AMICCOM

AMICCOM Electronics Corporation

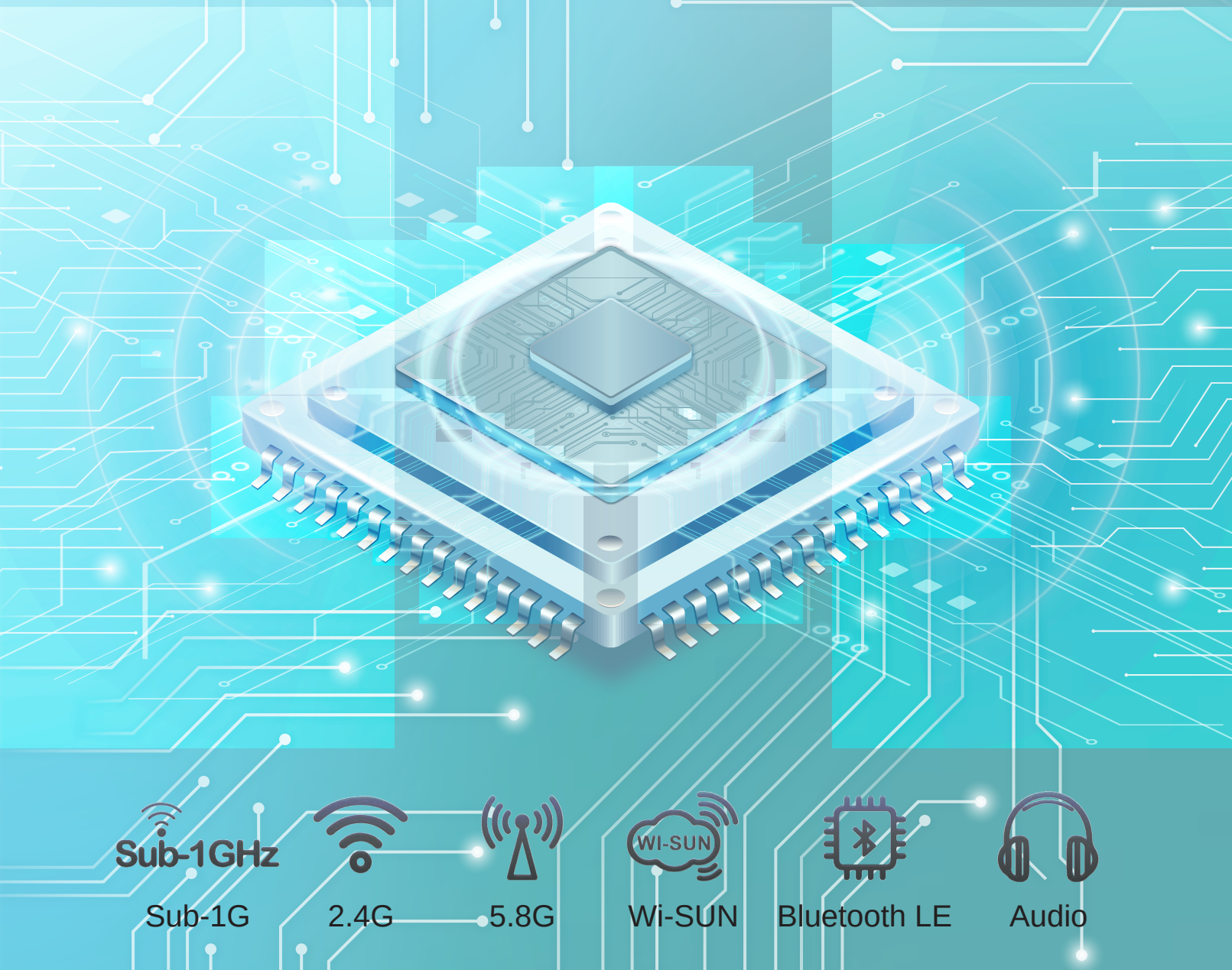
笙科電子股份有限公司

Share excellent RF Experiences

Keep leading RF technology

RF Solutions & Wireless IC Design

Low Power | Long Range | High Reliability



Sub-1GHz

Sub-1G

2.4G

5.8G

WI-SUN

Wi-SUN

Bluetooth LE

Audio

關於笙科電子

笙科電子 (AMICCOM) 是一間專業的 RF 晶片設計公司，管理階層和技術團隊均已在 RF 業界數十年的經驗。 笙科一直專注研發 CMOS 製程的 RF 半導體晶片，提供客戶高效能、低成本、高整合度的 RF IC 與 SOC。笙科電子產品的應用範圍非常廣泛，在 PC 應用方面，如：無線滑鼠 / 鍵盤 / Vista RF 遙控器，以及 Wireless USB。 在工業應用方面，如：自動讀表系統 (AMR/AMI)、Zigbee、WiSUN、智慧型建築，以及工廠自動化控制。 在消費電子應用方面，如：低功耗藍芽 (Bluetooth LE)、電子貨價標籤 (ESL)、PS / XBox 無線遊戲控制器、無線耳機以及無線對講機。在汽車電子應用方面，如： 汽車遙控器、汽車防盜系統、無線胎壓偵測，以及無線倒車影像系統。 加上特殊的無線應用，如： 衛星通訊接收器、智慧型運動器材、以及無線醫療儀器。以上各式應用，均已是笙科電子積極開發的市場。 同時，我們的管理團隊秉持藍海策略，我們的技術團隊持續開發自我專利的 CMOS RF IC，期盼帶給人類更好的生活經驗。

