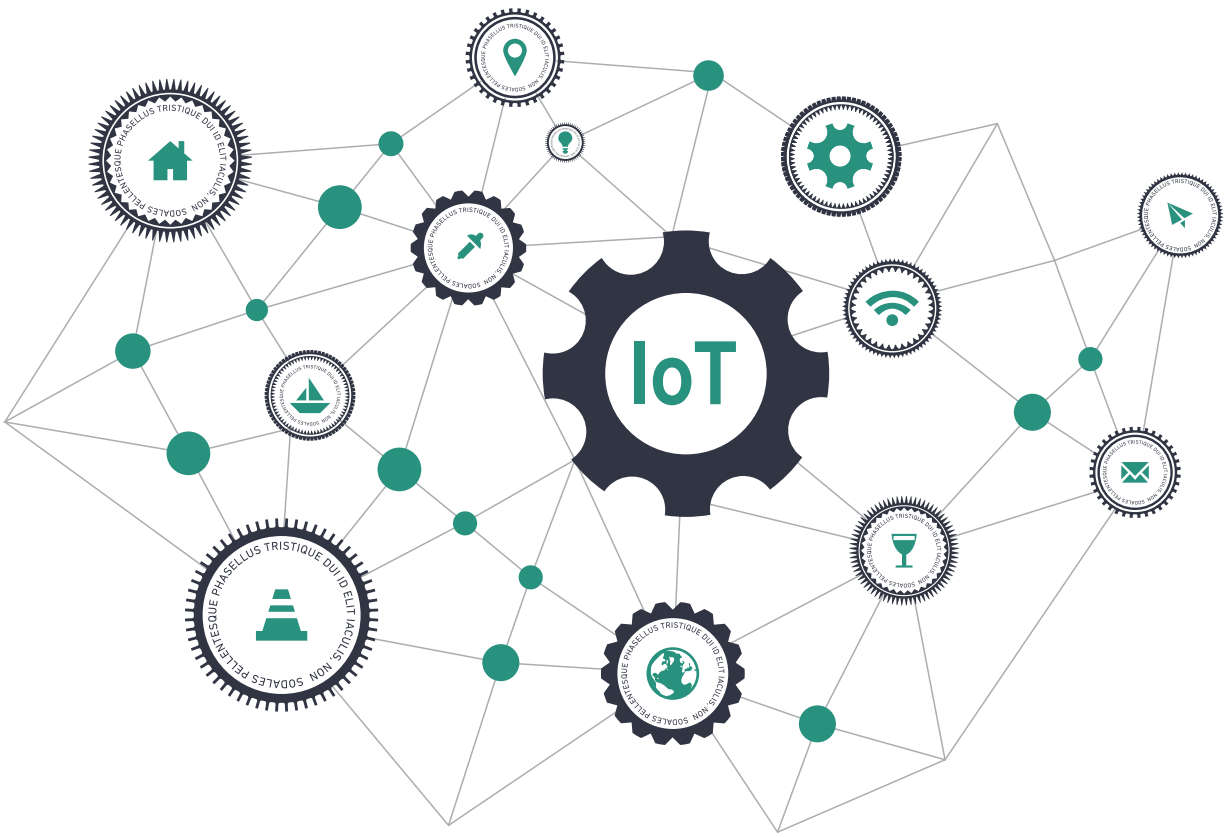
SKYLAB

Simplify Your System



WiFi · BLUETOOTH · GNSS · UWB

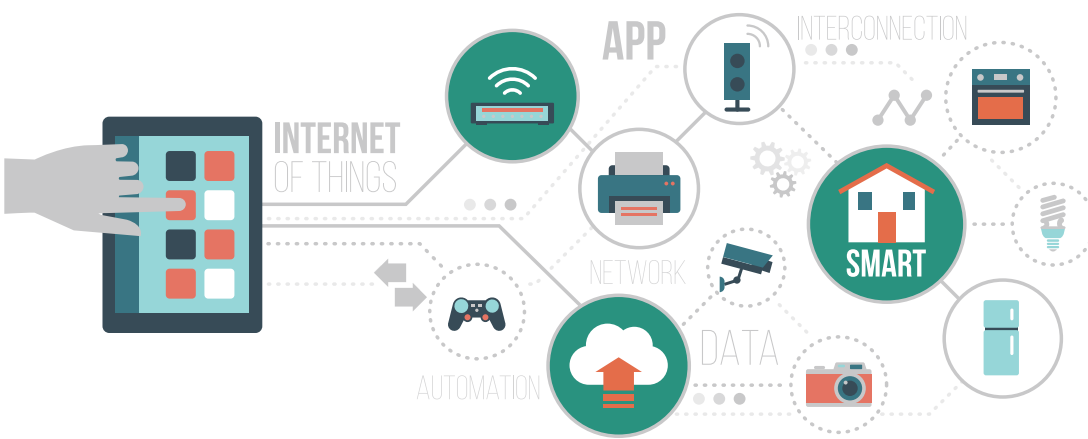
Company profile

Founded in 2002, SKYLAB is a high-tech enterprise specializing in the research and development and application of products related to indoor and outdoor positioning technology and wireless communication technology. SKYLAB has a technical team with nearly 20 years of experience in wireless communication embedded software and hardware development and RF technology. The main product technologies involve high-quality and high-performance modules such as GNSS, Wi-Fi, BLE, UWB and offer relevant application solutions based on our products. We have been striving to create long-term market value and potential growth for our customers, and also provide rich-experienced OEM/ODM and system integration services. Keeping up with the development of the times, We deeply cultivates the professional innovation field of indoor and outdoor positioning, provides location information and perception information for digital twins, and realizes edge computing and cloud computing applications through the integration of short-range and 5G mobile communication technology.

SKYLAB has passed the IATF-16949 automotive electronic quality system certification, and our products meet international standards such as SRRC/FC-C/CE/IC/BQB/ROHS/REACH. The company has passed the GB/T-29490 intellectual property management system certification, and has more than 100 intellectual property rights including invention patents, utility model patents, and software copyrights.

At present, We own more than 80 employees, 40% of which are R&D-related personnel. The products developed are sold to more than 50 countries and regions around the world, serving more than 20,000 companies around the world. We focus on customer needs and expectations, provide the best quality products and the best service, and help customers create value continuously. Adhering to the concept of customer-centered and quality-centered, we make unremitting efforts to become a leading supplier in the industry.

— SKYLAB



CATALOG

WiFi Module Selector

PRODUCT SELECTOR

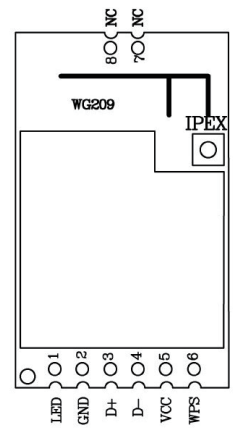
Protocol (802.11)	Part Number	Chipset	Dimension (mm)	Packaging	Frequency (GHZ)	Data Rate (Mbps)	Transmit Power (dBm)	Distance (m)	Interface	Power-Supply	Antenna Type
IOT WLAN/UART	WG229	ESP8266	24.0*16.0*2.4	SMD	2.4G	72.2	18	100	3,5,6,8	3.3V	1 IPEX/PCB
	LCS6260	TR6260	24.0*16.0*2.4	SMD	2.4G	150	18	100	3,4,5,8	3.3V	1 IPEX/PCB
	WG231	ESP8285	11.0*10.0*2.0	SMD	2.4G	72.2	18	100	3,5,6,8	3.3V	1 IPEX/PCB
High Power b/g/n	SKW77	MT7620A	59*28.9*9	Pin header	2.4G	300	28	1000	1,2,3.4,7	3.3V&5.0V	2 IPEX
b/g/n USB	SKW17AE	MT7601	18.3*16.5*2.8	SMD	2.4G	150	18	150	1	3.3V	1 IPEX/1 Pin
	WG209	MT7601	30*15*2.8	SMD&Pin header	2.4G	150	18	150	1	3.3V/5.0V	1 IPEX/PCB
ac USB	WG217	RTL8811	36*15*3.2	SMD&Pin header	2.4G+5G	433	18	120	1	3.3V/5.0V	1 IPEX/PCB
	WG233	RTL8812	29*17*2.8	SMD	2.4G+5G	867	18	200	1	3.3V	2 IPEX
	SKW421A	AR1021	31*23*3.6	SMD	2.4G+5G	300	23	500	1	3.3V	2 IPEX
AP b/g/n	SKW92A	MT7628N	40.5*25*3.0	SMD&Pin header	2.4G	300	18	150	1,2,3,4,5,6,7,8	3.3V	2 IPEX
	SKW99	QCA9531	48.0*25.7*9.0	Pin header	2.4G	300	18	150	1,2,3	3.3V	2 IPEX
	SKW92B	MT7688A	40.5*25*3.0	SMD	2.4G	150	18	150	1,2,3,4,5,6,7,8	3.3V	1 IPEX
	SKW103	QCA9531	41.2*18.5*9	Pin header	2.4G	300	18	150	1,2,3	3.3V	2 IPEX
	SKW95	MT7688A	33.2*18.7*3.0	SMD	2.4G	150	18	150	1,2,3,4,5,6,7,8	3.3V	1 IPEX
802.11ac AP	SKW93A	MT7628 MT7610E	36.4 *30.5*14.8	Pin header	2.4G+5G	733	18	200	1,2,3,4,5,7	3.3V	3 IPEX
	SKW100	QCA9531 QCA9887	47.8*35.4*9.5	Pin header	2.4G+5G	733	18	300	1,2,3	3.3V	3 IPEX
	SKW78	MT7621A MT7603E MT7612E	75*52.3*9.0	Pin header	2.4G+5G	1167	18	150	1,2,4,5,7	3.3V	4 IPEX
WiFi 6 AP	SKW496C	IPQ6000	86.5*70*9.0	Pin header	2.4G+5G	1774	18	150	1,2,3,10	12V	4 IPEX
WiFi 6 UART	WG236	ECR6600	24.0*16.0*2.4	SMD	2.4G+5G	150	18	150	3,4,6,8	3.3V	1 IPEX
PCIe Router	SKW497	QCA9531	40.5*27.5*3.0	SMD	2.4G	300	18	150	1,2,3,10	3.3V	2 IPEX

Port: 1.USB2.0 2.WAN/LAN 3.UART 4.I²S 5.I²C 6.SPI 7.SD 8.PWM 9.SDIO 10.PCIE

WG209 2.4GHz USB WiFi Modules

Highlights

- Compliant to IEEE 802.11b/g/n
- Main Chipset: MT7601U
- USB 2.0 high speed interface
- Optional: IPEX connector or PCB Antenna
- 72.2 Mbps for 20 MHz ; 150 Mbps for 40 MHz channel operations
- Windows XP 32/64, 2000, Vista 32/64bit, Windows 7 32/64bit, Linux, Android
- Manufactured in ISO9001/IATF16949 certified production sites



Electrical Data

Size	30(L) x 15(W) x 9.0(H) mm
Power Supply	3.3V or 5.0V (5V as default)
Packaging	SMD or 4pin/6pin Connector
Transmit Power	target power tolerance ±2dBm
	IEEE 802.11b: +18 dBm for 802.11b CCK
	IEEE 802.11g: +16dBm @ 6, 9, 12,18,24,36,48Mbps
	+15dBm @ 54Mbps
	IEEE 802.11n: +15dBm @MCS 7/15@HT20
	IEEE 802.11n: +15dBm @MCS 7/15@HT40
Power Consumption	TX: 700mW; RX: 450mW
Wireless Security	64/128/152-bit WEP encryption
	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 55℃

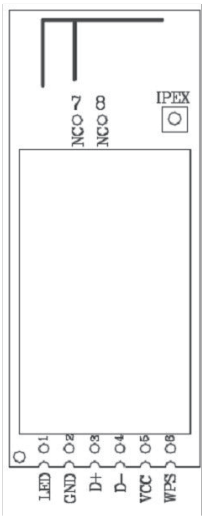
Certification and approvals

FCC/CE/IC certified

WG217 Dual Band USB WiFi Modules

Highlights

- Compliant to IEEE 802.11a/b/g/n/ac
- Main Chipset: RTL8811CU-CG
- 2.4G or 5G 1T1Rmode
- USB 2.0 high speed interface
- Optional: IPEX connector or PCB Antenna
- Supports for Windows XP 32/64, 2000, Vista 32/64bit, Windows 7 32/64bit, Linux, Android
- Manufactured in ISO9001/IATF16949 certified production sites



Electrical Data

Size	36(L) x 15(W) x 3.2(H) mm
Power Supply	3.5V ~ 5.5V
DDR2	SMD or 4pin/6pin Connector
Flash	IEEE 802.11ac: 11-14dBm @AC80 MCS7
Transmit Power	IEEE 802.11n: 13-16dBm @HT40 MCS7
	13-16dBm @HT20 MCS7
	IEEE 802.11g: 15-17dBm
	IEEE 802.11b: 16-18dBm
Data rate	433Mbps
Wireless	64/128/152-bit WEP encryption
Security	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

Environmental data, quality & reliability

Operating temperature: -10℃ ~ 70℃
Storage Temperature: -40℃ ~ 125℃

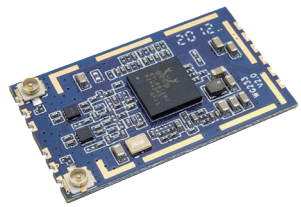
Certification and approvals

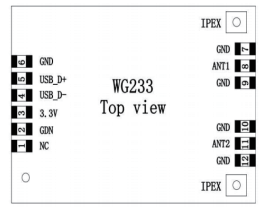
FCC/CE/ROHS certified

WG233 Dual Band USB WiFi Modules

Highlights

- IEEE 802.11a/b/g/n/ac WLAN
- 2T2R mode
- With support of 867Mbps PHY rate
- IEEE 802.11e QoS Enhancement(WLAN)
- USB LPM/Selective Suspend support
- Fully compliance with USB2.0 High-speed mode
- IEEE 802.11i(WPA, WPA2). Open, shared key, and pair-wise key authentication services





