

MOKO Bluetooth Module Family

MOKO Smart is focused on Bluetooth Low Energy (BLE) technology and we have developed series Bluetooth modules based on world famous SoC brand such as Nordic Semiconductor, Texas Instruments and Realtek Semiconductor.

Our portfolio spans the full Bluetooth connectivity range from the latest Bluetooth 5 and Bluetooth mesh options to Bluetooth 4. We developed the powerful hardware with high-performance RF design and flexible firmware for variety of applications.

Our Bluetooth module portfolio is designed to provide robust performance, easy global certification and simple implementation to accelerate your Bluetooth IoT project development cycle and save your time to the market.





MOKO SMART

MOKO Bluetooth Module and Evaluation Board

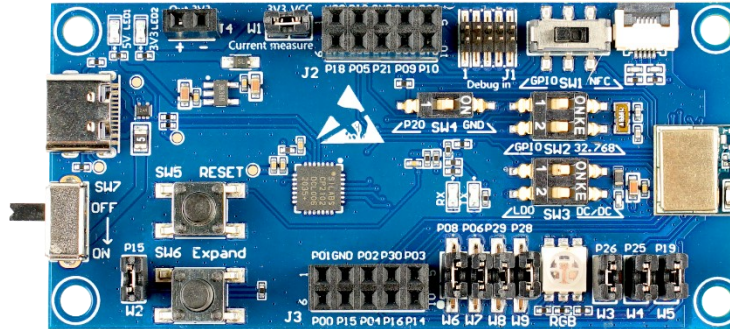
Nordic® nRF52832 Bluetooth Module



MK01A
Ceramic Chip Antenna
10.0x10.0x2.0mm



MK01B
u.FL Connector
10.0x10.0x2.0mm



MK01-KIT
Evaluation Board for MK01



MK02E
PCB Antenna
21.0x13.8x2.3mm



MK02E
u.FL Connector
21.0x13.8x2.3mm

MOKO Bluetooth Module

Nordic® nRF52810 Bluetooth Module



MK05A
PCB Antenna
21.0x13.8x2.3mm



MK05B
u.FL Connector
21.0x13.8x2.3mm

Nordic® nRF52811 Bluetooth Module



MK06A
PCB Antenna
21.0x13.8x2.3mm



MK06B
u.FL Connector
21.0x13.8x2.3mm

MOKO Bluetooth Module

Nordic® nRF52833 Bluetooth Module



MK07A
PCB Antenna
21.0x13.8x2.3mm



MK07B
u.FL Connector
21.0x13.8x2.3mm

Nordic® nRF52840 Bluetooth Module



MK08A
PCB Antenna
21.0x13.8x2.3mm



MK08B
u.FL Connector
21.0x13.8x2.3mm



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MOKO Bluetooth Module

TI CC2642R Bluetooth Module



MK11A
PCB Antenna
25.0x17.0x2.8mm

Nordic® nRF5340 Bluetooth Module

Coming soon
2021 Q4

MK13A
PCB Antenna

Coming soon
2021 Q4

MK13B
u.FL Connector

MOKO Bluetooth Module

Nordic® nRF52805 Bluetooth Module

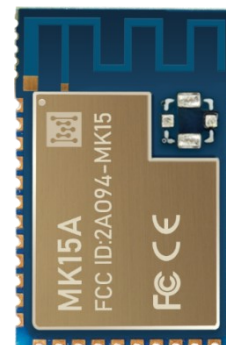


MK14A
PCB Antenna
12.1x8.9x2.0mm

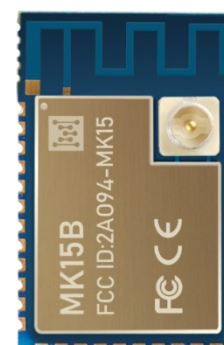


MK14B
u.FL Connector
12.1x8.9x2.0mm

RealTek RTL8762CMF Bluetooth Module



MK15A
PCB Antenna
21.0x13.8x2.3mm



MK15B
u.FL Connector
21.0x13.8x2.3mm

MOKO Bluetooth Module

Solution	Nordic® nRF52832			
Series	MK01 Series		MK02 Series	
Model	MK01A	MK01B	MK02D	MK02E
Picture				
Pad Package	Land Grid Array (LGA)		Plated Half-hole	
Dimension	10.0x10.0x2.0mm (with shield)		21x13.8x2.3mm (with shield)	
Antenna	Ceramic Chip	u.FL Connector	PCB Antenna	u.FL Connector
Flash + RAM	512KB + 64KB			
Bluetooth5.0/5.1 Specification	2 Mbps, CSA #2, Advertising Extensions			
Interface	UART, SPI, TWI, PDM, I²S, QDEC, PWM, ADC, NFC			
Power Supply	1.7-3.6 V			
Operating Temp	-40 to +85°C			
GPIO	22	22	30	30
Certification	FCC, CE, IC, MIC, RCM			
Other Feature	Bluetooth mesh, ANT+, 2.4GHz			