关于笙科电子

笙科电子 (AMICCOM) 是一间专业的 RF 芯片设计公司，管理阶层和技术团队均已在 RF 业界数十年的经验。 笙科一直专注研发 CMOS 制程的 RF 半导体芯片，提供客户高效能、低成本、高整合度的 RF IC 与 SOC。笙科电子产品的应用范围非常广泛，在 PC 应用方面，如：无线鼠标 / 键盘 / Vista RF 遥控器，以及 Wireless USB。 在工业应用方面，如： 自动读表系统 (AMR/AMI)、Zigbee、WiSUN、智能型建筑，以及工厂自动化控制。 在消费电子应用方面，如：低功耗蓝牙 (Bluetooth LE)、电子货价卷标 (ESL)、PS / XBox 无线游戏控制器、无线耳机以及无线对讲机。在汽车电子应用方面，如： 汽车遥控器、汽车防盗系统、无线胎压侦测，以及无线倒车影像系统。 加上特殊的无线应用，如： 卫星通讯接收器、智能型运动器材、以及无线医疗仪器。以上各式应用，均已是笙科电子积极开发的市场。同时，我们的管理团队秉持蓝海策略，我们的技术团队持续开发自我专利的 CMOS RF IC，期盼带给人类更好的生活经验。

About AMICCOM

AMICCOM is a professional semiconductor company offering a complete product family of industry-leading RF ICs. Our management team and technical groups have already stayed in RF field for decades. We definitely focus on RFCMOS process to provide our customers the high performance, low cost, and high integration RF ICs and SOC. In PC applications, we have Wireless Mice/Keyboard/Vista Remote controller and Wireless USB products. In Industrial applications, there are products for AMR/AMI, Zigbee, WiSUN, Smart Building and Automation Control. In Consumer Electronics, we provide chips for Bluetooth LE, Electronic Shelf Label, PS/Xbox Wireless Game Pads, wireless headphone and Walkie Talkie application. In Automotive Electronics, we have products for Car Remote Controller, Car Security, TPMS and Wireless Video Parking System. We also engaged in some Specific applications, such as Satellite LNB, Intelligent Sports and Wireless Medicine. Those markets are what AMICCOM have dedicated to. Our management team always focuses on Blue Ocean Strategy and our technical groups keep developing the advanced RF IC/SOC to bring better life experiences to human beings.

笙科電子專注以 CMOS 技術設計 RF IC，從元件佈局，功耗最小化，獨特的電路設計加上先進的製程，笙科電子所設計的高頻特性已超越商用化的水準。笙科電子根據 ISM Band 無線應用，提供客戶三大選擇；2.4GHz, Sub 1GHz(169/315/433/868/915MHz) 與 5.8GHz，完整的產品線包含：單向 / 雙向 RF IC；多種傳輸速率 2K~500K / 500K ~2M/3M/4M/6M bps；可程式化發射功率 -10 ~ + 20dBm，配合高接收靈敏度，並可依需求外掛笙科的 LNA/PA 或內建的 PA，符合客戶設計遠近不同 (1m ~ 1.0km) 的無線應用。

AMICCOM focuses on RF IC/SOC design with CMOS technology. From device layout, power optimization, circuit design, and advanced semiconductor processes, AMICCOMs high-frequency circuit characteristics have surpassed commercial standards. AMICCOM provides customers three ISM Band wireless applications: 2.4GHz, Sub 1GHz (169/315/433/868/915MHz), and 5.8GHz. The complete product lines include: unidirectional/bidirectional RF IC and SOC; various transmission speeds: 0.25K ~ 500K/500K ~ 2M/3M/4M/6M bps; Programmable transmitting power level: -10 ~ + 20dBm with high receiving sensitivity. According to transmission distance requirements (1M ~ 1.0KM), customer also can choose to use AMICCOMs LNA/PA or built-in PA for wireless applications.

