

Hardware Features and Specifications

Of ButterFly M2

Product Name	BUTTERFLY M2	Date	9/30/2018
Produced By	KEICAN R&D Team	Department	Electronics

Item	Item Description	Availability	Quantity	Type
MCU	ATmega8A: <ul style="list-style-type: none"> • A low-power 8-bit microcontroller running at 16 MHz • 8Kbytes of In-System Self-Programmable Flash program memory • 5012Bytes EEPROM • 1Kbytes Internal SRAM 	Yes	1	Microcontroller
Relays	HI LI SHUN HLS8L-DC5V-S-C ¹ OR HJR-3FF-S-Z <ul style="list-style-type: none"> • Contact Ratings: 7A 250VAC /15A 120VAC • Max Switching Power: 2770VA/240W • Life Expectancy Electrical: 100,000 Operations (rated load) • Life Expectancy Mechanical: 10,000,000 Operations(no load) 	Yes	2	Electromechanical
Power Input	5 V-1 A	Yes	1	PowerJack
UART	<ul style="list-style-type: none"> • Full Duplex Operation • Asynchronous or Synchronous Operation • High Resolution Baud Rate Generator • Noise Filtering • Multi-processor Communication Mode 	Yes	1	Communication Protocol
NRF	NRF24L01 ² +: <ul style="list-style-type: none"> • Worldwide 2.4GHz ISM band operation • 250kps,1Mbps and 2Mbps on air data rates • Enhanced ShockBurst • Automatic packet handling • Auto packet transaction handling • 900Na in power down and 26 uA in standby 	Yes	1	Communication Protocol

¹ All relay features according to datasheet

² All features according to datasheet

Item	Item Description	Availability	Quantity	Type
WIFI	<ul style="list-style-type: none"> • ESP8266 ESP01³: • 802.11 b/g/n support • 802.11n support (2.4 GHz), up to 72.2 Mbps • 2 x virtual Wi-Fi interface • Support Infrastructure BSS Station mode/SoftAP mode/Promiscuous mode • 2.4G ~ 2.5G (2400M ~ 2483.5M Frequency Range) • PCB Trace Antenna • UART Interface • WPA/WPA2 Security and WEP/TKIP/AES Encryption • Network Protocols IPv4, TCP/UDP/HTTP 	Yes	1	Module
Two Isolated Inputs	<ul style="list-style-type: none"> • 12 V input Max 	Yes	2	Input
Two Output	<ul style="list-style-type: none"> • Logic Output • Relay Driver 	EF		Output
LEDS	<ul style="list-style-type: none"> • 2 Red LEDS Which Indicates Relays Status • An ON/OFF Green LED • An Green User LED 	Yes	9	Component
Buttons	<ul style="list-style-type: none"> • 1 Reset Button • 1 User Button 	Yes	2	Component
Buzzer	<ul style="list-style-type: none"> • Frequency Buzzer 			Component
Dimensions	<ul style="list-style-type: none"> • Height: 19.52 mm • Width: 72.45 mm • Length: 73.60 mm 			Board

³ All features according to Esp8266 Datasheet