



CardKB Mini Keyboard Unit (MEGA328P)

SKU: U035

CardKB is a unit can implement a full-featured QWERTY keyboard. Consider that you want make some cool stuff that require keyboard typing and interaction, but M5 core it self just have 3 buttons, here comes the flexible and powerful CardKB unit.

It also can achieve button combination(Sym+Key, Shift+Key, Fn+Key) and output richer key value. This unit communicates with M5Core through GROVE A port(IIC interface). Address is 0x5F.

Product Features

- Full-function keyboard, multi-key combination
- Program Platform: Arduino, UIFlow(Blockly, Python)

Kit includes

- 1x CardKB unit
- 1x GROVE Cable

Application

- Keyboard peripherals for M5Stack Core

Example

1. Arduino IDE

To get the code, please click [here](#).

```
#include <Wire.h>
#include <M5Stack.h>

#define CARDKB_ADDR 0x5F

void setup()
{
  M5.begin();
  Serial.begin(115200);
  Wire.begin();
  pinMode(5, INPUT);
  digitalWrite(5, HIGH);
  M5.Lcd.fillScreen(BLACK);
  M5.Lcd.setCursor(1, 10);
  M5.Lcd.setTextColor(YELLOW);
  M5.Lcd.setTextSize(2);
  M5.Lcd.printf("IIC Address: 0x5F\n");
  M5.Lcd.printf(">>");
}
void loop()
{
  Wire.requestFrom(CARDKB_ADDR, 1);
  while (Wire.available())
  {
    char c = Wire.read(); // receive a byte as characterif
    if (c != 0)
    {
      M5.Lcd.printf("%c", c);
      Serial.println(c, HEX);
      // M5.Speaker.beep();
    }
  }
}
```



2. UIFlow

To get the complete code, please click [here](#).

The image shows the UIFlow IDE interface. On the left, there is a visual editor for a device named 'CarKB Example' with two text input fields labeled 'Key value: Text' and 'Key Name: Text'. The middle section is a component palette with categories like UI, Hardware, Units, Modules, Variables, Math, Loops, Logic, and Graphic. The 'CardKB' unit is selected. On the right, the block-based code editor shows a 'Setup' block and a 'Loop' block. The 'Loop' block contains two 'show' blocks for 'label4' and 'label5', each connected to a 'Get key' and 'Get string' block respectively, followed by a 'Wait 0.1 s' block.

1. Button combination description:

- **Single button pressed**, keyboard will output the first key value(letter button will output lower case form). E.g if "Q" was pressed, keyboard will output "q"(lower case).
- **Sym+key**, keyboard will output the second key value. E.g if "Sym" was single pressed, then "Q" was pressed, the keyboard will output "{". If "Sym" was double clicked, then the keyboard will lock this function, all key pressed will output it's second key value.
- **Shift+key**, if a letter button was pressed, it'll output upper case form. E.g if "Shift" was single pressed, then "Q" was pressed, the keyboard will output "Q". If "Shift" was double clicked, then the keyboard will lock this function, all letter key pressed will output it's upper case form.
- **Fn+key(custom function key combination)**, keyboard will output the third key value. You can custom what function the key pressed corresponds.

Line number	Button combination														
Line 1	Key	ESC	1	2	3	4	5	6	7	8	9	0	Back	Up	
	Value	0x1B	0x31	0x32	0x33	0x34	0x35	0x36	0x37	0x38	0x39	0x30	0x08	0xB5	
Line 2	Key	TAB	q	w	e	r	t	y	u	i	o	p	Fn	Down	
	Value	0x09	0x71	0x77	0x65	0x72	0x74	0x79	0x75	0x69	0x6F	0x70	NULL	0xB6	
Line 3	Key		Shift	a	s	d	f	g	h	j	k	l	Enter	Left	
	Value		NULL	0x61	0x73	0x64	0x66	0x67	0x68	0x6A	0x6B	0x6C	0x0D	0xB4	
Line 4	Key		Sym	z	x	c	v	b	n	m	,	.	SPACE	Right	
	Value		NULL	0x7A	0x78	0x63	0x76	0x62	0x6E	0x6D	0x2C	0x2E	0x20	0xB7	
Line number	Button combination														
Line 1	Sym+Key	ESC	!	@	#	\$	%	^	&	*	()	Back	Up	
	Value	0x1B	0x21	0x40	0x23	0x24	0x25	0x5E	0x26	0x2A	0x28	0x29	0x08	0xB5	
Line 2	Sym+Key	TAB	{	}	[]	/	\		-	'	"	Fn	Down	
	Value	0x09	0x7B	0x7D	0x5B	0x5D	0x2F	0x5C	0x7C	0x7E	0x27	0x22	NULL	0xB6	
Line 3	Sym+Key		Shift	;	:	`	+	-	_	=	?	NULL	Enter	Left	
	Value		NULL	0x3B	0x3A	0x60	0x2B	0x2D	0x5F	0x3D	0x3F	NULL	0x0D	0xB4	
Line 4	Sym+Key		Sym	NULL	NULL	NULL	NULL	NULL	NULL	NULL	<	>	SPACE	Right	
	Value		NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	0x3C	0x3E	0x20	0xB7	
Line number	Button combination														
Line 1	Shift+Key	ESC	1	2	3	4	5	6	7	8	9	0	Del	Up	
	Value	0x1B	0x31	0x32	0x33	0x34	0x35	0x36	0x37	0x38	0x39	0x30	0x7F	0xB5	
Line 2	Shift+Key	TAB	Q	W	E	R	T	Y	U	I	O	P	Fn	Down	
	Value	0x09	0x51	0x57	0x45	0x52	0x54	0x59	0x55	0x49	0x4F	0x50	NULL	0xB6	
Line 3	Shift+Key		Shift	A	S	D	F	G	H	J	K	L	Enter	Left	
	Value		NULL	0x41	0x53	0x44	0x46	0x47	0x48	0x4A	0x4B	0x4C	0x0D	0xB4	
Line 4	Shift+Key		Sym	Z	X	C	V	B	N	M	,	.	SPACE	Right	
	Value		NULL	0x5A	0x58	0x43	0x56	0x42	0x4E	0x4D	0x2C	0x2E	0x20	0xB7	
Line number	Button combination														
Line 1	Fn+Key	ESC	1	2	3	4	5	6	7	8	9	0	Back	Up	
	Value	0x80	0x81	0x82	0x83	0x84	0x85	0x86	0x87	0x88	0x89	0x8A	0x8B	0x99	
Line 2	Fn+Key	TAB	Q	W	E	R	T	Y	U	I	O	P	Fn	Down	
	Value	0x8C	0x8D	0x8E	0x8F	0x90	0x91	0x92	0x93	0x94	0x95	0x96	NULL	0xA4	
Line 3	Fn+Key		Shift	A	S	D	F	G	H	J	K	L	Enter	Left	
	Value		NULL	0x9A	0x9B	0x9C	0x9D	0x9E	0x9F	0xA0	0xA1	0xA2	0xA3	0x98	
Line 4	Fn+Key		Sym	Z	X	C	V	B	N	M	,	.	SPACE	Right	
	Value		NULL	0xA6	0xA7	0xA8	0xA9	0xAA	0xAB	0xAC	0xAD	0xAE	0xAF	0xA5	

PinMap

M5Core(GROVE A)	GPIO22	GPIO21	5V	GND
CardKB	SCL	SDA	5V	GND