笙科電子設計的 RF IC 採用高整合概念，晶片內建 VCO、PLL、LNA、PA、FIFO、RSSI、CRC、FEC、Data Whitening (可視為資料加密)、Auto Calibration 等功能，使用者可自行選擇熟悉的 MCU 透過 SPI 介面控制 RF IC，笙科電子的 RF IC 對於 MCU 並沒有挑剔性，RF IC 與 MCU 之間均為數位介面，易於開發與除錯，配合笙科電子提供的參考代碼及開發套件，研發時不需要艱深的射頻知識，生產時也不需要昂貴的射頻儀器，RF 模組僅需少量的外部元件，即可輕易地開發各式各樣的無線應用。除了 RF IC 外，笙科電子並積極開發高整合的 SoC 產品，內建 8bit CPU (1T 8051)，ARM Cortex M0 或 M4，各種數位周邊 (UART、I2C、SPI、PWM) 及 Audio Codec，可適用於各種無線應用。

The RF ICs provided by AMICCOM are highly integrated chips. These chips build in VCO, PLL, LNA, PA, FIFO, RSSI, CRC, FEC, Data Whitening, Auto Calibration and many other functions. Users can choose Various MCUs to control the RF IC through the SPI interface. Through the digital interface of RF IC and MCU, it is easy to develop and debug system for customer. In conjunction with the reference code and development kit provided by AMICCOM, customers dont need to know the hard RF knowledge during development and no need for expensive RF equipment during mass-production. RF modules only need a few external components and it is easy to develop all kind of wireless application with chips provided by AMICCOM. In addition to RF ICs, AMICCOM also provide customers the highly integrated SOC products with embedded micro-controller (including 8bit 1T-8051, 32-bit ARM Cortex-M0 and M4F), various digital peripherals (UART, I2C, SPI, PWM) and audio codec. Those SOC product lines are suitable for a variety of wireless applications.

2.4GHz Proprietary TRX

PART NUMBER	TYPE	MODULATION				DATA RATE up to(kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
		DSSS	FSK	GFSK	DQPSK					
A7157	TRX	✓	✓			133.3(DSSS) 4000(FSK)	-101 @133.3Kbps(DSSS) -87 @ 4Mbps(FSK)	65	90@17dBm	QFN 32
A7205	RX		✓	✓		500	-95@ 500Kbps	16	-	QFN 20
A7105	TRX		✓	✓		500	-95@500Kbps	16	20@0dBm	QFN 20
A7325	TX		✓	✓		2000	-	-	16.5@5dBm	QFN 16
A7125	TRX		✓			2000	-90@ 2Mpbs	17	21@5dBm	QFN 20
A7137	TRX		✓	✓		2000	-90@ 2Mbps	24	35.5@10dBm	QFN 20
A7192	TRX		✓	✓		2000	-89 @ 2Mbps	23	140@19.5dBm	QFN 24
A7121	TRX		✓	✓		3000	-80 @3Mpbs	28	34@0dBm	QFN 32
A7130	TRX		✓	✓		4000	-88@ 4Mpbs	27	29@5dBm	QFN 20
A7133	TRX		✓	✓		4000	-88@ 4Mpbs	27	35@9dBm	QFN 20
A7131	TRX		✓	✓		4000	-88 @4Mbps	27	35@10dBm	QFN 20
A7196	TRX		✓	✓		6000	-83 @ 6Mbps	29	140@19.5dBm	QFN 24
A7197	TRX		✓		✓	8000	-86 @ 8Mbps	33	270@22dBm	QFN 24

PA / LNA

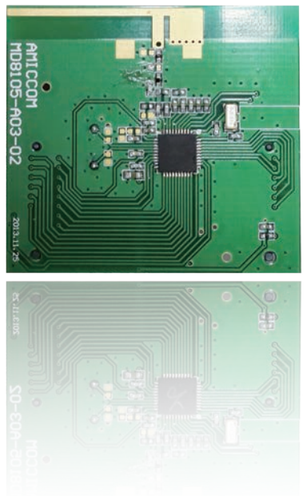
PART NUMBER	TYPE	FREQUENCY (MHZ)	SLEEP CURRENT (uA)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
A7700	PA/LNA	2400 - 2483.5	1	4.3	115 @ 19dBm	QFN 16
A7701	PA/LNA	2400 - 2483.5	1	5.4	230 @ 22dBm	QFN 16
A7702	PA/LNA	2400 - 2483.5	8	8	135 @ 21dBm	QFN 16

2.4GHz module

2.4GHz + A7700 module.