Electrical Data

Antenna Type	IPEX connecter
Voltage	3.0 - 3.6V
Dimensions(L*W*H)	29mm*19mm*2.8mm
Wireless Standards	IEEE 802.11 a/b/g/n/ac
Frequency	2.4/5GHz
Data Rates	IEEE 802.11a Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11 b Standard Mode: 1,2,5.5,11Mbps
	IEEE 802.11g Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n/Draft 2.0 Mode: 300Mbps @ HT40
	IEEE 802.11ac Standard Mode: 867Mbps @VHT80
2.4G Receive Sensitivity	HT40 MCS15: -69dBm@10% PER(MCS7)
	HT20 MCS15 : -72dBm@10% PER(MCS7)
	54M: -74dBm@10% PER
	11M: -89dBm@ 8% PER
5G Receive Sensitivity	VHT80 MCS15: -59dBm@10% PER(MCS9)
	HT40 MCS15: -68dBm@10% PER(MCS7)
	OFDM 54M: -75dBm@10% PER
	OFDM 6M: -90dBm@ 8% PER
Operational Limits	802.11 Legacy b/g/n
	DSSS (DBPSK, DQPSK, CCK)
	OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
	802.11ac
	OFDM (256-QAM)
Wireless Security	Supports WEP64/128, WPA, WPA2, TKIP, WAPI, and AES hardware encryption
5Ghz Transmit Power	IEEE 802.11ac: 9-13dBm @AC80 MCS7
2.4Ghz Transmit Power	IEEE 802.11n: 14-17dBm @HT40 MCS7 14-17dBm@HT20 MCS7
	IEEE 802.11g: 15-17dBm
	IEEE 802.11b: 16-20dBm
Work Mode	AP/Ad-Hoc / Infrastructure mode

Environmental data, quality reliability

Operating Temperature: -10℃~70℃ Operating Humidity: 10%~90% non-condensing
Storage Temperature: -40℃~125℃ Storage Humidity: 5%~90% non-condensing

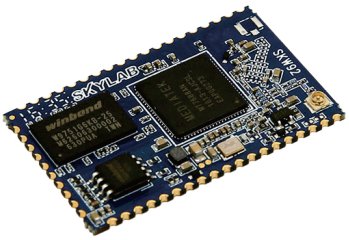
Certification

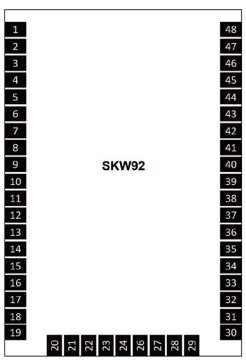
FCC/CE/IC/ROHS certificated

SKW92B IoT 2.4G AP Router WiFi Modules

Highlights

- Compliant to IEEE 802.11b/g/n
- Main Chipset: MT7688A
- Antenna : 1 IPEX connector
- Lowest standby current: 160mA
- Working mode: IoT AP/AP Client/Bridge/Repeater/Router mode
- Manufactured in ISO9001/ITAF16949 certified production sites





Interfaces

USB 2.0	Support USB slave devices & 3/4G USB dongle & USB camera
I2C	1
SD	1
I2S	1
WAN/LAN	1 WAN,4 LAN
PCM	1
PWM	1
SPI Master	Support SPI slave devices
UART	2
GPIO	35

Electrical Data

Size	40.5(L) x 25(W) x 3.0(H) mm
Power Supply	3.3V+/-5%
DDR2	512Mb as default, Customize
Flash	64Mb as default, Customize
Transmit Power	IEEE 802.11n: 16dBm @HT20/40 MCS7
	IEEE 802.11g: 16dBm @54MHz
	IEEE 802.11b: 18dBm @11MHz
Data rate	150Mbps -1T1R
Wireless	64/128/152-bit WEP encryption
Security	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 125℃

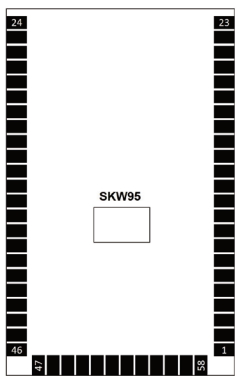
Certification

FCC/CE/ROHS certificated

SKW95 IoT 2.4G AP Router WiFi Modules

Highlights

- Compliant to IEEE 802.11b/g/n
- Main Chipset: MT7688A
- 580MHz MIPS CPU
- Antenna : 1 IPEX connector
- Lowest standby current: 160mA
- Working mode: IoT AP/AP Client/Bridge/Repeater/Router mode
- Manufactured in ISO9001/ITAF16949 certified production sites



Interfaces

USB 2.0	Support USB slave devices & 3/4G USB dongle& USB camera
I2C-SDIO	Controlled by I2C_MODE register
SD-XC/eMMC	Controlled by the EPHY_APGIO_AIO_EN[4:1] and SD_MODE register
I2S	192K/24bits, Controlled by I2S_MODE register
WAN/LAN	1WAN,4LAN
PCM	Input-Min 3.5ns
PWM	4
SPI slave	1
UART	2
GPIO	35

Electrical Data

Size	33.2(L) x 18.7(W) x 3.0(H) mm
Power Supply	3.3V+/-5%
DDR2	1024Mb (Max)
Flash	256Mb (Max)
Transmit Power	IEEE 802.11n: 16dBm @HT20/40 MCS7
	IEEE 802.11g: 16dBm @54MHz
	IEEE 802.11b: 18dBm @11MHz
Data rate	150Mbps -1T1R
Wireless	64/128/152-bit WEP encryption
Security	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

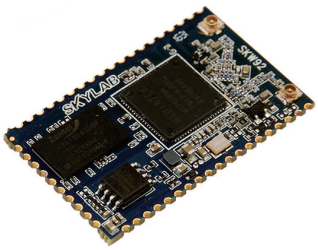
Environmental data, quality & reliability

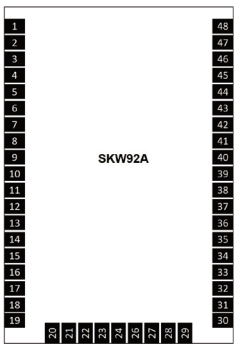
Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 125℃

SKW92A 2.4G AP Router WiFi Modules

Highlights

- Compliant to IEEE 802.11b/g/n
- Main Chipset: MT7628N
- 2T2R mode at 300Mbps PHY data rate
- 580MHz MIPS CPU
- Antenna : 2 IPEX connectors
- Lowest standby current: 180mA
- Working mode: AP/AP Client/Bridge/Repeater/Router mode
- Manufactured in ISO9001/ITAF16949 certified production sites





Interfaces

USB 2.0	Support USB slave devices & 3/4GUSB dongle & USB camera
I2C	1
SD	1
I2S	1
WAN/LAN	1 WAN,4 LAN
PCM	1
PWM	1
SPI Master	Support SPI slave devices
UART	2
GPIO	35

Electrical Data

Size	40.5(L) x 25(W) x 3.0(H) mm
Power Supply	3.3V+/-5%
DDR2	512Mb as default, Customize
Flash	64Mb as default, Customize
Transmit Power	IEEE 802.11n: 16dBm @HT20/40 MCS7
	IEEE 802.11g: 15dBm IEEE 802.11b: 18dBm
	IEEE 802.11b: 18dBm @11MHz
Data rate	300Mbps -2T2R
Wireless	64/128/152-bit WEP encryption
Security	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 125℃

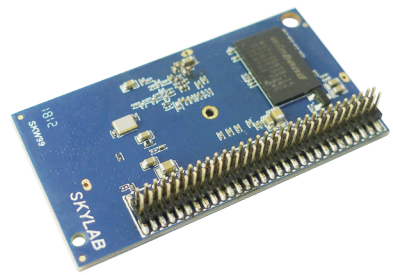
Certification

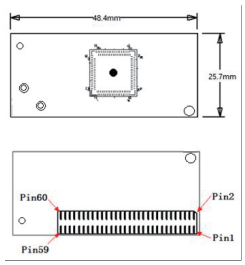
FCC/CE certificated

SKW99 2.4G AP Router WiFi Modules

Highlights

- Compliant to IEEE 802.11b/g/n
- Main Chipset: QCA9531
- 2x2 MIMO at 300Mbps PHY data rate
- 650MHz MIPS CPU
- Antenna : 2 IPEX connectors
- Lowest standby current: 180mA
- Working mode: AP/AP Client/Bridge/Repeater/Router mode
- Manufactured in ISO9001/ITAF16949 certified production sites





Interfaces

USB 2.0	Support USB slave devices & 3/4G USB dongle& USB camera
UART	Default baud rate is 115200bps
WAN/LAN	1WAN,4LAN
UART	For Debug Only
GPIO	12

Electrical Data

Size	48.4(L) x 25.7(W) x 9.0(H) mm
Power Supply	3.3V+/-5%
DDR2	1024Mb (Max)
Flash	256Mb (Max)
Transmit Power	IEEE 802.11n: 13-16dBm @HT20/40 MCS7
	IEEE 802.11g: 14-17dBm @54MHz
	IEEE 802.11b: 16-20dBm @11MHz
Data rate	300Mbps -2T2R
Wireless	64/128/152-bit WEP encryption
Security	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

Environmental data, quality & reliability

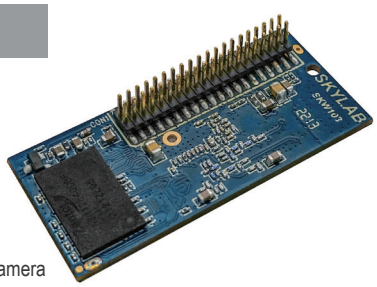
Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 125℃

Certification

FCC/CE/ROHS certificated

SKW103 2.4G AP Router WiFi Modules

Highlights



- Compliant to IEEE 802.11b/g/n
- 2T2R mode with support for a 300Mbps PHY data rate
- DDR2 memory up to 1024Mb
- Flash memory up to 256Mb
- 4 LAN ports and 1 WAN port
- Support USB 2.0 slave device for USB disk and USB 3G/4G dongle and USB camera
- Security: WEP64/128, TKIP, AES, WPA, WPA2, WAPI

Electrical Data

Antenna Type	IPEX
Voltage	3.3V±5%
Dimension(L×W×H)	41.2(L) x 18.5(W) x 9.0(H) mm
Wireless Standards	IEEE 802.11 b/g/n
Frequency Range	2412GHz---2484MHz
Data Rates	IEEE 802.11b : 1,2,5.5,11Mbps
	IEEE 802.11g : 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n : MCS0--MCS7 @ HT20 MCS0--MCS7 @ HT40
Receiver Sensitivity	HT40 MCS7 : -69dBm@10% PER(MCS7)
	HT20 MCS7 : -71dBm@10% PER(MCS7)
	54M: -75dBm@10% PER
	HT20 MCS7 : -71dBm@10% PER(MCS7) /2.4GHz band
	54M: -76dBm@10% PER
	11M: -88dBm@ 8% PER
Modulation Technique	DSSS (DBPSK, DQPSK, CCK)
	OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
Wireless Security	WPA/WPA2, WEP, TKIP and AES, WPS2.0, WAPI
Transmit Power	IEEE 802.11n: 13-16dBm @HT20/40 MCS7
	IEEE 802.11g: 14-17dBm @54MHz
	IEEE 802.11b: 16-20dBm @11MHz
Work Mode	Bridge/Gateway/AP

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 125℃
Operating Humidity: 10%~90% non-condensing
Storage Humidity: 5%~90% non-condensing

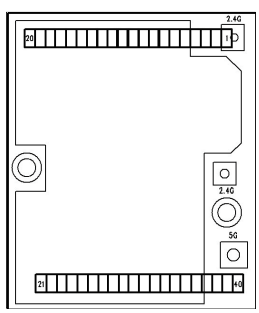
Certification

FCC/CE/ROHS certificated

SKW93A Dual Band AP Router WiFi Modules

Highlights

- Compliant to IEEE 802.11b/g/n/ac
- Main Chipset: MT7628A+7610E
- 3X3 MIMO at 733Mbps PHY data rate
- Dual-core MIPS1004Kc (580MHz)
- Antenna : 3 IPEX connectors
- Lowest standby current: 280mA
- Working mode: AP/AP Client/Bridge/Repeater/Router mode
- Manufactured in ISO9001/ITAF16949 certified production sites



Interfaces

USB 2.0	Support USB slave devices & 3/4GUSB dongle & USB camera
I2C	1
SD	1
I2S	1
WAN/LAN	1WAN,2LAN
PCM	1
PWM	1
SPI Master	Support SPI slave devices
UART	2
GPIO	27

Electrical Data

Size	36.4(L) x 30.5(W) x 14.8(H) mm
Power Supply	3.3V+/-5%
DDR2	1024Mb (Max)
Flash	256Mb (Max)
Transmit Power	IEEE 802.11ac: 13dBm @HT80 MCS9 /5GHz band
	IEEE 802.11ac: 16dBm @HT80 MCS0 /5GHz band
	IEEE 802.11n: 14dBm @HT20/40 MCS7 /5GHz band
	IEEE 802.11n: 16dBm @HT20/40 MCS0 /5GHz band
	IEEE 802.11n: 16dBm @HT20/40 MCS7 /2.4GHz band
	IEEE 802.11g: 16dBm @54MHz
	IEEE 802.11b: 18dBm @11MHz
Data rate	733Mbps -3T3R
Wireless	64/128/152-bit WEP encryption
Security	WPA/WPA2 enterprise encryption
	AES-CCM & TKIP encryption

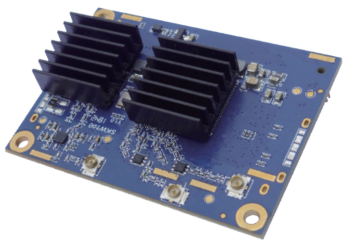
Environmental data, quality & reliability

Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 125℃

SKW100 Dual Band AP Router WiFi Modules

Highlights

- IEEE 802.11b/g/n/ac
- 3T3R mode with support for a 733Mbps PHY data rate
- DDR2 memory up to 2048Mb
- Flash memory up to 512Mb
- 4 LAN ports and 1 WAN port
- USB 2.0 slave device for USB disk and USB 3G/4G dongle and USB camera
- Support AP/Client/Router mode



