value when reference(Z phase) was last seen *1. If reference is disabled, always return 0. The data type depends on the ECONF[5].
11	0x0B	ECONF	R/W	○	○	0x00			Encoder configuration Bit [7:6]: Unimplemented Bit [5]: Data type. 0b0: int32(Counter default: 0), 0b1: uint32(Counter default: 2147483647) Bit [4]: Count direction. 0b0: Up, 0b1: Down Bit [3:2]: Multiply. 0b00: x4, 0b01: x2_A, 0b02: x2_B Bit [1:0]: Phase type. 0b00: (A,/A,B,/B,Z,/Z), 0b01: (A,B,Z), 0b10: (A,/A,B,/B), 0b11: (A,B)
12	0x0C	CCONF	R/W	○	○	0x00			Communication configuration Bit [7:1]: Unimplemented Bit [0]: USB auto transmission mode. 0b0: enable, 0b1: disable
13	0x0D	VMAJOR	R	-	-	[1,255]			Firmware major version
14	0x0E	VMINOR	R	-	-	[0,255]			Firmware minor version
15	0x0F	VPATCH	R	-	-	[0,255]			Firmware patch version
16	0x10	SYSRBT	W	-	○	-			System Reboot. If 0xFF is written to the register, reboot system.
17	0x11	I2CADDR	R/W	○	○	0x11	0x11	0x14	I2C device address. Choices: [0x11, 0x12, 0x13, 0x14]
18	0x12	INIT	W	-	○	-			System initialization. If 0xFF is written to the register, initialize all register values to factory default value then reboot. CAUTION: The I2C device address also returns to the factory default value, so next time you need to operate with the default I2C address.

\*1. Byte order is little endian.