2.4GHz SoC

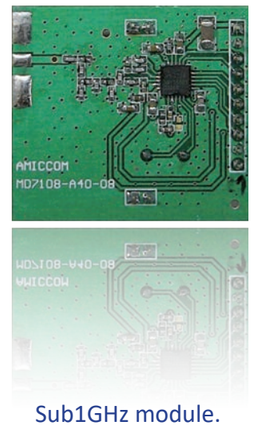
PART NUMBER	Type	Code Memory	RAM	Digital I/O	Peripheral					ADC		MODULATION		DATA RATE up to(kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
					I2C	SPI	UART	PWM	NFC	SAR,12bit	RSSI,8bit	FSK	GFSK	HIGH				
A83X25F445	8051 CPU	16KB Flash	1KB	8			1	2		2CH	✓	✓	✓	2000			16.2 @6dBm	QFN 20
A81X06F45A	8051 CPU	16 KB Flash	2KB	24	✓	1	1	2		8CH	✓	✓	✓	500	-99@ 500Kbps	14	21.3 @4dBm	QFN 40
A81C06F85A	ARM® Cortex®-M0	256KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		500	-100@ 500Kbps	6@DC/DC	8@DC/DC	QFN 40
A81C31F75A	ARM® Cortex®-M0	128 KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		2000	-94.5@ 2Mbps	6.3@DC/DC	8.3@DC/DC	QFN 40
A81C31F85A	ARM® Cortex®-M0	256KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		2000	-94.5@ 2Mbps	6.3@DC/DC	8.3@DC/DC	QFN 40
A81C31F95A	ARM® Cortex®-M0	256KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		2000	-94.5@ 2Mbps	6.3@DC/DC	8.3@DC/DC	QFN 40
A81U25F75A	ARM® Cortex®-M0	128 KB Flash	32KB	23	✓	2	3	7		2CH	✓	✓	✓	2000	-90@ 2Mbps	7.1@DC/DC	9.0@DC/DC	QFN 40
A81C31F748	ARM® Cortex®-M0	128 KB Flash	32KB	14	✓	2	1	6	✓	4CH	✓	✓		2000	-94.5@ 2Mbps	6.3@DC/DC	8.3@DC/DC	QFN 32
A81C31F848	ARM® Cortex®-M0	256KB Flash	32KB	14	✓	2	1	6	✓	4CH	✓	✓		2000	-94.5@ 2Mbps	6.3@DC/DC	8.3@DC/DC	QFN 32
A81C31F948	ARM® Cortex®-M0	512KB Flash	32KB	14	✓	2	1	6	✓	4CH	✓	✓		2000	-94.5@ 2Mbps	6.3@DC/DC	8.3@DC/DC	QFN 32
A81C37F75A	ARM® Cortex®-M0	128 KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		2000	-94.5@ 2Mbps	7.6@DC/DC	35@DC/DC	QFN 40
A81C37F85A	ARM® Cortex®-M0	256 KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		2000	-94.5@ 2Mbps	7.6@DC/DC	35@DC/DC	QFN 40
A81C37F95A	ARM® Cortex®-M0	512 KB Flash	32KB	23	✓	3	3	7		7CH	✓	✓		2000	-94.5@ 2Mbps	7.6@DC/DC	35@DC/DC	QFN 40



2.4GHz SoC module.

Sub1GHz Proprietary TRX

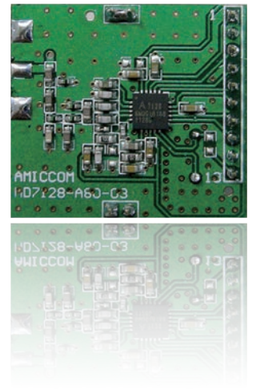
PART NUMBER	TYPE	MODULATION													DATA RATE up to(kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
		DSSS	FSK	4FSK	GFSK	4GFSK	OOK	ASK	169	315	433	490	868	915	1253				
A7126	TRX	✓	✓	✓	✓	✓	✓				✓				✓	500	-85@500Kbps -123@1.25Kbps	8.8	21.1@10.94dBm	QFN 24
A7128	TRX		✓		✓						✓	✓	✓	✓		2000	-88@ 2Mbps	18.5	36@10dBm	QFN 20
A7108	TRX		✓		✓					✓	✓	✓	✓	✓		250	-117@ 2Kbps	14	70@ 17dBm	QFN 20
A7136	TRX		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		500	-97 @ 500Kbps -122 @ 1.25Kbps	8.2 @ DC/DC	82.9@19.4dBm,DC/DC	QFN 24
A7138	TRX		✓		✓						✓		✓	✓		4000	-88@ 2Mbps	18.5	35 @ 11dBm	QFN 24
A7146	TRX		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		500	-97 @ 500Kbps -115@9.6Kbps	8.2 @ DC/DC	79.5@19.4dBm,DC/DC	QFN 24
A7169	TRX		✓		✓					✓	✓	✓	✓	✓		500	-108@ 100Kbps	3.3	70@19.1dBm	QFN 16
A7159	TRX	✓	✓		✓					✓	✓	✓	✓	✓		250	-120 @ 10Kcps@ DSSS	3.9	86@ 20dBm	QFN 24
A7119	TRX	✓	✓		✓					✓	✓	✓	✓	✓		250	-121 @ 10Kcps@ DSSS	4.5	25@ 10dBm	QFN 24
A7149	TRX		✓		✓					✓	✓	✓	✓	✓		500	-115.2@ 2Kbps	1.67	66.7@ 19.2dBm	QFN32
A7139	TRX		✓		✓					✓	✓	✓	✓	✓		250	-119@ 2Kbps	3.8	76@ 18.9dBm	QFN 24
A7109	TRX		✓		✓					✓	✓	✓	✓	✓		250	-118@ 2Kbps	1.8	15.7@ 10.3dBm	QFN32
A7129	TRX		✓		✓					✓	✓	✓	✓	✓		250	-118@ 2Kbps	3.8	26@ 10.3dBm	QFN 24
A7112	TRX		✓		✓					✓	✓	✓	✓	✓		250	-114@ 2Kbps	14	36.1@ 8.7dBm	QFN 20
A7102	TRX		✓								✓		✓	✓		150	-117@ 2Kbps	13	20@0dBm	QFN 32
A7103A	TRX		✓					✓		✓	✓					20	-110@ 2.4Kbps	9	18@10dBm	SSOP24
A7103B	TRX		✓					✓					✓	✓		20	-107@ 2.4Kbps	11	17@5dBm	SSOP24
A7339	TX		✓		✓						✓		✓	✓		250	-	-	73@18.8dBm	QFN 20
A7329	TX		✓		✓						✓		✓	✓		250	-	-	25@ 10dBm	QFN 20
A7229	RX		✓		✓					✓	✓		✓	✓		250	-112@ 50Kbps	3.85	-	QFN20
A7209	RX						✓	✓		✓	✓		✓	✓		10	-112@ 2.4Kbps	4	-	QFN20
A7210	RX						✓	✓		✓	✓		✓	✓		10	-109@ 10Kbps	3.8	-	QFN32
A7302C	TX		✓					✓		✓	✓					20	-	-	14@ 10dBm	DFN 10
A7302D	TX		✓					✓					✓	✓		20	-	-	13@ 6dBm	DFN 10