Electrical Data

Antenna Type	IPEX
Voltage	3.3V±5%
Dimension(L×W×H)	47.8x 35.4 x 9.5mm
Wireless Standards	IEEE 802.11a/b/g/n/ac
Frequency Range	2412GHz---2484MHz & 5180---5825MHz
Data Rates	IEEE 802.11b : 1,2,5.5,11Mbps
	IEEE 802.11g : 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n : MCS0--MCS7 @ HT20 /2.4GHz band
	MCS0--MCS7 @ HT40 /2.4GHz band
	MCS0--MCS9 @ HT40 /5GHz band
	IEEE 802.11ac : MCS0--MCS9 @ VHT80 /5GHz band
Receiver Sensitivity	VHT80 MCS9 : -58dBm@10% PER(MCS9) /5GHz band
	HT40 MCS9 : -63dBm@10% PER(MCS9) /5GHz band
	HT40 MCS7 : -70dBm@10% PER(MCS7) /2.4GHz band
	HT20 MCS7 : -71dBm@10% PER(MCS7) /2.4GHz band
	54M: -76dBm@10% PER
	11M: -88dBm@ 8% PER
Modulation Technique	DSSS (DBPSK, DQPSK, CCK)
	OFDM (BPSK, QPSK, 16-QAM, 64-QAM, 125-QAM, 256-QAM)
Wireless Security	WPA/WPA2, WEP, TKIP and AES, WPS2.0, WAPI
Transmit Power	IEEE 802.11ac: 12±2dBm @HT80 MCS9 /5GHz band
	IEEE 802.11ac: 16±2dBm @HT80 MCS0 /5GHz band
	IEEE 802.11n: 14±2dBm @HT20/40 MCS7 /5GHz band
	IEEE 802.11n: 16±2dBm @HT20/40 MCS0 /5GHz band
	IEEE 802.11n: 16±2dBm @HT20/40 MCS7 /2.4GHz band
	IEEE 802.11g: 16±2dBm @54MHz
	IEEE 802.11b: 18±2dBm @11MHz

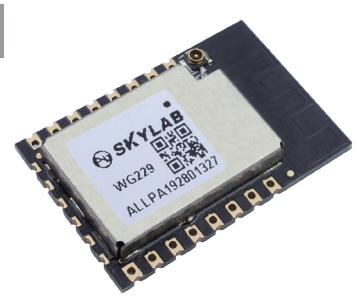
Environmental data, quality & reliability

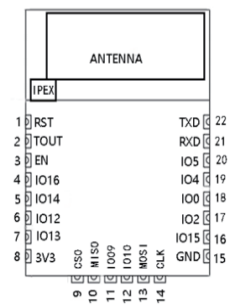
Operating temperature: -20℃ ~ 55℃
Storage Temperature: -40℃ ~ 85℃

WG229 IoT UART WiFi Modules

Highlights

- 802.11 b/g/n/e/i
- 802.11 n (2.4 GHz), up to 72.2 Mbps
- 802.11 e: QoS for wireless multimedia technology
- AT Set, Cloud Server, App
- A-MPDU and A-MSDU aggregation
- Network Protocols: IPv4, TCP/UDP/HTTP/FTP
- Fragmentation and defragmentation
- Automatic Beacon monitoring/scanning
- 802.11 i security features: pre-authentication and TSN
- Wi-Fi Protected Access (WPA)/WPA2/WPA2-Enterprise/Wi-Fi Protected Setup (WPS)
- Infrastructure BSS Station mode/Soft AP mode
- Wi-Fi Direct (P2P), P2P Discovery, P2P Group Owner mode and P2P Power Management
- UMA compliant and certified
- Antenna diversity and selection





Electrical Data

Hardware Features	
ANTENNA TYPE	PCB Antenna or IPEX Connector
Voltage	3.3V+/-10%
DIMENTIONS(L×W×H	24.0mm*16.0mm*2.2mm
2.4GHz WiFi Features	
WIRELESS STANDARDS	IEEE 802.11 b/g/n/
FREQUENCY RANGE	2.412-2.484GHz
DATA RATES	IEEE 802.11a Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11 b Standard Mode: 1,2,5.5,11Mbps
	IEEE 802.11g Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n Standard Mode: 72.2Mbps @ HT20(MCS7)
2.4G RECEIVE SENSITIVITY	HT20 MCS7 : -70dBm@10% PER(MCS7)
	OFDM 54M: -73dBm@10% PER
	CCK, 11M: -88dBm@ 8% PER
WIRELESS SECURITY	Supports WEP64/128, WPA, WPA2, TKIP, WAPI, and AES hardware encryption
"WIRELESS TRANSMIT POWER With ±2dBm tolerance"	IEEE 802.11n: 12-14dBm@HT20 MCS7
	IEEE 802.11g: 16dBm
	IEEE 802.11b: 18dBm
WORK MODE	Soft AP/ Station/Soft AP+Station

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃
Storage Temperature: -40℃ ~ 125℃
Operating Humidity: 10%~90% non-condensing
Storage Humidity: 5%~90% non-condensing

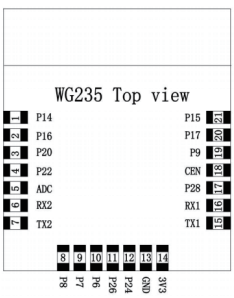
Certification

CE/FCC/ROHS/SRRC certificated

WG235 2.4G WiFi+BLE Combo Modules

Highlights

- IEEE 802.11b/g/n WLAN
- Integrated classic Bluetooth and low power BLE system
- Bluetooth and Wi-Fi share antennas and transceiver circuits
- Internal priority-based scheduling logic ensures the stability of Bluetooth and Wi-Fi dual connections and the efficient sharing of air resources
- 802.11n (2.4 GHz)up to 150Mbps
- Support AT Set, cloud server, application
- Network protocol: IPv4, TCP/ UDP/ HTTP/ FTP
- 256 KB internal RAM
- 2 MB internal Flash
- Six high-speed 10bit multi-channel ADC, and support internal filtering to 16bit



Electrical Data

Antenna Type	PCB Antenna or IPEX Connector
Voltage	3.3V+/-10%
Dimensions(L×W×H)	20.3*15.8*2.7mm
Wireless Standards	IEEE 802.11 b/g/n
Frequency Range	2.412-2.484GHz
Data Rates	IEEE 802.11 b Standard Mode: 1,2,5.5,11Mbps
	IEEE 802.11g Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n Standard Mode: 150Mbps @ HT40(MCS7)
2.4G Receive Sensitivity	HT20 MCS7 : -70dBm@10% PER(MCS7)
	OFDM 54M: -72dBm@10% PER
	CCK, 11M: -86dBm@ 8% PER
Wireless Security	WEP64/128, WPA, WPA2, TKIP, WAPI, and AES hardware encryption
Wireless Transmit power with ±2dBm Tolerance	IEEE 802.11n: 11-13dBm@HT20 MCS7 IEEE 802.11g: 12dBm IEEE 802.11b: 18dBm
Work Mode	Soft AP/ Station

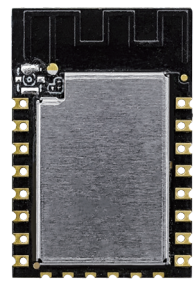
Environmental data, quality & reliability

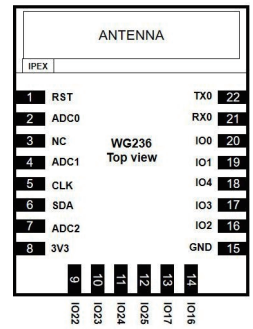
Operating temperature: -20℃ ~ 70℃ Operating Humidity: 10%~90% non-condensing
Storage Temperature: -40℃ ~ 125℃ Storage Humidity: 5%~90% non-condensing

WG236 UART WiFi 6 +BLE 5 Combo Modules

Highlights

- IEEE 802.11b/g/n/ax WLAN/ 802.11 b/g/n/ax
- BLE5.1
- Bluetooth and Wi-Fi share antennas and transceiver circuits
- Support BLE and BT multi-device connection
- 802.11ax (2.4 GHz)up to 86Mbps
- Support AT Set, cloud server, application
- Network protocol: IPv4, TCP/ UDP/ HTTP/ FTP
- Support of WEP, WPA, WPA2, WPA3 (Personal and Enterprise modes)
- Internal priority-based scheduling logic ensures the stability of Bluetooth and Wi-Fi dual connections and the efficient sharing of air resources





WiFi Features

Antenna type	PCB Antenna or IPEX Connector
Voltage	3.3V+/-10%
Dimensions(L×W×H)	24.0mm*16.0mm*2.4mm
Wireless standards	IEEE 802.11 b/g/n/ax
Frequency range	2.400-2.4835GHz
Data rates	IEEE 802.11b Standard Mode: 1,2,5.5,11Mbps
	IEEE 802.11g Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n Standard Mode: 150Mbps @ HT40(MCS7)
	IEEE 802.11ax Standard Mode: 86Mbps @ HT20(MCS7)
2.4G Receive sensitivity	IEEE 802.11b: -85dBm@ 8% PER
	IEEE 802.11g: -76dBm@10% PER
	IEEE 802.11n: -73dBm@10% PER(MCS7)
	IEEE 802.11ax: -73dBm@10% PER(MCS7)
Wireless security	Support of WEP, WPA, WPA2, WPA3 (Personal and Enterprise modes)
Wireless transmit power with ±2dBm tolerance	IEEE 802.11b: 17dBm
	IEEE 802.11g: 14dBm
	IEEE 802.11n: 12-14dBm@HT20 MCS7
	IEEE 802.11ax: 12-14dBm@HT20 MCS7
Work mode	Soft AP/ Station

BLE Features

Parameter	Minimum	Typical	Maximum	Unit
Working frequency	2402		2480	MHz
Data rates	1		2	Mbps
Wireless transmit power		10		dBm
Sensitivity	-95	-91		dBm

BLE Products

BLE Module

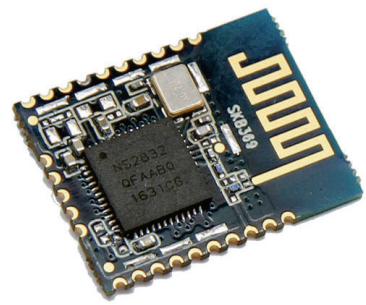
PRODUCT SELECTOR

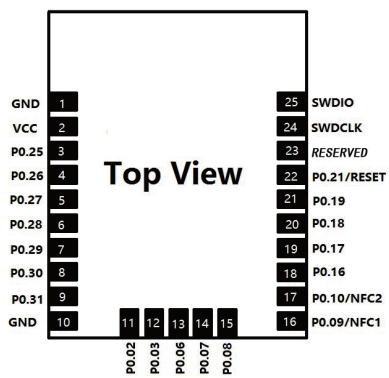
No.	1	2	3	4	5	6	7
Kinds	BLE 4.2	BLE 5.0	BLE 5.0	BLE 5.0	BLE 5.0	BLE 5.2	BLE 5.2
Code	0922303	0926702	0926703	0946702	09467	0947101	I 0947102
Part No.	SKB369 _CSPI	SKB501 _CSPI	SKB501 _CSEI	SKB376 _XSEI	SKB376 _XSPI	SKB378 -CSPI	SKB378 -CSEI
Size	17.4*13.7 *1.9mm	17.4*13.7 *1.9mm	17.4*13.7 *1.9mm	17.4*13.7 *1.9mm	17.4*13.7 *1.9mm	17.4*13.7 *1.9mm	17.4*13.7 *1.9mm
Main Chp	nRF 52832 _QFAA	nRF 52840 _QFAA	nRF 52840 _QFAA	SYD 8811	SYD 8811	EFR 32BG22	EFR 32BG22
Interface	UART/SPI /I2C/PWM /GPIO	UART/SPI /I2C/PWM /GPIO	UART/SPI /I2C/PWM /GPIO	UART/SPI /I2C/PWM /GPIO	UART/SPI /I2C/PWM /GPIO	UART/SPI /I2C/PWM /GPIO	UART/SPI /I2C/PWM /GPIO
Antenna Type	PCB Ant.	PCB Ant.	Ext.Ant	Ext.Ant	PCB Ant.	PCB Ant.	Ext.Ant

SKB369 Bluetooth 4.2 Low Energy Module

Highlights

- Main Chipset: nRF52832
- Bluetooth® 4.2 low energy single-mode
- protocol stack: L2CAP, ATT, GAP, GATT and SM protocols
- Central and Peripheral roles
- Supported data rates up to 1Mbps
- AES HW encryption
- Dimension: 17.4(L)*13.7(W)*1.9(H) mm
- Manufactured in ISO 9001/IATF 16949 certified production sites





Interfaces

Antenna	PCB Antenna/External Antenna
UART	1
SPI	3
I2C	2
ADC	6
GPIO	19, Controlled over AT commend

Electrical Data

Power Supply	1.8-3.6V	
Power Consumption	Sleep Mode	0.2uA
	Idle Mode	1.2uA

Environmental data,quality & reliability

Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃

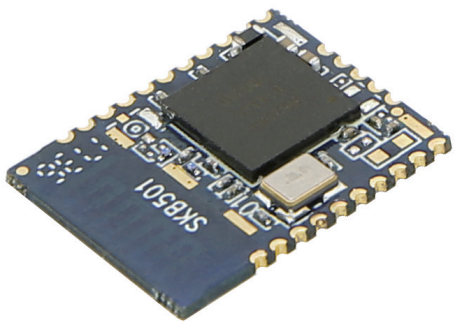
Certification

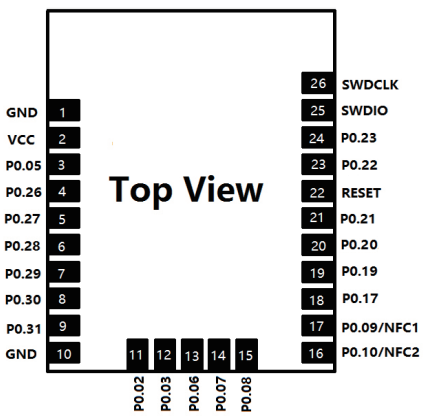
FCC/CE/IC/BQB/ROHS certificated

SKB501 Bluetooth 5.0 Low Energy Module

Highlights

- Main Chipset: nRF52840
- Bluetooth 5 ready multi-protocol radio
- Bluetooth 5 data rate: 2Mbs, 1Mbs, 500Kbs, 125Kbs
- 32-bit ARM Cortex-M4F @ 64MHz
- Up to 111 dB link budget for Bluetooth long range mode
- Programmable output power from +8dBm to -20dBm
- -96dBm Sensitivity for Bluetooth low energy
- Dimension: 17.4(L)x13.7(W)x1.9(H) mm
- Manufactured in ISO 9001/IATF 16949 certified production sites





Interfaces

Antenna	PCB Antenna/External Antenna
UART	1
SPI	3
I2C	2
TWI	2
ADC	6
GPIO	20, Controlled over AT commend