MOKO Bluetooth Module

Solution	Nordic® nRF52833		Nordic® nRF52840	
Series	MK07 Series		MK08 Series	
Model	MK07A	MK07B	MK08A	MK08B
Picture				
Pad Package	Land Grid Array (LGA) +Plated Half-hole			
Dimension	21x13.8x2.3mm (with shield)			
Antenna	PCB Antenna	u.FL Connector	PCB Antenna	u.FL Connector
Flash + RAM	512KB + 128KB		1MB + 256KB	
Bluetooth5.0/5.1 Specification	Direction Finding, 2 Mbps, CSA #2, Advertising Extensions, Long Range		2 Mbps, CSA #2, Advertising Extensions, Long Range	
Interface	UART, SPI, HS-SPI, TWI, PDM, I²S, QDEC, PWM, ADC, NFC, USB		UART, SPI, HS-SPI, QSPI, TWI, PDM, I²S, QDEC, PWM, ADC, NFC, USB	
Power Supply	1.7-5.5 V			
Operating Temp	-40 to +85°C (-40 to +105°C can be customized)		-40 to +85°C	
GPIO	40	40	46	46
Certification	FCC, CE, IC, MIC, RCM			
Other Feature	Bluetooth mesh, Thread, Zigbee, 2.4GHz		Bluetooth mesh, ANT+, Thread, Zigbee, 2.4GHz	

MOKO Bluetooth Module

Solution	Nordic® nRF52805		Nordic® nRF52810		Nordic® nRF52811	
Series	MK14 Series		MK05 Series		MK06 Series	
Model	MK14A	MK14B	MK05A	MK05B	MK06A	MK06B
Picture						
Pad Package	Plated Half-hole					
Dimension	12.1x8.9x2.0mm (with shield)		21x13.8x2.3mm (with shield)			
Antenna	PCB Antenna	u.FL Connector	PCB Antenna	u.FL Connector	PCB Antenna	u.FL Connector
Flash + RAM	192KB + 24KB					
Bluetooth5.0/5.1 Specification	2 Mbps, CSA #2				Direction Finding, 2 Mbps, CSA #2, Advertising Extensions, Long Range	
Interface	UART, SPI, TWI, ADC		UART, SPI, TWI, PDM, QDEC, PWM, ADC			
Power Supply	1.7-3.6 V					
Operating Temp	-40 to +85°C					
GPIO	8	8	30	30	30	30
Certification	FCC, CE, IC, MIC, RCM					
Other Feature	2.4GHz		ANT+, 2.4GHz		ANT+, Thread, Zigbee, 2.4GHz	

MOKO Bluetooth Module

Solution	TI CC2642R	REALTEK RTL8762CMF	
Series	MK11 Series	MK15 Series (Coming soon)	
Model	MK11A	MK15A	MK15B
Picture			
Pad Package	Plated Half-hole	Plated Half-hole	
Dimension	25x17x2.8mm (with shield)	21x13.8x2.3mm (with shield)	
Antenna	PCB Antenna	PCB Antenna	u.FL Connector
Flash + RAM	352KB Flash, 256KB ROM, 8KB Cache SRAM, 80KB ultra-low leakage SRAM	512KB Flash, 160KB SRAM	
Bluetooth5.0/5.1 Specification	Direction Finding/ AoA, 2 Mbps, CSA #2, Advertising Extensions, Long Range	2 Mbps, CSA #2, Advertising Extensions, Long Range	
Interface	UART, SPI, I ² C, I ² S, SSI, PDM, ADC, DAC	UART, SPI, I ² C, PWM, ADC	
Power Supply	1.8 V to 3.8 V	1.8 V to 3.6 V	
Operating Temp	-40 to +85°C (-40 to +105°C can be customized)	-40 to +85°C (-40 to +105°C can be customized)	
GPIO	30	25	
Certification	FCC, CE	FCC, CE (under progress)	
Other Feature	Bluetooth mesh, 2.4GHz	Bluetooth mesh	