Sub1GHz module.

Sub1GHz SoC

PART NUMBER	Type	Code Memory	RAM	Digital I/O	Peripheral					ADC		MODULATION								FREQUENCY (MHZ)						DATA RATE up to(kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
					I2C	SPI	UART	USART	PWM	SAR,12bit	RSSI,8bit	DSSS	FSK	4FSK	GFSK	4GFSK	OOK	IEEE 802.15.4 compliant MAC	169	315	433	470	868	915					
A93X39F445	8051 CPU	16 KB Flash	1KB	8		✓	1		2	2Ch			✓		✓						✓	✓	✓	✓	250	-	-	88.6@18dBm	QFN 20
A91X08F5A	8051 CPU	16 KB Flash	2KB	24	✓	✓	1		2	4Ch	✓		✓		✓						✓	✓	✓	✓	250	-117@ 2Kbps	14.2	81.6@17.4dBm	QFN 40
A91X12F45A	8051 CPU	16 KB Flash	2KB	24	✓	✓	1		2	4Ch	✓		✓		✓						✓	✓	✓	✓	250	-117@ 2Kbps	13.1	51.2 @ 15.5dBm	QFN 40
A91U59F66C	8051 CPU	64 KB Flash	8KB	32	✓	✓	2		4	8Ch	✓	✓	✓		✓						✓	✓	✓	✓	500	-108@ 100Kbps	6.9	88.6 @ 19.9dBm	QFN 48
A91X39F46C	8051 CPU	16 KB Flash	4KB	32	✓	✓	1		2	8Ch	✓		✓		✓					✓	✓	✓	✓	✓	250	-117@ 2Kbps	4.5	72.4 @ 19dBm	QFN 48
A91U39F66C	8051 CPU	64 KB Flash	8KB	32	✓	✓	2		4	8Ch	✓		✓		✓						✓	✓	✓	✓	500	-108@ 100Kbps	6.9	88.6 @ 19.9dBm	QFN 48
A91X29F46C	8051 CPU	16 KB Flash	4KB	32	✓	✓	1		2	8Ch	✓		✓		✓					✓	✓	✓	✓	✓	250	-117@ 2Kbps	4.8	22.3 @13dBm	QFN 48
A91U29F66C	8051 CPU	64 KB Flash	8KB	32	✓	✓	2		4	8Ch	✓		✓		✓						✓	✓	✓	✓	500	-108@ 100Kbps	6.8	31 @10dBm	QFN 48
A91U59F75A	ARM® Cortex®-M0	128 KB Flash	16KB	22	✓	✓	2		2	8Ch	✓	✓	✓		✓					✓	✓	✓	✓	✓	2000	-119@ 10Kcps @DSSS	4.5@DCDC	69 @ 20dBm	QFN40
A91U29F75A	ARM® Cortex®-M0	128 KB Flash	16KB	22	✓	✓	2		2	8Ch	✓		✓		✓						✓	✓	✓	✓	2000	-118@ 2Kbps	4.6@DCDC	15.3@DC/DC	QFN40
A91U39F75A	ARM® Cortex®-M0	128 KB Flash	16KB	22	✓	✓	2		2	8Ch	✓		✓		✓						✓	✓	✓	✓	2000	-118@ 2Kbps	4.19@DCDC	71.9 @ 20dBm	QFN40
A91S36F96C	ARM® Cortex®-M4	512 KB Flash	80KB	24	✓	✓	3	✓	8	5Ch	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	1000	-98.5 @ 500Kbps -129.5 @ 0.5Kbps	9.48@DCDC	83.36 @ 19.14dBm,DC/DC	QFN 48
A91S36FZ6C	ARM® Cortex®-M4	1536 KB Flash	80KB	24	✓	✓	3	✓	8	8Ch	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	1000	-98.5 @ 500Kbps -129.5 @ 0.5Kbps	9.48@DCDC	83.36 @ 19.14dBm,DC/DC	QFN 48
A91S46F98G	ARM® Cortex®-M4	512 KB Flash	80KB	21	✓	✓	3		8	8Ch	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1000	-100.5 @ 200Kbps -108 @ 50Kbps	9.48@DCDC	83.36 @ 19.14dBm,DC/DC	QFN 64
A91S46FZ6C	ARM® Cortex®-M4	1536 KB Flash	80KB	21	✓	✓	3		8	8Ch	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1000	-100.5 @ 200Kbps -108 @ 50Kbps	9.48@DCDC	83.36 @ 19.14dBm,DC/DC	QFN 64



Sub1GHz module.