Electrical Data

Power Supply	1.7-3.6V
Power Consumption	Sleep Mode 0.4uA Idle Mode 1.2uA

Environmental data,quality & reliability

Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃

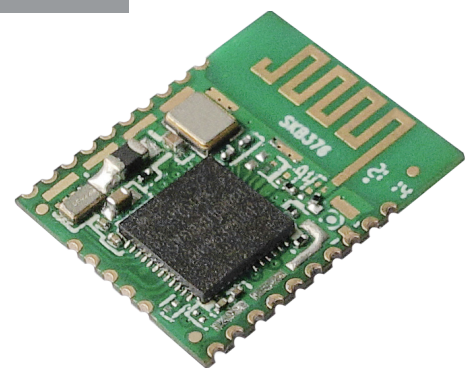
Certification

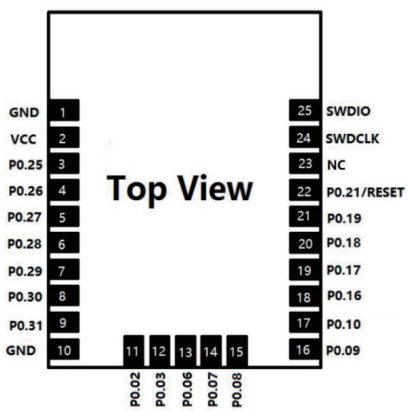
FCC/CE/IC/BQB/ROHS certificated

SKB376 BLE 4.2 Modules

Highlights

- Main Chip: SYD8811
- Bluetooth® 4.2 low energy
- Support UART-to-BLE transparent transmission(Slave only).
- Supported BLE data rates : 1Mbps
- RTC 4x32bit timers, RTC support
- Cap detection for touch pad
- 10bit ADC and 6 configurable channels
- 19Digital I/O pins





Interfaces

GPIOs	19
SWD	2
GND	Ground
VCC	Power Supply

Electrical Data

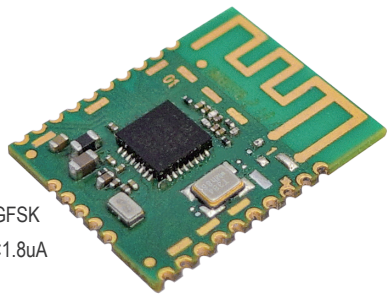
Size	17.4×13.7×1.9 mm
Antenna Type	PCB Antenna/External Antenna
Voltage	1.8V~3.6V
Frequency Range	2400MHz---2483.5MHz
Transmit Power	Tx Power -20 to +4 dBm in 2 dB Steps

Environmental data,quality & reliability

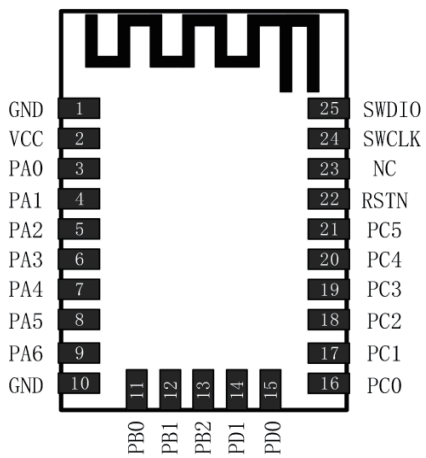
Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃
Operating Humidity: 10%~50% Non-condensing
Storage Humidity: 5%~90% Non-condensing

SKB378 BLE 5.2 Modules

Highlights



- Main Chip: SILICON LABS EFR32BG22
- BLE® 5.2 protocol
- Support BLE AOA/AOD positioning
- Supported BLE all data rates : 125kbps/250kbps/500kbps/1Mbps/2Mbps
- Superior Radio Performance: TX Power 6dBm / RX sensitivity -106.7dBm@125kbps GFSK
- Ultra Low Power consumption: TX 4.1mA@0dBm, RX 3.6mA@1Mbps, Sleep current<1.8uA
- 4x16bit timers+1x32bit RTC timer+1*24bit Low Energy Timer for waveform generation
- 12-bit 1Msps SAR ADC
- 2*USART(UART/SPI/SmartCard-ISO7816/IrDA/I2S), 2*I2C, PDM for Digital Microphone, 12*PRS
- HW encryption: AES 128/256,SHA-1,SHA-2,ECC(up to 256bit),ECDSA(up to 256bit) and ECDH



Interfaces

GPIOs	18
SWD	2
GND	2
VCC	1

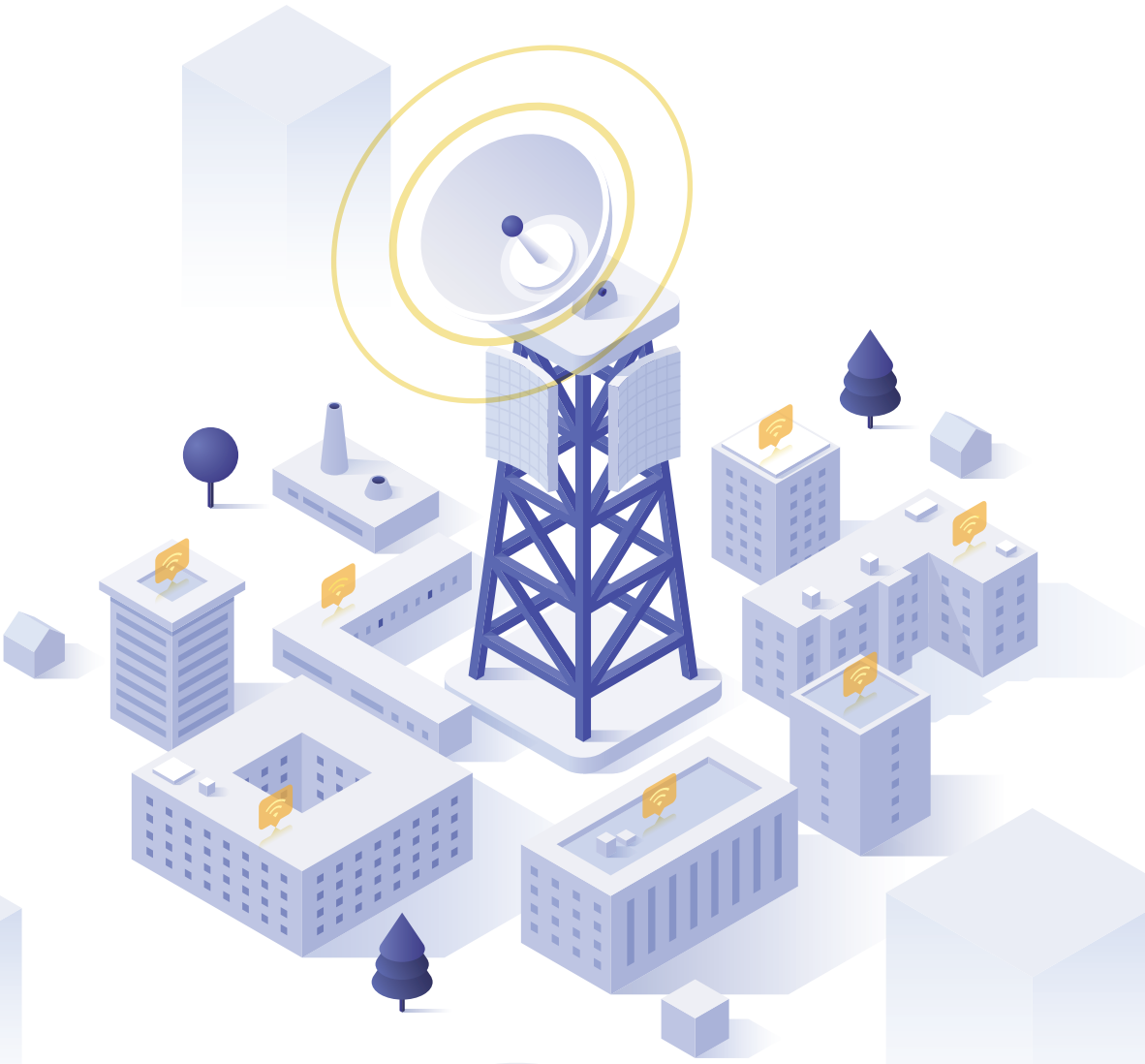
Electrical Data

Size	17.4×13.7×1.9 mm
Antenna Type	PCB Antenna/ External Antenna(UF.L IPEX-1)
Voltage	1.71V~3.8V
Frequency Range	2400MHz---2483.5MHz
Transmit Power	-27 to +6dBm(SKB378) -28 to 0dBm(SKB378A)

Environmental data,quality & reliability

Operating Temperature: -40℃~85℃ Operating Humidity: 10%~50% Non-condensing
Storage Temperature: -40℃~125℃ Storage Humidity: 5%~90% Non-condensing

BLE Beacon



BLE Beacon

PRODUCT SELECTOR

No.	1	2	3	4	5	6
PN.	VG01	VG02	VG05	VDB1611	VDB1612	VDB1617
Sensor	N/A	N/A	Accelerometer sensor	Temperature &Humidity & Accelerometer Sensor	N/A	N/A
Dimension(mm)	47.5*16.1 (R*H)	72*45*26 (L*W*H)	52.1*23.1 (L*W*H)	72*45*26 (L*W*H)	121.5*103.5*23.6 (L*W*H)	52.1*23.1 (L*W*H)
Support	Eddystone & iBeacon	Eddystone & iBeacon	Eddystone & iBeacon	Eddystone & iBeacon	Eddystone & iBeacon	Eddystone & iBeacon
BLE Type	4.0	4.0	4.2/5.0	4.2/5.0	4.2/5.0	5.0
Main Chip	Nordic nRF51802	Nordic nRF51822	Nordic nRF52810	Nordic nRF52832	Nordic nRF52810	Nordic nRF52840
Battery	1*CR2477	2*AA	2*ER14250	2*AA	1*ER18505	2*ER14250
Distance	70m	70m	70m	70m	70m@4dBm	100m
Battery Lifetime	2 Yrs @500ms @0dBm	4 Yrs @500ms @0dBm	5.5 Yrs @500ms @0dBm	4 Yrs @500ms @0dBm	7 Yrs @500ms @0dBm	4.8 Yrs @500ms @0dBm
Programmable	UUID/Major/ Minor/Device Name/etc	UUID/Major/ Minor/ Device Name/etc	UUID/Major/ Minor/ Device Name/etc	UUID/Major/ Minor/ Device Name/etc	UUID/Major/ Minor/ Device Name/etc	UUID/Major/ Minor/ Device Name/etc
Customized	LOGO/ Housing/ Label/Color	LOGO/Housing /Label/Color	LOGO/Housing/Label/Color	LOGO/ Housing/ Label/Color	N/A	LOGO/ Housing/ Label/Color
Waterproof	N/A	IP66	IP66	N/A	IP68	N/A

VDB1611 BLE 4.2 Beacon

Highlights

- Low Power Consumption
- Acceleration and temperature and humidity data collection
- Application of flexible
- Easy to Install
- Broadcasting distance can reach 70 meters
- RoHS compliant (lead-free)

Electrical Data

Bluetooth Standard	BLE 4.2/5.0
Battery	2* AA
Broadcast Frequency (Adjustable)	Default 500ms,100~1000ms adjustable)
Battery Life	4 Years
Broadcast Power (Adjustable)	Default 0dBm, -20~4dBm adjustable
Size	72*45*26 mm
Transmit Distance	70m@4dBm
Sensor	Acceleration, Humidity and Temperature sensor

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB1617 BLE 5.0 Beacon

Highlights

- Low Power Consumption
- Acceleration and temperature and humidity data collection
- APP can flexibly configure parameters
- Easy to Install (3M Glue)
- Broadcasting distance can reach 70 meters
- RoHS compliant (lead-free)

Hardware Features

Antenna Type	PCB Antenna
Battery	ER14250 2 * 1200 mAh
Voltage	1.8~3.6 v
Dimension(D×H)	52.0 * 23.2(±0.3)mm

Wireless Features

Wireless Standards	Bluetooth ® 5.0
Frequency Range	2400MHz——-2483.5MHz
Data Rates	125kbps/ 250 kbps/ 500kbps/ 1 Mbps/ 2 Mbps
Modulation Technique	GFSK
Wireless Security	AES
Transmit Power	Tx Power -20 to +8 dBm in 4 dB Steps
Sensitivity	-95dBm at 1Mbps BLE
Work Mode	Peripheral

Environmental data, quality reliability

Operating Temperature: -40℃~85℃ Operating Humidity: 10%~90% Non-condensing
Storage Temperature: -40℃~85℃ Storage Humidity: 5%~90% Non-condensing

VDB1608 BLE 5.0 Card

Highlights

- BLE5.0 TX power: +8dBm Max
- BLE5.0 RX sensitivity: -95dBm(1Mbps BLE)； -103dBm(125Kbps BLE)
- Frequency: 2400~2483.5MHz
- Battery Life: TBD
- Power consumption: TBD
- LED: Charging LED, state LED
- Key: Short press: SOS Long press: Turn on/off
- Broadcasting distance: 100 meters
- Battery capacity: 550mAh
- Charging cable: Magnetic connect cable
- Charging time: 4 hours
- Program updating: Support USB JLINK; Support OTA(Over The Air, by bluetooth updating)
- IP grade: IP67 （water resistance）
- Accessory: Magnetic connect cable, Hanging belt

Product Parameter

Bluetooth Standard	BLE 4.2/5.0
Battery	Rechargeable Li-Battery
Broadcast Frequency (Adjustable)	Default 500ms,100~1000ms adjustable)
Battery Life	4 Years
Broadcast Power (Adjustable)	Default 0dBm, -20~4dBm adjustable
Size	72*45*26 mm
Transmit Distance	70m@4dBm
RAM and ROM	512 KB flash/64 KB RAM 256 KB flash/32 KB
Protocol	Support BLE5.0 (No Longrange)
Frequency	2400MHz---2483.5MHz

Power adapter parameter

Input	AC 100~240V 50/60Hz 0.35A
Output	DC 5V /1A

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB1506A BLE 4.2 Tag

Highlights

- Refreshing frequency when moving: 0.5Hz
- Power consumption: Standby 50uA location launch 18mA@0dBm
- Precision: 3~5m
- General using time when fully charged: 8 days
- Full charge time: About 3.5 hours
- Positioning distance: 20m
- Level of protection: IP65
- Battery capacity: 1000mAh
- Temperature: Operational: -20~80℃ Charging: 0~45℃ Storage: -20~40℃(<3month in shut down mode)
- Dimension: 57.4mm*38.8mm*21mm(±0.5mm)
- RAM and ROM: 512kB flash/64kB RAM
- Protocol: Support BLE5.0 (No Long-range)
- Frequency: 2400MHz---2483.5MHz
- Power adapter parameter: Output DC 5V /1A

Model Parameter

Main Chipset	BLE:nRF52832
Size	57.4*38.8*21 mm (not including watchband)
Battery capacity	1000 (mAh)
Stand-by Time (default power@1Hz)	About 4 Months
Working Temperature	-20~80℃
Power Consumption	Standby: 50uA TX standard power: 300mA RX: 70mA