MOKO SMART

MOKO Bluetooth Module Hardware

Module		MK01	MK02	MK05	MK06	MK07	MK08	MK11A	MK14	MK15
Solution		nRF52832	nRF52832	nRF52810	nRF52811	nRF52833	nRF52840	CC2642	nRF52805	RTL8762CMF
Wireless protocol	BLUETOOTH LOW ENERGY	●	●	●	●	●	●	●	●	●
	BLUETOOTH MESH	●	●			●	●	●		●
	THREAD				●	●	●			
	ZIGBEE					●	●			
	ANT	●	●	●			●			
	2.4 GHZ PROPRIETARY	●	●	●	●	●	●	●	●	
	NFC	●	●			●	●			
CORE SYSTEM	CPU	Arm Cortex-M4	Arm Cortex-M4	Arm Cortex-M4	Arm Cortex-M4	Arm Cortex-M4	Arm Cortex-M4	Arm Cortex-M4F	Arm Cortex-M4	Arm Cortex-M4F
	FPU	●	●			●	●	●		●
	DSP INSTRUCTION SET	●	●	●	●	●	●		●	
	CACHE	●	●			●	●	●		●
	MEMORY (FLASH+RAM)	512K+64K	512K+64K	192K+24K	192K+24K	512K+128K	1M+256K	352K+88K	192K+24K	512K+160K
	CLOCKS	64MHz/32kHz	64MHz/32.768kHz	64MHz/32.768kHz	64MHz/32.768kHz	64MHz/32.768kHz	64MHz/32.768kHz	48MHz/32.768kHz	64MHz/32.768kHz	40MHz/ 32kHz
RADIO	MAXIMUM TX POWER	4dBm	4dBm	4dBm	4dBm	8dBm	8dBm	5dBm	4dBm	7.5dBm
	RX SENSITIVITY	-96dBm (1Mbps)	-96dBm (1Mbps)	-96dBm (1Mbps)	-97dBm (1Mbps)	-95dBm (1Mbps)	-95dBm (1Mbps)	-97dBm (1Mbps)	-97dBm (1Mbps)	-97dBm (1Mbps)
	ANTENNA INTERFACE	Ceramic/ u.FL	PCB/ u.FL	PCB/ u.FL	PCB/ u.FL	PCB/ u.FL	PCB/ u.FL	PCB	PCB/ u.FL	PCB/ u.FL
CERTIFICATIONS		FCC, CE, IC MIC, RCM	FCC, CE, IC MIC, RCM	FCC, CE, IC MIC, RCM	FCC, CE, IC MIC, RCM	FCC, CE, IC MIC, RCM	FCC, CE, IC MIC, RCM	FCC, CE	FCC, CE, IC MIC, RCM	FCC, CE
OPERATING TEMPERATURE		-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 105 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C
SUPPLY VOLTAGE RANGE		1.7 to 3.6V	1.7 to 3.6V	1.7 to 3.6V	1.7 to 3.6V	1.7 to 5.5V	1.7 to 5.5V	1.8 to 3.8V	1.7 to 3.6V	1.8 to 3.3V
Dimension		10.0*10.0*2.0mm	21.0x13.8x2.3mm	21.0x13.8x2.3mm	21.0x13.8x2.3mm	21.0x13.8x2.3mm	21.0x13.8x2.3mm	25.0x17.0x2.8mm	12.1x8.9x2.0mm	21x13.8x2.3mm



MOKO SMART

MOKO Bluetooth Module Firmware

Firmware		MKBN-G01		MKBN-C02		MKBN-D01			MKBN-A01	MKBN-C01	
Status		Released		Under development		Released			Under development	Released	
Module		MK07	MK08	MK01	MK02	MK05	MK06	MK14	MK11A	MK01	MK02
ADVERTISING	iBeacon ADV	●	●	●	●				●		
	LEGACY ADV	●	●	●	●	●	●	●	●	●	●
	EXTENDED ADV	●	●	●	●				●		
	EXTENDED ADV PHY	1M/2M/Coded	1M/2M/Coded	1M/2M	1M/2M				1M/2M/Coded		
	ADV INTERVAL	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms	100 to 7000ms	100 to 7000ms
MASTER	SCAN	●	●	●	●				●	●	●
	SCAN FILTER	●	●	●	●				●	●	●
	SCAN INTERVAL	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms						
	SCAN WINDOW	20 to 10240ms	20 to 10240ms	20 to 10240ms	20 to 10240ms						
	MAX CONNECT	8	8	8	8					1	1
	CONNECT INTERVAL	7.5 to 4000ms	7.5 to 4000ms	7.5 to 4000ms	7.5 to 4000ms					7.5 to 2000ms	7.5 to 2000ms
	AUTO CONNECT	●	●	●	●				●		
UART BAUD Rate(bps)		1200 - 921600	1200 - 921600	1200-1000000	1200-1000000	1200-1000000	1200-1000000	1200-1000000	1200 - 921600	9600-115200	9600-115200
DC/DC POWER		●	●		●	●	●	●	●		
MODIFY PASSWORD		●	●	●	●	●	●	●	●		
MODIFY MAC		●	●	●	●	●	●	●	●	●	●
PWM, ADC, IO		4, 8, 30	4, 8, 36	4, 7, 14	4, 8, 20	3, 8, 20	3, 8, 20	-,-,-	- , 8, 19	- , 8, 18	- , 8, 24
UART TRANSMISSION		●	●	●	●	●	●	●	●	●	●
OTA / DFU		●	●	●	●	●	●	●	●	●	●