5.8GHz / 5.2GHz Proprietary TRX

PART NUMBER	TYPE	MODULATION	FREQUENCY (MHZ)	DATA RATE up to(kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
A5128	TRX	FSK/GFSK	5725-5850 5130-5250	4000	-91 @ 4Mbps	33	88 @ 15	QFN 24
A5131	TRX	FSK/GFSK	5500-5700	4000	-91 @ 4Mbps	33	96 @ 15	QFN 24
A5132	TRX	FSK/GFSK	5725 - 5850	4000	-91 @ 4Mbps	33	53 @ 4.5	QFN 24
A5133	TRX	FSK/GFSK	5725 - 5850	4000	-91 @ 4Mbps	33	88 @ 15	QFN 24

5.8GHz SOC

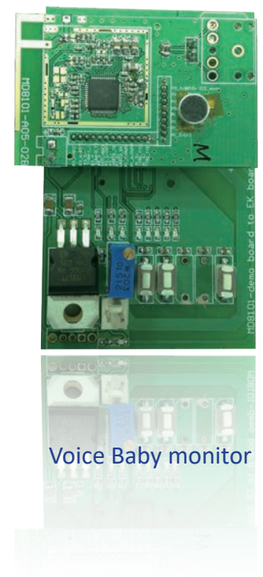
PART NUMBER	Type	Code Memory	RAM	Digital I/O	Peripheral					ADC		MODULATION	DATA RATE (kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
					I2C	SPI	UART	PWM	ISO7816	SAR, 12bit	RSSI, 8bit						
A10U11F66C	8051 CPU	64 KB	8K	24	✓	✓	1	4	✓	8Ch	✓	ASK	256	-85	32	50 @9dBm	QFN 48
A61S33F97E	ARM® Cortex®-M4	512K	80K	24	✓	✓	3	8		8Ch	✓	FSK/GFSK	4000 - 500	-91 @4Mbps	33	88 @15dBm	QFN 56

Wireless Audio / Voice SoC

PART NUMBER	TYPE	Code Memory	RAM	Digital I/O	Peripheral						ADC		Audio Codec	MODULATION	FREQUENCY (MHZ)	DATA RATE (kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	OUTPUT POWER (Max dBm)	TX OUTPUT POWER (Max dBm)	Package
					I2C	I2S	SPI	UART	PWM	USB	SAR, 8bit	RSSI, 8bit									
A81X01F458	8051 CPU	16KB Flash	512B	8				✓			2Ch	✓	16 bits 16KSps	FSK/GFSK	2400 - 2483.5	2000 - 500	-88 @ 2Mbps	27.5	+20	160 @ 20dBm	QFN 32
A81X01F46C	8051 CPU	16KB Flash	512B	24	✓		✓	✓	2		4Ch	✓	16 bits 16KSps	FSK/GFSK	2400 - 2483.5	2000 - 500	-88 @ 2Mbps	27.5	+20	160 @ 20dBm	QFN 48
A91X01F46C	8051 CPU	16KB Flash	512B	24	✓		✓	✓	2		12bit 4ch	✓	16 bits 32KSps	FSK/GFSK	315 - 915	2000 - 500	-94 @ 500Kbps @ 915MHz	16	+18	79 @ 17dBm	QFN 48
A81X03F46C	8051 CPU	16KB Flash	1KB	24	✓		✓	✓	4		8Ch	✓	16 bits 32KSps	FSK/GFSK	2400 - 2483.5	2000 - 500	-92 @ 2Mbps	33	+23	270 @ 23dBm	QFN 48
A81X02F57E	8051 CPU	32KB Flash	8.5KB	22	✓		✓	✓	2	✓	4Ch	✓	Stereo 16 bits 48KSps	FSK/GFSK	2400 - 2483.5	4000	-85 @ 4Mbps	32	+17	122 @ 17dBm	QFN 56

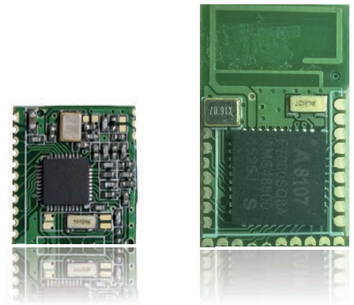
Zigbee/ RF4CE /IEEE 802.15.4

PART NUMBER	Type	Code Memory	RAM	Digital I/O	Peripheral	ADC	MODULATION	FREQUENCY (MHZ)	DATA RATE (Max kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
A81X53F55A	8051 CPU	32KB Flash	2KB	24	I2C, SPI, UART, PWM x2	4Ch, 8bit; RSSI, 8bit	DSSS/MSK	2405 - 2480	250	-96@ 250Kbps	23	23 @3.5dbm	QFN 40