BLE Gateway

Bluetooth Gateway

PRODUCT SELECTOR

BLE Gateway	Bluetooth Standard	Main Chip	Dimension (mm)	Antenna Type	BLE Maximum Transmit Power (dBm)	FEM (PA+LNA)	Scanning Range	Broadcasting Range	Power Supply
VDB2601	BLE4.2	BT:nRF52832 WiFi:MT7688AN	D:124*H:40	BLE:PCB Antenna WiFi:FPC Antenna	20	Y	100m	150m	Standard 48V POE DC 5V/1A
VDB2602	BLE4.2+BLE5.0	BT1:nRF52832 BT2:nRF52840 WiFi:MT7688AN	D:124*H:40	BLE:PCB Antenna WiFi:PCB Antenna	BT1:20 BT2:8	BT1:Y BT2:N	100m	150m	Standard 48V POE DC 5~24V/1A
VDB2603	BLE5.0	BT:nRF52840 WiFi:MT7688AN	D:124*H:40	BLE:PCB Antenna WiFi:FPC Antenna	8	N	70m	120m	Standard 48V POE DC 5V/1A
VDB2605	BLE4.2	BT:nRF52832 WiFi:MT7688AN 4G LTE	D:124*H:40	BLE:PCB WiFi:FPC Antenna 4G:FPC Antenna	20	Y	100m	150m	DC 5V/2A
VDB2606	BLE4.2	BT:nRF52832 WiFi:MT7688AN	D:124*H:40	BLE:PCB Antenna WiFi:FPC Antenna	4	N	50m	50m	Standard 48V POE DC 5V/1A
VDB2612	BLE5.0	BLE:nRF52840 WiFi:MT7688AN Cat1+GNSS	D:124*H:40	BLE:PCB Antenna WiFi:FPC Antenna Cat1:FPC Antenna GPS:外置 Antenna	8	N	70m	120m	DC 5V/3A

Outdoor BLE Gateway	Bluetooth Standard	Main Chip	WiFi Frequency Band	Antenna Type	Bluetooth Maximum Transmit Power (dBm)	FEM (PA+LNA)	Gateway Scan Range	Gateway Broadcast Range	Power Supply
VDB2607	BLE5.0	WiFi:MT7628+MT7610E BLE:nRF52840 4G communication module	2.4GHz +5GHz	WiFi2.4G+WiFi5G+LTE/5G+ BLE 4 Antenna	8	N	100m	150m	DC 5V/2A
VDB2609	BLE4.2	WiFi:MT7688AN BLE:nRF52832 4G communication module	2.4GHz	LTE+BLE+WiFi 3 Antenna	20	Y	200m	300m	Standard 48V POE DC 5V/2A
VDB2610	BLE4.2	WiFi:MT7688AN BLE:nRF52832	2.4GHz	WiFi+ BLE 2 Antenna	20	Y	200m	300m	Standard 48V POE DC 5V 1A

Ble Flamepro of Gateway	Bluetooth Standard	Main Chip	WiFi Frequency Band	Antenna Type	Bluetooth Maximum Transmit Power (dBm)	FEM (PA+LNA)	Gateway Scan Range	Gateway Broadcast Range	Power Supply
VDB2613	BLE5.0	WiFi:MT7688AN BLE:nRF52840 4G communication module	2.4GHz	Bluetooth +WiFi (+4G 3 Antenna)	8	N	100m	150m	Standard 48V POE DC6~24V
VDB2615	BLE5.0	WiFi:MT7628+MT7610E BLE:nRF52840 5G communication module	2.4GHz +5GHz	Bluetooth +WiFi +5G 4 Antenna	8	N	100m	150m	Standard 48V POE DC6~24V

VDB2601 BLE 4.2 Gateway

Highlights

- POE switch power supply and 4.5V to 12.0V power supply.
- IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol
- Bluetooth ® 4.2
- One WAN/LAN variable network port

Product Parameter

Bluetooth standard	BLE4.2
Main chip	BLE:nRF52832 WiFi:MT7688AN
Antenna type	BLE:PCB WiFi:FPC Antenna
MSTXPWR	20dBm
Scan range	100m
Broadcast range	150m
WiFi frequency	2.4GHz
FEM (PA+LNA)	Y
Power Supply	"Standard 48V POE DC 5V/1A"
Average current	200mA@5V
Size	Diameter124*Height40mm
Physical interface	One network port, one DC power interface
Working mode	Bridge、Gateway、AP Client
Wireless Security	AES HW Encryption
Transmit Power	-20~+4dBm

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

Certification

CE certificated

VDB2603 BLE 5.0 Gateway

Highlights

- POE switch power supply and 5V adapter power supply.
- IEEE 802.3 standard-compliant solution, including pre-standard PoE support.
- IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol.
- BLE 5.0.
- One WAN/LAN variable network port.
- RoHS compliant (lead-free)

Product Parameter

Bluetooth standard	BLE5.0
Main chip	BLE:nRF52840 WiFi:MT7688AN
Antenna type	BLE:PCB WiFi:FPC Antenna
MSTXPWR	8dBm
Scan range	70m
Broadcast range	120m
WiFi frequency	2.4GHz
FEM (PA+LNA)	N
Power Supply	Standard 48V POE DC 5V/1A
Wireless Security	WPA/WPA2, WEP, TKIP, and AES
Working mode	Bridge、Gateway、AP Client
Data Rate	2Mbps
Transmit Power	-20~+8dBm

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB2605 4G BLE 5.0 Gateway

Highlights

- PoE switch power supply and 5V adapter power supply
- IEEE 802.3 standard-compliant solution, including pre-standard PoE support
- IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol
- Bluetooth ® 5.0
- LTE-TDD/LTE-FDD/TD-SCDMA/UMTS
- EVDO/EDGE/GPRS/GSM/CDMA
- One WAN/LAN variable network port

Product Parameter

Bluetooth standard	BLE5.0
Main chip	BLE:nRF52832 WiFi:MT7688AN 4G communication module
Antenna type	BLE:PCB WiFi:FPC Antenna 4G:FPC Antenna
MSTXPWR	20dBm
Scan range	100m
Broadcast range	150m
WiFi frequency	2.4GHz
FEM (PA+LNA)	Y
Power Supply	DC 5V/2A

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB2606 Bluetooth 4.2 Gateway

Highlights

- Supports the POE switch power supply and 4.5V to 12.0V adapter power supply
- Support IEEE 802.11n, IEEE 802.11g, IEEE 802.11b Protocol
- Support Bluetooth 4.2
- One WAN/LAN variable network port

Product Parameter

Sensitivity	HT20 MCS7 : -73dBm@10% PER(MCS7)
	54M: -76dBm@10% PER
	11M: -91dBm@ 8% PER
Transmit Power	IEEE 802.11n: 15dBm @HT40 MCS7 15dBm@HT20 MCS7
	IEEE 802.11g: 16dBm
	IEEE 802.11b: 18dBm
Wireless Security	WPA/WPA2, WEP, TKIP, and AES
Working mode	Bridge, Gateway, AP Client
Bluetooth Protocol	Bluetooth ® 4.2
Data Rate	1Mbps
Wireless Security	AES HW Encryption
Coverage area	10m indoor
Transmit Power	-20~+4dBm
Receiver sensitivity	-93dBm@1Mbps

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB2609 4G LTE Outdoor High Power BLE Gateway

Highlights

- Supports POE power supply and 5V DC power supply
- 4G modem support All Netcom
- protocol: IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
- Bluetooth 4.2/5.0 (Long-range not included)

  BLE Max Transmission Power is +21dBm

  Self-adjust WAN/LAN port

Product Parameter

Dimension	L153mm*W137mm*H97mm
Power Supply	DC 5V or POE
Currents	200mA@5V
Operating Temperature	-20℃~70℃
Physical interface	Ethernet port *1, DC port *1
WiFi Protocol	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
Data Rate	IEEE 802.11 b Standard Mode: 1,2,5.5,11Mbps
	IEEE 802.11g Standard Mode: 6,9,12,18,24,36,48,54Mbps
	IEEE 802.11n : 72Mbps @ HT20 150Mbps @ HT40
Sensitivity	HT40 MCS7 : -70dBm@10% PER(MCS7)
	HT20 MCS7 : -73dBm@10% PER(MCS7)
	54M: -77dBm@10% PER
	11M: -89dBm@ 8% PER
Transmit Power	IEEE 802.11n: 14dBm @HT40 MCS7 15dBm@HT20 MCS7
	IEEE 802.11g: 15dBm
	IEEE 802.11b: 18dBm
Wireless Security	WPA/WPA2, WEP, TKIP, and AES
Working mode	Bridge, Gateway, AP Client
Bluetooth Protocol	Bluetooth 4.2/5.0(Not Support Long Range)
Data Rate	Uncoded:1Mbps/2Mbps,Coded:125kbps(S=8)/500kbps(S=2)
Wireless Security	AES HW Encryption
Coverage area	10m indoor
Transmit Power	Default 20dBm±1.5dBm (Can be adjusted from 0 to 20dBm in 4dBm step)
Receiver sensitivity	<-94dBm
Distance	>200m

Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB2610 Warterproof BLE 4.2 Gateway

Highlights

- Supports POE power supply and 5V DC power supply
- 4G modem support All Netcom
- WiFi protocol: IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
  Bluetooth ® 4.2/5.0(Long-range not included)
- BLE Max Transmission Power is +21dBm
- Small and easy to install
- Self-adjust WAN/LAN port

Product Parameter

Bluetooth standard	BLE 4.2
Main chip	BLE:nRF52832 WiFi:MT7688AN
Antenna type	Bluetooth + WiFi (2 Antennas)
Max TX Power	20dBm
Scan range	200m
Broadcast range	300m
WiFi Rrequency	2.4GHz
FEM(PA+LNA)	Y
Power Supply	Standard 48V POE DC 5V 1A

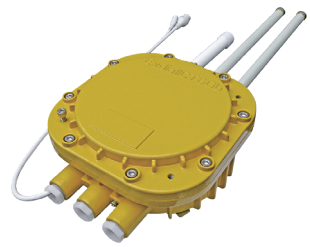
Environmental data, quality & reliability

Operating temperature: -20℃ ~ 70℃

VDB2613 Explosin-proof BLE 5.0 Gateway

Highlights

- Supports POE power supply and 5V DC power supply
- 4G modem support All Netcom
- WiFi Protocol: IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
- Bluetooth ®5.0
- BLE Max Transmission Power is +8dBm
- Small and easy to install
- Self-adjust WAN/LAN port



Product Parameter

Bluetooth standard	BLE 5.0
Main chip	BLE:nRF52840 WiFi:MT7688AN 4G Communication Module
Antenna type	Bluetooth + WiFi (+4G 3 Antennas)
Max TX Power	8dBm
Scan range	100m
Broadcast range	150m
Power Supply	Standard 48V POE DC 6~24V

Interface

LTE ANT
WiFi ANT
BLE ANT
Reserved for 4th ANT or Reset Key
Reserved for RS485 or Molex
DC_Plug in
RJ45 with LED

GNSS Modules

GNSS Modules

PRODUCT SELECTOR

No.		1	2	3	4	5	6	7	8	9	10
L/W/H （mm）		10.1*9.7*2.2	10.1*9.7*2.2	10.1*9.7*2.2	16*12.2*2.4	16*12.2*2.4	16*12.2*2.4	16*12.2*2.4	16*12.2*2.4	16*12.2*2.4	20*20*4.9
PN.		SKG09D	SKG09A	SKG09BL	SKG12D	SKG12A	SKG12BL	SKG121S	SKG123	SKM-6DM	SKM52D
Chipset		MT3333	MT3339	MT3337	MT3333	MT3339	MT3337	STA8089FG	AG3335	AG3335A	MT3333
Module Type	1L+L5								●	●	
	RTK								●		
	Inertial Navigation Combination									●	
									●		
	Timing								●		
	Vehicle Grade										
	Low Power Consumtion			●			●				
Satellite	GPS/QZSS	●	●	●	●	●	●	●	●	●	●
	BDS	●			●			●	●	●	●
	GLONASS	●			●			●	●	●	●
	GALILEO	●			●			●	●	●	●
	IRNSS										
Power	3.0V~3.6V	●	●	●	●	●	●	●	●	●	●
	4.2V~5.5V										
Interface	UART	●	●	●	●	●	●	●	●	●	●
	SPI								●		
	I2C										
	USB										
	CAN										
Feature	Programmable	●	●		●	●			●	●	●
	Antenna Detection		●		●	●			●		
	Antenna Integrated										●
	PPS	●	●	●	●	●	●	●	●	●	●
	Anti-interference	●	●	●	●	●	●	●	●	●	●
	AGPS	●	●	●	●	●	●	●	●	●	●
	EASY	●	●	●	●	●	●		●	●	●
	Data Record	●	●		●	●					●

GNSS Modules

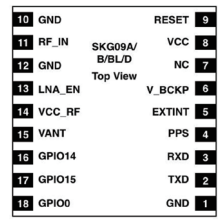
PRODUCT SELECTOR

No.		11	12	13	14	15	16	17	18	19	20
L/W/H （mm）		30*20*8.5	30*26*7.6	25*25*8.7	18*18*5.8	16.1*16.1*6.7	50.5*38.5*18	50.5*38.5*18	50.5*38.5*18	50.5*38.5*18	50.5*38.5*18
PN.		SKM53A	SKM61A	SKM80D	SKM81D	SKM86B	SKM51G	SKM51	SKM55	SKM2101	SKM2105
Chipset		MT3339	MT3339	MT3333	MT3333	MT3337	MXT2702				
Module Type	1L+L5										
	RTK									●	
	Inertial Navigation Combination						●			●	
	Timing										
	Vehicle Grade										
	Low Power Consumtion										
Satellite	GPS/QZSS	●	●	●	●	●	●	●	●	●	●
	BDS		●	●	●	●	●	●	●	●	●
	GLONASS		●	●	●	●		●	●	●	●
	GALILEO									●	●
	IRNSS										
Power	3.0V~3.6V										
	4.2V~5.5V	●	●	●	●	●	●	●	●	●	●
Interface	UART	●	●	●	●	●	●	●	●	●	●
	SPI										
	I2C										
	USB								●		
	CAN								●		
Feature	Programmable		●	●	●	●	●	●	●	●	●
	Antenna Detection										
	Antenna Integrated	●	●	●	●	●	●	●	●	●	●
	PPS				●		●				
	Anti-interference	●	●	●	●	●	●	●	●	●	●
	AGPS	●	●	●	●	●	●	●	●	●	●
	EASY	●	●	●	●	●					
	Data Record			●		●					

SKG09BL GPS Modules

Highlights

- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption
- 10ns high accuracy time pulse (1PPS)
- NMEA Output GGA,GSA,GSV,RMC,VTG,GLL
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Size	10.1 (L)x 9.7(W) x 2.2(H)mm	
Power Supply	3.0-4.2V	
Reserve Power	2.0~4.2V	
Power Consumption	Tracking	16mA @3.3V Typical
	Acquisition	19mA @3.3V
Antenna	50Ω	
Protocol	NMEA0183	
Receiver Type	GPS, L1 frequency band, C/A code, 22 Tracking / 66 Acquisition-Channel	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0mCEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s withoutSA
	Timing (PPS)	10nsRMS
TTFF	Cold Start	23s(Typical Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Assisted GPS support	EPO	
Maximum Update Rate	10Hz	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g

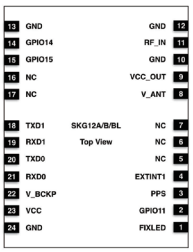
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKG12BL GPS Modules

Highlights

- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption
- ±10ns high accuracy time pulse (1PPS)
- NMEA Output GGA,GSA,GSV,RMC,VTG,GLL
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Size	16.0(L)x 12.2(W) x 2.4(H)mm	
Power Supply	3.0~4.2V	
Reserve Power	2.0~4.2V	
Power Consumption	Tracking	23mA @3.3V Typical
	Acquisition	26mA @3.3V
Antenna	50Ω	
Protocol	NMEA 0183, RTCM	
Receiver Type	GPS, L1 frequency band, C/A code, 22 Tracking / 66 Acquisition-Channel	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0mCEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s withoutSA
	Timing (PPS)	10nsRMS
TTFF	Cold Start	23s(Typical Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Assisted GPS support	EPO	
Maximum Update Rate	10Hz	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g

Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

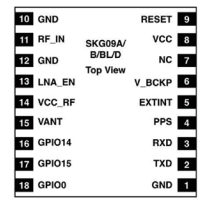
Certification

CE /FCC/RoHS certificated (Lead-free)

SKG09A High Performance GNSS Modules

Highlights

- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption. Lowest standby current: < 0.20 mA
- 10ns high accuracy time pulse (1PPS)
- Indoor and outdoor multi-path detection and compensation
- Easy to be integrated, response to customer's demands or product
- design quickly
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Size	10.1(L) x 9.7 (W)x 2.2(H)mm	
Power Supply	3.0~4.2V	
Reserve Power	2.0~4.2V	
Power Consumption	Tracking	17mA @3.3V Typical
	Acquisition	22mA @3.3V
Antenna	50Ω Antenna Detection	
Time Pulse	Configurable 0.1Hz~20Hz	
Protocol	NMEA 0183	
Receiver Type	GPS, L1 frequency band, C/A code,	
	22 Tracking / 66 Acquisition-Channel	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0m CEP 50 without SA (Typical Open Sky)
	Velocity	0.1m/s without SA
	Timing (PPS)	10ns RMS
TTFF	Cold Start	23s(Typical Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Assisted GPS support	EPO	
Maximum Update Rate	10Hz	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g

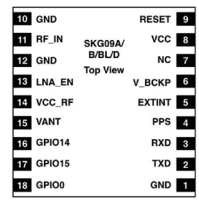
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKG09D High Performance GPS Modules

Highlights

- GPS/GLONASS/BDS/GALILEO/QZSS receiver
- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption. Lowest standby current: < 0.20 mA
- 10ns high accuracy time pulse (1PPS)
- Indoor and outdoor multi-path detection and compensation
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Size	10.1(L) x 9.7(W) x 2.2(H)mm	
Power Supply	3.0-4.2V	
Reserve Power	2.0~4.2V	
Power Consumption	Tracking	25mA @3.3V Typical
	Acquisition	30mA @3.3V
Antenna	50Ω Antenna Detection	
Protocol	NMEA0183, User-defined	
Receiver Type	GPS/GLONASS/BDS/GALILEO/QZSS	
	33 Tracking / 99 Acquisition-Channel	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0mCEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s withoutSA
	Timing (PPS)	10nsRMS
TTFF	Cold Start	23s(Typical Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Maximum Update Rate	10Hz	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g

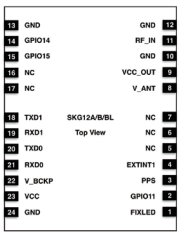
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKG12A High Performance GPS Modules

Highlights

- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption. Lowest standby current: < 0.20 mA
- 10ns high accuracy time pulse (1PPS)
- Easy to be integrated, response to customer's demands or product
- design quickly
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Size	16.0(L) x 12.2(W) x 2.4(H)mm	
Power Supply	3.0~4.2V	
Reserve Power	2.0~4.2V	
Power Consumption	Tracking	18mA @3.3V Typical
	Acquisition	23mA @3.3V
Antenna	50Ω Antenna Detection	
Time Pulse	Configurable 0.1Hz ~ 20Hz	
Protocol	NMEA0183, RTCM,User-defined	
Receiver Type	GPS, L1 frequency band,C/A code	
	22 Tracking / 66 Acquisition-Channel	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0mCEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s withoutSA
	Timing (PPS)	10nsRMS
TTFF	Cold Start	23s(Typical Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Assisted GPS support	EPO	
Maximum Update Rate	10Hz	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g

Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

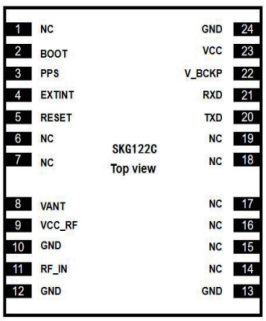
Certification

CE /FCC/RoHS certificated (Lead-free)

SKG122C L1 Beidou 3 Modules

Highlights

- Supports BDS3, GPS, GLONASS, Galileo, QZSS and SBAS systems
- Extremely fast TTFF: cold start less than 28s;
- Hot start less than 1s
- A-GPS/ Support A-GPS
- Industrial Grade Standards
- Super small size: 16.0x12.2x2.4mm
- Get the fastest location time
- Better positioning accuracy and position validity are
- maintained under weak signal



Electrical Data

Parameter	Description	Performance Evaluation
Voltage		3.0-3.6V
RF input	Frequency	GPS/QZSS:L1 C/A
		GLONASS:L1
		GALILEO:E1
		BEIDOU:B1I,B1C
		SBAS: L1 C/A(WAAS,ENGOS,MSAS,GAGAN,SDCM)
	Standing-wave ratio	≤ 1.5
	input impedance	50Ω±10%
	Antenna Gain	0-32dB
Physical dimension		16.4*12.2*2.4mm
Data interface		1 UART, TTL level, baud rate 1200 ~ 460800bps adjustable,9600bps by default
Antenna Testing		Support antenna feed, need external antenna detection circuit
First position time TTFF	Cold start	≤28s
	Hot Start	≤1s
	Re-acquisition	≤1s
Sensitivity	Tracking	-163dBm
	Acquisition	-149dBm
Percision	Positioning	GNSS Open-Sky CEP<2.5m; SBAS Open-Sky CEP<2.0m; D-GNSS Open-Sky CEP<1.0m
	Speed	GNSS 0.1m/s; SBAS 0.05m/s; D-GNSS 0.05m/s
Dynamic performance	Speed	515m / s
	Acceleration	4g
PPS		20ns
Data update rate		1Hz ~ 10Hz, default 1 Hz
Navigation data format		NMEA 0183 V4.1

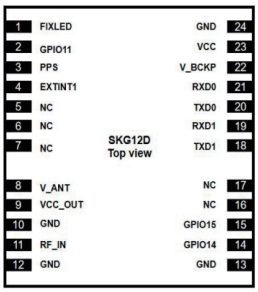
Environmental data, quality reliability

Operating Temperature: -40°C~85°C Storage Temperature: -40°C~125°C

SKG12D High Performance GNSS Modules

Highlights

- GPS/GLONASS/BDS/ GALILEO/QZSS reseiver
- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Built-in 12 multi-tone active interference canceller
- Ultra low power consumption
- ±20ns high accuracy time pulse (1PPS)
- Advanced Features: Always Locate; AIC; EPO;EASY
- SBAS (WAAS,EGNOS,MSAS,GAGAN)
- Indoor and outdoor multi-path detection and compensation



Electrical Data

Size	16.2(L)*12.2(W)*2.4(H)mm
Power Supply	3.0V~4.2V
Reserve Power	2.0V~4.2V
Power Consumption	Tracking 35mA@3.3v Typical
	Acquisition 40mA@3.3v
Antenna	50Ω Antenna Detection
Protocol	NMEA0183, RTCM, User-defined
Receiver Type	GPS,GLONASS,BDS, GALILEO,QZSS
Sensitivity	Tracking -165dBm Typical
	Acquisition -148dBm Typical
Accuracy	Position <2.5m CEP50 (Typical Open Sky)
	Velocity 0.1m/s without SA
	Timing (PPS) 20ns RMS
TTFF	Cold Start 23s(Typical Open Sky)
	Warm Start 2-3s
	Hot Start 1s
	Re-Acquisition <1s
Assisted GPS support	EPO
Operational Limits	Altitude Max 18,000m
	Velocity Max 515m/s
	Acceleration Less than 4g

Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

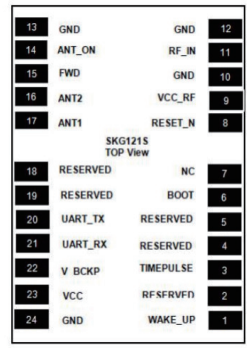
Certification

CE /FCC/RoHS certificated (Lead-free)

SKG121S L1+L5 GNSS Modules

Highlights

- GPS/GLONASS/BDS/GALILEO/QZSS reseiver
- Ultra high sensitivity: -162dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption
- ±25ns high accuracy time pulse (1PPS)
- SBAS (WAAS,EGNOS,MSAS,GAGAN)
- Indoorand outdoor multi-path detection and compensation
- RoHS compliance (Lead-free)



Electrical Data

Size	16.2(L)*12.2(W)*2.4(H)mm
Receiver Type	GPS L1 C/A (1575.42MHz)
	BeiDou B1 C/A (1561.098MHz)
	GLONASS L1 C/A (1602.5625MHz)
	Galileo E1 C/A (1575.42MHz)
Sensitivity	Tracking -162dBm Typical
	Reacquisition -156dBm Typical
	Acquisition -147dBm Typical
Accuracy	Position <1.8m CEP* @-130dBm
	Velocity 0.1m/s without SA
	Timing (PPS) 25ns RMS
Acquisition Time	Cold Start <32s(Typical Open Sky)
	Warm Start <25s
	Hot Start <1.5s
	Re-Acquisition <1s
Assisted GPS support	Support
Power Consumption	Tracking TBD
	Acquisition TBD
Navigation Data Update Rate	Max 10Hz Default 1Hz
Operational Limits	Altitude Max 18,000m
	Velocity Max 515m/s
	Acceleration 4.5G

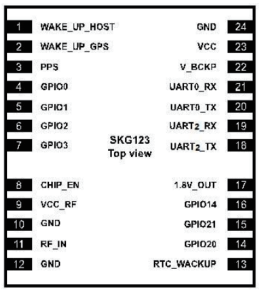
Environmental data, quality reliability

Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃

SKG123S L1+L5 GNSS Modules

Highlights

- L1+L5 dual frequency, L1 supports GPS, GLO, GAL, BDS, QZSS, SBAS system
- L5 supports GPS, GAL, BDS, QZSS
- Support SBAS (WAAS, EGNOS, MSAS, GAGAN)
- Support RTCM (v2.3 and v3.3)
- Support AGPS: EPO, EASY, NVRAM, hotstill
- Support Power Saving Mode: Sleep mode, RTC mode, Periodic Mode, GLP, ULP
- Support PPS timing, the accuracy can reach ±15ns, PPS is associated with NMEA
- Tracks up to 75 L1 satellites and 60 L5 satellites
- Extremely fast TTFF: cold start less than 28s (CTTFF is 24s with GLO); warm start less than 1s
- Industrial standard
- Better positioning accuracy and position validity under weak signal
- With superior quality and reliability



Electrical Data

Voltage	3.0~4.3V	
Size	16.4*12.2*2.4mm	
TTFF	Cold Start	≤28S
	Hot Start	≤1s
	Re-Acquisition	<1s
Sensitivity	Tracking	-164dBm
	Acquisition	-146dBm
Accuracy	Position	<1.7m CEP50 (Typical Open Sky)
	Velocity	0.1m/s without SA
	Timing (PPS)	±15ns

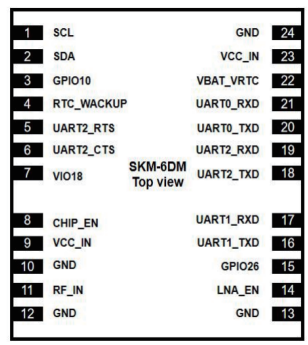
Environmental data, quality reliability

Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃

SKM6DM L1+L5 Interial Navigation GNSS Modules

Highlights

- High-performance 3-axis gyroscope and 3-axis accelerometer
- Complete error compensation such as quadrature error/temperature drift
- The calibration parameters of each product are inconsistent with anti-piracy
- Compact modular design saves user product space
- Plug and play standard communication protocol NEMA0183
- No installation angle requirements, convenient for users to install in the car
- Support RTCM2.3-3.3 protocol/sub-meter navigation in complex environment
- Compliant with RoHS, FCC, CE
- Eliminate gyro drift to obtain high-precision attitude and heading information
- Eliminate vibration acceleration to obtain high-precision speed information
- Zero-speed correction algorithm prevents navigation data drift
- Adaptive Extended Kalman Filter Algorithm
- Identify and isolate GNSS data with large errors
- High-precision positioning using pure inertial navigation
- Autonomous switching between integrated navigation and pure inertial navigation technology



Electrical Data

Receiver Type	GPS L1C/A+L5
	GLONASS L1OF
	BeiDou B1C+B1L+B2a
	Galileo E1+E5a
	QZSS L1+L5
TTFF	Cold Start 28S
	Warm Start 28s
	Hot Start 1s
	Re-Acquisition 5s
Sensitivity	Tracking -165dBm
	Re-Acquisition -160dBm
	Cold Start 28S -148dBm
	Warm Start 28s -148dBm
	Hot Start 1s -156dBm
Timing accuracy	RMS: 30ns
	99%: 60ns
Speed accuracy	0.05m/s