Bluetooth Low Energy

PART NUMBER	TYPE	Code Memory	RAM	Digital I/O	Peripheral								ADC			MODULATION			DATA RATE up to(kbps)	SENSITIVITY (dBm)	RX CURRENT (mA)	TX OUTPUT POWER (Max dBm)	Package
					I2C	SPI	UART	PWM	DMA	USB	LCD	MIC	SAR, 12bit	24bit SDADC (ENOB 20bit)	RSSI, 8bit	FSK	GFSK	GMSK					
A7107	Bluetooth Low Energy TRX	-	-	-					-						✓		✓		2000	-90@ 1Mbps	17	+8	QFN 32
A81X05F56C	8051 CPU	32KB Flash	2KB	28	✓	✓	1	2					8Ch		✓		✓		2000	-92@ 1Mbps	16.3	+6	QFN 48
A81X05F55A	8051 CPU	32KB Flash	2KB	24	✓	✓	1	2					8Ch		✓		✓		2000	-92@ 1Mbps	16.3	+6	QFN 40
A81U05F66C	8051 CPU	64KB Flash	8KB	32	✓	✓	1	4					8Ch		✓		✓		2000	-94@ 1Mbps	11.5	+7	QFN 48
A81U05F65A	8051 CPU	64KB Flash	8KB	24	✓	✓	1	4					8Ch		✓		✓		2000	-94@ 1Mbps	11.5	+7	QFN 40
A81X07F66C	8051 CPU	64KB Flash	8KB	32	✓	✓	1	4					8Ch		✓		✓		2000	-92@ 1Mbps	15.9	+6	QFN 48
A81X07F65A	8051 CPU	64KB Flash	8KB	24	✓	✓	1	4					8Ch		✓		✓		2000	-92@ 1Mbps	15.9	+6	QFN 40
A81X07F76C	8051 CPU	128KB Flash	8KB	32	✓	✓	1	4					8Ch		✓		✓		2000	-92@ 1Mbps	15.9	+6	QFN 48
A81X07F75A	8051 CPU	128KB Flash	8KB	24	✓	✓	1	4					8Ch		✓		✓		2000	-92@ 1Mbps	15.9	+6	QFN 40
A31U13F65A	8051 CPU	64KB Flash	8KB	21	✓	✓	1	3			✓		4Ch	3Ch	✓		✓		2000	-93@ 1Mbps	11.9	+5	QFN40
A35U12F66C	8051 CPU	64KB Flash	8KB	22	✓	✓	1	2			✓		4Ch	3Ch	✓		✓		2000	-93@ 1Mbps	11.9	+5	QFN48
A35U13F67E	8051 CPU	64KB Flash	8KB	26	✓	✓	1	3			✓		6Ch	4Ch	✓		✓		2000	-93@ 1Mbps	11.9	+5	QFN56
A81U15F65A	8051 CPU	64KB Flash	8KB	24	✓	✓	1	4				✓	8Ch		✓		✓		2000	-94@ 1Mbps	11.5	+7	QFN 40
A81U15F66C	8051 CPU	64KB Flash	8KB	32	✓	✓	1	4				✓	8Ch		✓		✓		2000	-94@ 1Mbps	11.5	+7	QFN 48
A81U07F86C	ARM® Cortex®-M0	256KB Flash	32KB	31	✓	✓	3	4	✓				8Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 48
A81U07F85A	ARM® Cortex®-M0	256KB Flash	32KB	23	✓	✓	2	4	✓				5Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 40
A31U07F86C	ARM® Cortex®-M0	256KB Flash	32KB	31	✓	✓	3	4	✓				8Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 48
A31U07F85A	ARM® Cortex®-M0	256KB Flash	32KB	23	✓	✓	2	4	✓				5Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 40
A31U17F85A	ARM® Cortex®-M0	256KB Flash	72KB	23	✓	✓	2	4	✓				5Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 40
A31U17F86C	ARM® Cortex®-M0	256KB Flash	72KB	31	✓	✓	3	4	✓				8Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 48
A31U17F86C	ARM® Cortex®-M0	256KB Flash	72KB	26	✓	✓	3	4	✓	✓			6Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 48
A31U17F87E	ARM® Cortex®-M0	256KB Flash	72KB	32	✓	✓	3	4	✓	✓			8Ch		✓		✓	✓	2000	-94@ 1Mbps	6.4 @DC/DC	+6	QFN 56
A31C30F95A	ARM® Cortex®-M0	512KB Flash	64KB	23	✓	✓	2	7					7Ch		✓	✓	✓		2000	-96@ 1Mbps	5 @DC/DC	+6	QFN 40
A31C37F95A	ARM® Cortex®-M0	512KB Flash	64KB	23	✓	✓	2	7					7Ch		✓	✓	✓		2000	-96@ 1Mbps	5 @DC/DC	+13	QFN 40



Bluetooth Low Energy module

BLE with Voice

BLE with LCD

除了 ISM Band RF IC，笙科電子自成立以來，就以 CMOS 技術設計 LNB IC，至今該產品已經順利量產多年，深獲客戶長期信任。並於近年來研發 LNB Down-Converter 整合 PLL 與 VCO，並可直接驅動 pHENT 偏壓。

In addition to the ISM Band RF IC, AMICCOM has designed LNB Switch ICs based on CMOS technology. So far, this product line has been mass-produced many years and has won long-term trust from customers. In recent years, LNB Down-Converter has been developed to integrate PLL and VCO, and can directly drive pHENT bias.