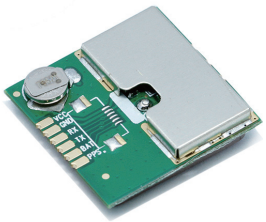
Environmental data, quality reliability

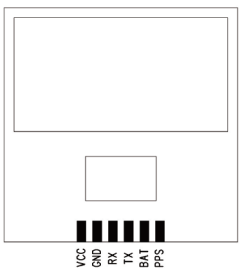
Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃

SKM52 GNSS Modules with antenna integrated

Highlights

- GPS/GLONASS/GALILEO/BDS/QZSS
- Ultra high sensitivity: -165dBm
- Internal back-up battery
- Extremely fast TTFF at low signal level
- Built in high gainLNA
- Ultra Low power consumption: Typical 20mA@3.3V
- Manufactured in ISO9001 / IATF16949 certified production sites





Electrical Data

Size	20(L)x20(W)x4.9(H)mm
Power Supply	3.0~4.2V
Reserve Power	2.0~4.2V
Power Consumption	Tracking 20mA @3.3V Typical
	Acquisition 24mA @3.3V
Antenna	50 Ω, integrated
Protocol	NMEA0183
Receiver Type	GPS/GLONASS/GALILEO/BDS/QZSS,
	22 Tracking / 66 Acquisition-Channel
Sensitivity	Tracking -165dBm Typical
	Acquisition -148dBm Typical
Accuracy	Position 3.0mCEP50 without SA(Typical Open Sky)
	Velocity 0.1m/s withoutSA
	Timing (PPS) 60nsRMS
TTFF	Cold Start 23s(Typical Open Sky)
	Warm Start 2-3s
	Hot Start 1s
	Re-Acquisition <1s
Assisted GPS support	1Hz as default
Maximum Update Rate	10Hz in max
Operational Limits	Altitude Max 18,000m
	Velocity Max 515m/s
	Acceleration Less than 4g

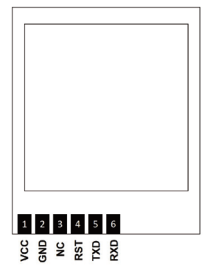
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKM53 GNSS Modules with antenna integrated

Highlights

- Ultra high sensitivity: -165dBm
- Internal back-up battery
- Extremely fast TTFF at low signal level
- Built in high gain LNA
- low power consumption: Typical 30mA@3.3V
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Size	30(L) x20(W)x 8.5(H)mm	
Power Supply	3.3-5.5V	
Power Consumption	Tracking	30mA @3.3V Typical
	Acquisition	33mA @3.3V
	Sleep/Standby Mode	TBD
Protocol	NMEA0183	
Antenna	50 Ω, integrated	
Receiver Type	GPS, L1 frequency band, C/A code, 22 Tracking / 66 Acquisition-Channel	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0mCEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s withoutSA
	Timing (PPS)	60nsRMS
TTFF	Cold Start	23s (Typical in Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Assisted GPS support	1Hz as default	
Maximum Update Rate	10Hz in max	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s

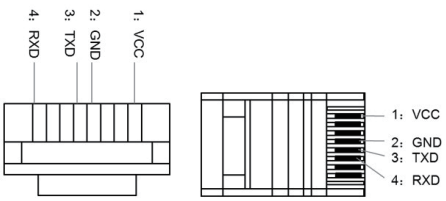
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃(without backup battery)
Storage Temperature: -40℃ to +125℃

SKM61 GNSS Modules with antenna integrated

Highlights

- GPS/GLONASS/GALILEO/BDS/QZSS receiver
- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Internal back-up battery
- Low power consumption: Typical 20mA@5V
- Manufactured in ISO9001 / IATF16949 certified production sites



Electrical Data

Power Supply	3.3~5.5V	
Reserve Power	2.0~4.2V	
Power Consumption	Tracking	35mA@3.3V Typical
	Acquisition	40mA@3.3V
Protocol	NMEA0183, User-defined	
Receiver Type	GPS/GLONASS/GALILEO/BDS/QZSS	
Sensitivity	Tracking	-165dBm Typical
	Acquisition	-148dBm Typical
Accuracy	Position	3.0mCEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s withoutSA
	Timing (PPS)	60nsRMS
TTFF	Cold Start	23s(Typical Open Sky)
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Assisted GPS support	1Hz as default	
Maximum Update Rate	10Hz in max	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g
Size	30(L)x26(W)x7.6(H)mm	

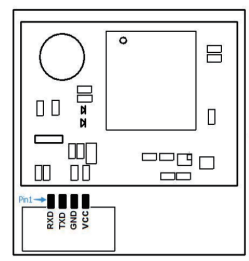
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKM80D GNSS Modules with antenna integrated

Highlights

- GPS only or BDS only or GPS+BDS or GPS+GLONASS
- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Built-in 12 multi-tone active interference canceller
- Ultra low power consumption
- Advanced Features: AlwaysLocate; AIC; EPO;EASY
- SBAS (WAAS,EGNOS,MSAS,GAGAN)
- ROHS compliance (Lead-free)



Electrical Data

Receiver Type	GPS only or GPS+BDS or GPS+GLONASS	
TTFF	Cold Start	23S
	Warm Start	2-3s
	Hot Start	1s
	Re-Acquisition	<1s
Sensitivity	3.0m CEP50 without SA(Typical Open Sky)	
Position	0.1m/s without SA	
Velocity	Tracking	-165dBm Typical
Sensitivity	Re-Acquisition	-160dBm Typical
	Cold Start	28S -148dBm
	Warm Start	28s -148dBm
	Hot Start	1s -156dBm
Speed accuracy	0.05m/s	
Altitude	Max 18,000m	
Velocity	Max 515m/s	
Acceleration	Less than 4g	
Navigation Data	Max 10Hz	
Update Rate	Default 5Hz	
Assisted GPS support	EPO	

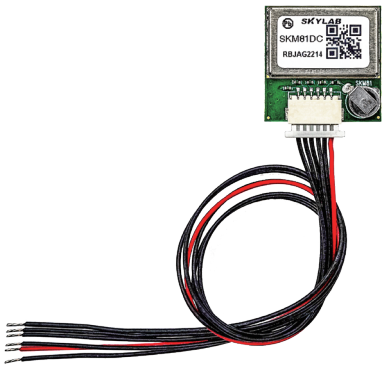
Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKM81DC GNSS Modules with antenna integrated

Highlights

- GPS/GLONASS/BD/QZSS receiver
- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Built-in 12 multi-tone active interference canceller
- Ultra low power consumption
- ±10ns high accuracy time pulse (1PPS)
- Advanced Features: AlwaysLocate; AIC; EPO;EASY
- SBAS (WAAS,EGNOS,MSAS,GAGAN)
- Small form factor: 18x18x6.3mm
- RoHS compliance (Lead-free)



Electrical Data

Voltage	3.0~4.3V	
Size	16.4*12.2*2.4mm	
TTFF	Cold Start	≤28S
	Hot Start	≤1s
	Re-Acquisition	<1s
Sensitivity	Tracking	-164dBm
	Acquisition	-146dBm
Accuracy	Position	<1.7m CEP50 (Typical Open Sky)
	Velocity	0.1m/s without SA
	Timing (PPS)	±15ns

Environmental data, quality reliability

Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~125℃

SKM86B GNSS Modules with antenna integrated

Highlights

- GPS/QZSS receiver
- Ultra high sensitivity: -167dBm
- Extremely fast TTFF at low signal level
- Ultra low power consumption
- NMEA Output： GGA,GSA,GSV,RMC,VTG,GLL
- Advanced Features: Aiding EPO;EASY
- RoHS compliance (Lead-free)

Parameter Specification

Receiver Type	GPS,GLONASS,BDS
Sensitivity	Tracking -165dBm Typical
	Acquisition -148dBm Typical
Accuracy	Position 3.0m CEP50 without SA(Typical Open Sky)
	Velocity 0.1m/s without SA
	Timing (PPS) 10ns RMS
Time To First Fix	Cold Start 26s(Typical Open Sky)
	Hot Start 1s
Assisted GPS support	EPO
Power Consumption	Tracking 25mA
	Acquisition 30mA
Navigation Data Update Rate	Max 10Hz
	Default 1Hz
Operational Limits	Altitude Max 18,000m
	Velocity Max 515m/s
	Acceleration Less than 4g

Environmental data, quality & reliability

Operation temperature: -40℃ to +85℃
Storage Temperature: -40℃ to +125℃

SKM51 GPS Receiver

Highlights

- Ultra high sensitivity: -165dBm
- 22 tracking/66 acquisition-channel receiver
- QZSS support
- NMEA protocols (default: 9600bps)
- Internal back-up battery
- Embedded patch antenna 25 x 25 x 4.0 mm
- Operating temperature range: -40 to 95℃ （Shell online test for 12 hours）
- RoHS compliance (Lead-free)
- Tiny form factor： 50.5* 38.5 * 18mm

Electrical Data

Receiver Type	L1 frequency band, C/A code, 22 Tracking / 66 Acquisition-Channel
Sensitivity	Tracking -165dBm
	Acquisition -148dBm
Accuracy	Position 3.0m CEP50 without SA(Typical Open Sky)
	Velocity 0.1m/s without SA
Acquisition Time	Cold Start 23s
	Warm Start 2~3s
	Hot Start 1s
	Re-Acquisition <1s
Power Consumption	Tracking 25mA @5V Typical
	Acquisition 30mA @5V
Navigation Data Update Rate	1Hz
Assisted GPS support	Altitude Max 18,000m
	Velocity Max 515m/s
	Acceleration Less than 4g
Impedance	50 Ω

Environmental data, quality reliability

Operating Temperature: -40℃~95℃

Storage Temperature: -40℃~95℃

SKM55 GNSS Receiver

Highlights

- GPS/ BDS/ GLONASS/GALILEO/QZSS receiver
- Ultra high sensitivity: -165dBm
- Extremely fast TTFF at low signal level
- Internal back-up battery
- Low power consumption: Typical 20mA@5V
- Manufactured in ISO9001 / IATF16949 certified production sites

Electrical Data

Size	46(L) x 45(W) x 15(H)mm
Power Supply	3.5~5.5V
Reserve Power	2.0~4.2V
Power Consumption	Tracking 35mA@3.3V typical
	Acquisition 40mA@3.3V
	Sleep/Standby Mode TBD
Protocol	NMEA 0183, User-defined
Receiver Type	GPS/BDS/GALILEO/GLONASS
Sensitivity	Tracking -165dBm Typical
	Acquisition -148dBm Typical
Accuracy	Position 3.0mCEP50 without SA(Typical Open Sky)
	Velocity 0.1m/s withoutSA
	Timing (PPS) 60nsRMS
TTFF	Cold Start 23s (Typical in Open Sky)
	Warm Start 3s
	Hot Start 1s
	Re-Acquisition <1s
Assisted GPS support	1Hz as default
Maximum Update Rate	10Hz in max
Operational Limits	Altitude Max 18,000m
	Velocity Max 515m/s
	Acceleration Less than 4g

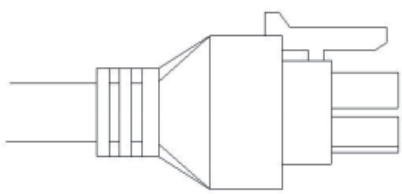
Environmental data, quality & reliability

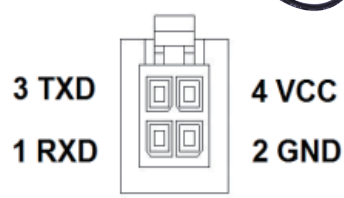
Operation temperature: -40℃ to +85℃(without backup battery)
Storage Temperature: -40℃ to +125℃

SKM2105D GNSS Receiver

Highlights

- Only GPS or only BDS or GPS+BDS or GPS+GLONASS Multisystem reception
- Size：50.7* 48.5* 18.5mm
- Ultra high sensitivity：-165 dBm
- NMEA agreement（default：9600 bps）
- Internal back-up battery
- Embedded patch antenna 35 x 35 x 4.0 mm or 25 x 25 x 4.0mm
- Advanced features: Always Locate; AIC; EPO; EASY





Electrical Data

Sensitivity	Tracking	-165dBm
	Acquisition	-148dBm
Accuracy	Position	3.0m CEP50 without SA(Typical Open Sky)
	Velocity	0.1m/s without SA
Acquisition Time	Cold Start	23s
	Warm Start	2~3s
	Hot Start	1s
	Re-Acquisition	<1s
Power Consumption	Tracking	31~50mA @5V Typical
	Acquisition	45~66mA @5V
Navigation Data Update Rate	1Hz	
Operational Limits	Altitude	Max 18,000m
	Velocity	Max 515m/s
	Acceleration	Less than 4g

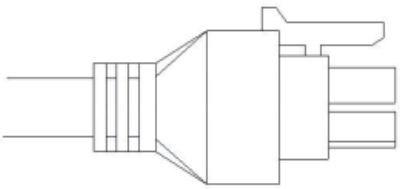
Environmental data, quality reliability

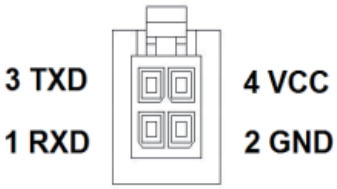
Operating Temperature: -40℃~85℃
Storage Temperature: -40℃~105℃

SKM2101 RTK GNSS Receiver

Highlights

- Low power consumption
- Get the fastest positioning time
- GPS/BDS/QZSS multi-system reception
- Ultra-high sensitivity: -165 dBm
- Internal backup battery
- Better positioning accuracy and position validity under weak signal
- NMEA protocol (default: 9600 bps)
- Operating temperature range: -40℃ to 85℃





Electrical Data

Size	50.7* 48.5* 18.0mm
Receiver Type	GPS L1C/A
	GLONASS L1OF
	BeiDou B1
TTFF	Cold Start 27s(Typical Open Sky)
	Warm Start 23s
	Hot Start 1s
	Assisted Start 5s
Timing accuracy	RMS: 30ns
	99%: 60ns
Speed accuracy	0.05m/s
Working current	Search: 28mA @5.0V Typical
	Tracking: 24mA @5.0V

Environmental data, quality reliability

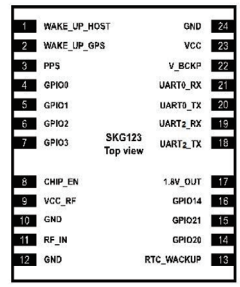
Operating Temperature: -40℃~85℃

Storage Temperature: -40℃~125℃

SKG123 L1+L5 GNSS Modules

Highlights

- L1+L5 dual-band, L1 supports GPS, GLO, GAL, BDS, QZSS, SBAS system
- L5 supports GPS, GAL, BDS, QZSS
- Support SBAS(WAAS, EGNOS, MSAS, GAGAN)
- Support RTCM(v2.3 and v3.3)
- Support AGPS: EPO, EASY, NVRAM, hotstill
- Support Power Saving Mode: Sleep mode, RTC mode, Periodic Mode, GLP, ULP
- Support PPS timing, accuracy up to ±15ns, PPS is associated with NMEA
- Up to 75 L1 satellites and 60 L5 satellites can be tracked
- Very fast TTFF: cold start is less than 28s (CTTFF is 24s with GLO); hot start is less than 1s
- Industrial standard
- Good positioning accuracy and position validity under weak signal



Electrical Data

Parameter	Specification
RF input	1602 MHz（L1）:1602 MHz（L1）
	1575.42 MHz（L1）:GPS L1 CA/QZSS L1 CA/SBAS L1/QZSS L1 SAIF/Galileo E1(E1B+E1C)
	1561.098 MHz（L1）:BeiDou B1I
	1176.45 MHz（L5）:GPS L5/QZSS L5/Galileo E5a/BeiDou B2a
	Resident waveby:≤1.5
	Input resistance:50Ω±10%
	Antenna gain:0～32dB
Physical dimension	16.4*12.2*2.4mm
Data interface	2 UART, TTL level, baud rate 110 ~ 921600bps adjustable
First position time TTFF	Cold start:≤28s Hot Start:≤1s Recovery:≤1s
Sensitivity	Capture:-146dBm Recapture:-160dBm Track:-164dBm
Dynamic performance	Speed:Maximum 515m / s Acceleration:Maximum 4g
Accuracy	position:Open sky: CEP50: <1.7 m
	speed:0.1m/s without SA
	PPS:±15ns
Data update rate	1Hz ~ 10Hz, default 1 Hz
Navigation data format	NMEA 0183 V4.1

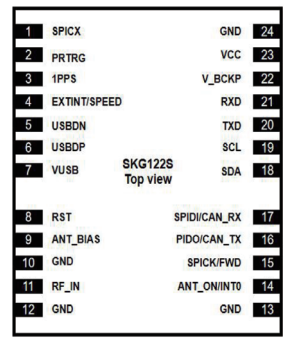
Environmental data, quality reliability

Operating Temperature: -40°C~85°C
Storage Temperature: -40°C~125°C

SKG122S L1+L5 GNSS Modules

Highlights

- Supports BDS, GPS, GLONASS, Galileo, QZSS and SBAS systems
- Support the number of tracking satellites up to 40
- Extremely fast TTFF: cold start less than28s
- Hot start less than 1s
- Support A-GPS
- Industrial Grade Standards
- Compliance with RoHS, FCC, CE standards
- Get the fastest location time
- Better positioning accuracy and position validityaremaintained under weak signal
- Superior quality and reliability



Electrical Data

Parameter	Description
Voltage	3.0~3.6V
Frequency	GPS/QZSS :L1CA, L1C,L5
	GLONASS: L1
	BeiDou: B1I,B2a,B1C(Off by default)
	GALILEO: E1,E5
	SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM(L1)
Standing-wave ratio	≤1.5
Input impedance	50Ω±10%
Antenna Gain	0～32dB
Physical Size	16.0*12.2*2.4（mm）
Data interface	One UART, TTL level, baud rate adjustable from1200to460800bps, 115200 by default
Antenna testing	Support antenna feed, need external antenna detection circuit
First positioning time TTF	Cold Start ≤28s
	Hot Start ≤1s
	Re-Acquisition ≤1s
Sensitivity	Tracking:-162dBm
	Acquisition:-148dBm
Precision	Position Open-Sky CEP<1m
	Speed 0.1m/s
Dynamic performance	Speed :515m/s
	accelerated speed :4g
PPS	Supported, precision20ns
Data updating rate	1Hz~5Hz /Default： 1Hz
Navigation data format	NMEA 0183 V4.1

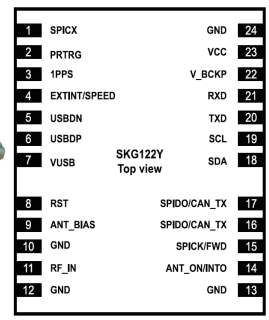
Environmental data, quality reliability

Operating Temperature: -40°C~85°C
Storage Temperature: -40°C~125°C

SKG122Y L1+L5 GNSS Modules

Highlights

- Support BDS、GPS、GLONASS、Galileo、QZSS、SBAS and IRNSS systems
- Support the number of tracking satellites up to 40
- 1s/ Extremely fast TTFF: cold start less than 28s; Hot start less than 1s
- Support A-GPS/ Support A-GPS
- Industrial Grade Standards
- Super small size: 16.0x12.2x2.4mm
- Compliance with RoHS, FCC, CE standards
- Get the fastest location time
- Superior quality and reliability
- Better positioning accuracy and position validity are maintained under weak signal



Electrical Data

Parameter	Description
Voltage	3.0~3.6V
Frequency	GPS/QZSS :L1CA, L1C,L5
	GLONASS: L1
	BeiDou: B1I,B2a,B1C(Off by default)
	GALILEO: E1,E5
	SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM(L1)
Standing-wave ratio	≤1.5
Input impedance	50Ω±10%
Antenna Gain	0～32dB
Physical Size	16.0*12.2*2.4（mm）
Data interface	One UART, TTL level, baud rate adjustable from1200to460800bps, 115200 by default
Antenna testing	Support antenna feed, need external antenna detection circuit
First positioning time TTF	Cold Start ≤28s
	Hot Start ≤1s
	Re-Acquisition ≤1s
Sensitivity	Tracking:-162dBm
	Acquisition:-148dBm
Precision	Position Open-Sky CEP<1m
	Speed 0.1m/s
Dynamic performance	Speed :515m/s
	accelerated speed :4g
PPS	Supported, precision20ns
Data updating rate	1Hz~5Hz /Default： 1Hz
Navigation data format	NMEA 0183 V4.1

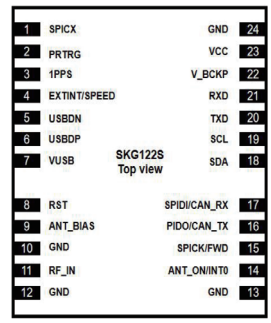
Environmental data, quality reliability

Operating Temperature: -40°C~85°C
Storage Temperature: -40°C~125°C

SKM2105NR L1+L5 GNSS Receiver

Highlights

- BDS, GPS, GLONASS, Galileo,QZSS, SBAS and Navic multi-system reception
- Ultra high sensitivity： -165dBm
- NMEA protocol (default baud rate: 115200 bps)
- Internal spare battery
- Embedded ceramic antenna 25x25x4.0mm and 35x35x4.0mm
- Advanced Features: Always Locate; AIC; EPO; EASY
- Compliance with ROHS, CE, FCC standards



Electrical Data

Parameter	Specification
Type of receipt	GNSS
Sensitivity	Tracking:1.5m CEP50 without SA(OpenSky); Acquisition:0.1m/s without SA
Acquisition Time	Cold Start:≤28s; Warm Start:≤28s; Hot Start:<1s; Re-Acquisition:<1s
Power Consumption	Tracking:56~59mA @5V Typical; Acquisition;57~62mA @5V
NMEA output frequency	1Hz
Operational Limits	Altitude:Max 18,000m; Velocity:Max 515m/s; Acceleration:Less than 4g
Antenna design	
Frequency point	L1:1602 MHz GLONASS L1OF
	L1:1575.42 MHz GPS L1CA QZSS L1CA SBAS L1 QZSS L1 SAIF Galileo E1(E1B+E1C)
	L1:1561.098 MHz BeiDou B1I
	L5:1176.45 MHz GPS L5 QZSS L5 Galileo E5a BeiDou B2a
Impedance	50±5 Ω
Axial ratio	3 dB max
Polarization	Right polarization (RHCP)
Mechanical characteristics	
Size	50.7* 48.5 * 18.5mm
Power Consumption	
Voltage	3.5V~5.5V
Electric current	57mA(typical)

Environmental data, quality reliability

Operating Temperature: -40°C~85°C
Storage Temperature: -40°C~125°C
Humidity: ＜95%

UWB Products

UWB Anchor

PRODUCT SELECTOR

UWB Anchor	VDU2503	VDU2613	VDU2506	VDU2506D
Main Chip	UWB:DW1000 MCU:STM32F4	UWB:DW1000 MCU:STM32F4	UWB:DW1000 BLE:nRF52832 WIFI：MT7688N	UWB:DW1000 BLE:nRF52832 WIFI：MT7688N
Power Supply	POE 48V DC 5V1A	POE 48V DC 5V2A	POE 48V DC 5V1A	POE 48V DC 5V2A
LNA	Y	Y	Y	Y
PA	1 Class	1 Class	2 Class	2 Class
Cover Range	<50m	<50m	<500m	<500m
Antenna	PCB Antenna	PCB Antenna	WIFi FPC Antenna UWB PCB Antenna	WIFi FPC Antenna UWB External Antenna
Waterproof Grade	IP66	IP67	IP67	N
Explosion-proof Grade	Compliant with ExibIIBT4Gb Pending Certification	Compliant with ExdibIIBT4Gb Flameproof,Pending Certification	Compliant with ExibIIBT4Gb Pending Certification	/

VDU2503 UWB Anchor (TDOA Algorithm)

Highlights

- UWB Channel: Default 3774~4243.2MHz, Support channel CH1-5
- Power Supply: POE or Power Adapter 5V(4.5V~5.5V)
- Antenna: Build-in UWB Antenna
- Data Upload Method: Default 6.8Mbps Support 110Kbps,850kbps
- Data Transmission Rate: Default 6.8Mbps Support 110Kbps,850kbps
- Positioning Accuracy: <30cm （no obstacle between anchor and Tag）
- Compatible with IEEE802.15.4-2011 UWB protocol

Model Parameter

Main Chipset	UWB:DW1000 MCU:STM32F4
Power Supply	POE 48V DC 5V1A
LNA	Y
PA	1 Class
Coverage Area	＜50m
Antenna	PCB Antenna
Working temperature	-30℃~70℃
Storage temperature	-40℃~85℃
Waterproof Rating	IP66
Explosion Protection Rating	ExibIIBT4Gb

VDU2506 UWB Anchor (TWR Algorithm)

Highlights

- UWB Channel: Default 3774~4243.2MHz, Support channel CH1-5
- Power Supply: POE or Power Adapter 5V(4.5V~5.5V)
- Antenna: Build-in UWB Antenna
- Data Upload Method: 100Mbps Ethernet
- Data Transmission Rate: Default 6.8Mbps Support 110Kbps,850kbps
- Positioning Accuracy: <30cm （no obstacle between anchor and Tag）
- Support protocol: Compatible with IEEE802.15.4-2011 UWB protocol
- Waterproof Grade: IP66
- Data storage: Support data storage without network

Model Parameter

Main Chipset	UWB:DW1000 BLE:nRF52832 WIFI:MT7688N
Power Supply	POE 48V DC 5V1A
LNA	Y
PA	2 Class
Coverage Area	＜500m
Antenna	WIFI FPC Antenna UWB PCB Antenna
Working temperature	-20℃~70℃
Storage temperature	-40℃~85℃
Waterproof Rating	IP66
Explosion Protection Rating	ExibIIBT4Gb

UWB Tag

PRODUCT SELECTOR

UWB Tag	VDU1501A/R	VDU1502A/R	VDU1506A/R
Main Chip	"UWB:DW1000 BLE:nRF52832"	"UWB:DW1000 BLE:nRF52832"	"UWB:DW1000 BLE:nRF52832"
Size（mm）	85*54*7.5	44*46*19.5 (Not included watchband)	57.4*38.8*21
Battery Capacity	550mAh	750mAh	1000mAh
"TDOA Standby-time (Default Power@1Hz)"	About 2.1 Months	About 2.8 Months	About 3.8 Months
"TWR Standby-time (Default@1Hz)"	15.6 Days	21.2 Days	28.3 Days
SOS	Y	Y	Y
Waterproof Grade	IP66	IP67	IP66

VDU1501A UWB Card

Highlights

- UWB Channel: Default 3774~4243.2MHz, Support channel CH1-5
- Protocol Standard: IEEE 802.15.4-2011 UW
- RF Chain: CH2 Support 2 Class PA+ 1 Class LNA,other frequency support FEM
- Broadcast Frequency: 1Hz/10Hz
- Build-in Battery: 550mAh Rechargeable Lithium Battery
- Charging Time: About 4 hours
- Buttons: SOS, ON, OFF
- Dustproof Waterproof Level: IP66

Model Parameter

Main Chipset	UWB:DW1000 BLE:nRF52832
Size	85*54*7.5 (mm)
Battery capacity	550 (mAh)
Stand-by Time (default power@1Hz)	About 2 Months
Working Temperature	-20~60℃
Power Consumption	Standby mode 20uA Transmit mode less than 20mA

VDU1502A UWB Bracelet

Highlights

- UWB Channel: Default 3774~4243.2MHz, Support channel CH1-5
- Protocol Standard: IEEE 802.15.4-2011 UW
- RF Chain: Support PA
- Build-in Battery: 750mAh Rechargeable Lithium Battery
- Charging Time: About 4 hours
- Heart Rate: Support
- SOS Button: Support
- Step counter: Support (Optional)
- Dustproof Waterproof Level: IP67

Model Parameter

Main Chipset	UWB:DW1000 BLE:nRF52832
Size	44*46*19.5 mm (not including watchband)
Battery capacity	750 (mAh)
Stand-by Time (default power@1Hz)	About 3 Months
Working Temperature	-20~60℃
Power Consumption	50uA standby, 150mA positioning launch
Charging voltage	DC5V /1A

VDU1506A UWB Tag

Highlights

- UWB Channel: Default 3774~4243.2MHz, Support channel CH1-5
- Protocol Standard: IEEE 802.15.4-2011 UW
- Broadcast Frequency: 1Hz/5Hz
- Build-in Battery: 1000mAh Rechargeable Lithium Battery
- Charging Time: About 4 hours
- Buttons: SOS, ON, OFF
- Dustproof Waterproof Level: IP66
- RF Chain: CH2 Support 2 Class PA+ 1 Class LNA, other frequency support 1 Class PA+ 1 Class LNA

Model Parameter

Main Chipset	UWB:DW1000 BLE:nRF52832
Size	57.4*38.8*21 mm (not including watchband)
Battery capacity	1000 (mAh)
Stand-by Time (default power@1Hz)	About 4 Months
Working Temperature	-20~80 ℃
Power Consumption	Standby: 50uA TX standard power: 300mA RX: 70mA

SKYLAB

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