笙科電子針對衛星通訊，提供兩大產品選擇 - LNB Switch 與 LNB Down-Converter。笙科電子運用台灣充分的半導體產業資源，提供了一個低價位以及高效能的選擇，針對全球衛星通訊設備製造廠商，提供完整的技術服務，包括線路設計以及解決系統應用問題，大大縮短客戶的開發時程，配合測試流程的簡化，更容易讓成品導入量產。

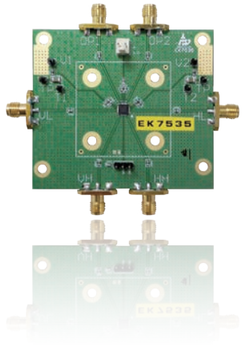
AMICCOM provides two types of products for satellite communications: LNB Switch and LNB Down-Converter. AMICCOM takes advantage of Taiwans semiconductor industry resources to provide a low-cost and high-performance product for global satellite communications equipment manufacturers. We provide complete technical services, includes circuit design and system application, which greatly shorten the development schedule and simplify the test process for customers, and make the prototype products be imported into mass production easier.

Satellite Switch

PART NUMBER	Function	FREQUENCY (MHZ)	Isolation (Typical dB)	Insection lose (Typical dB)	Others	Package
A7524	2x4 SWITCH	950 - 2150	28	4	Polarity detector	QFN 24
A7533	4x2 SWITCH	250 - 2150	31	7.5	Polarity detector Tone detector	QFN 20
A7535	4x2 SWITCH	250 - 2150	31	7.5	Polarity detector Tone detector	QFN 24
A7540	4x2 SWITCH	250 - 2150	40	7.5	Polarity detector Tone detector	QFN 24
A7544	4x4 SWITCH	250 - 2150	28	12	Polarity detector Tone detector	QFN 24

Satellite PLO Down-Converter

PART NUMBER	Function	FREQUENCY (GHZ)	LO FREQUENCY (GHz)	Crystal (MHz)	Others	Package
A7832	C band single LNB	3.4 - 4.2	5.15	25	FET Bias Polarity detector Tone detector	QFN 32

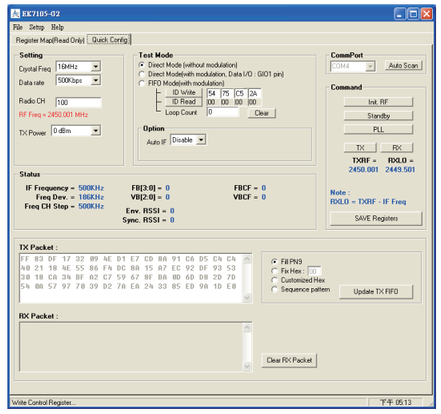


Satellite Switch evaluation kit

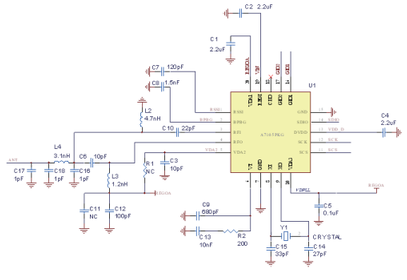
笙科提供完整的開發工具供客戶快速導入開發並在量產端提供簡便的量產治具供快速量產。開發階段可使用 EK (Evaluation kit) board 並配合各頻段的無線射頻 IC，如下圖 EK 7105. EK Board 提供 USB connector 與電腦連線。在電腦端提供應用程式如下圖 EK7105-G2。客戶可以快速驗證 RF 特性或是開發程式進行傳輸資料驗證。

AMICCOM provides complete development tools for customers to quickly develop and provide simple test fixtures for mass-production. During the development phase, EK (Evaluation kit) board can be used with the radio frequency IC, for example, shown in the figure below is EK 7105. EK Board provides a USB connector to connect with a computer. Graphic user interface program is provided for application on computer as shown in the figure EK7105-G2. Customers can quickly explore the RF characteristics and develop programs to verify data transmission.

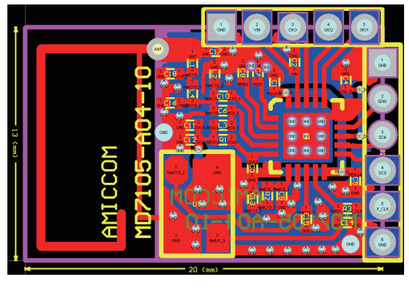
EK 7105



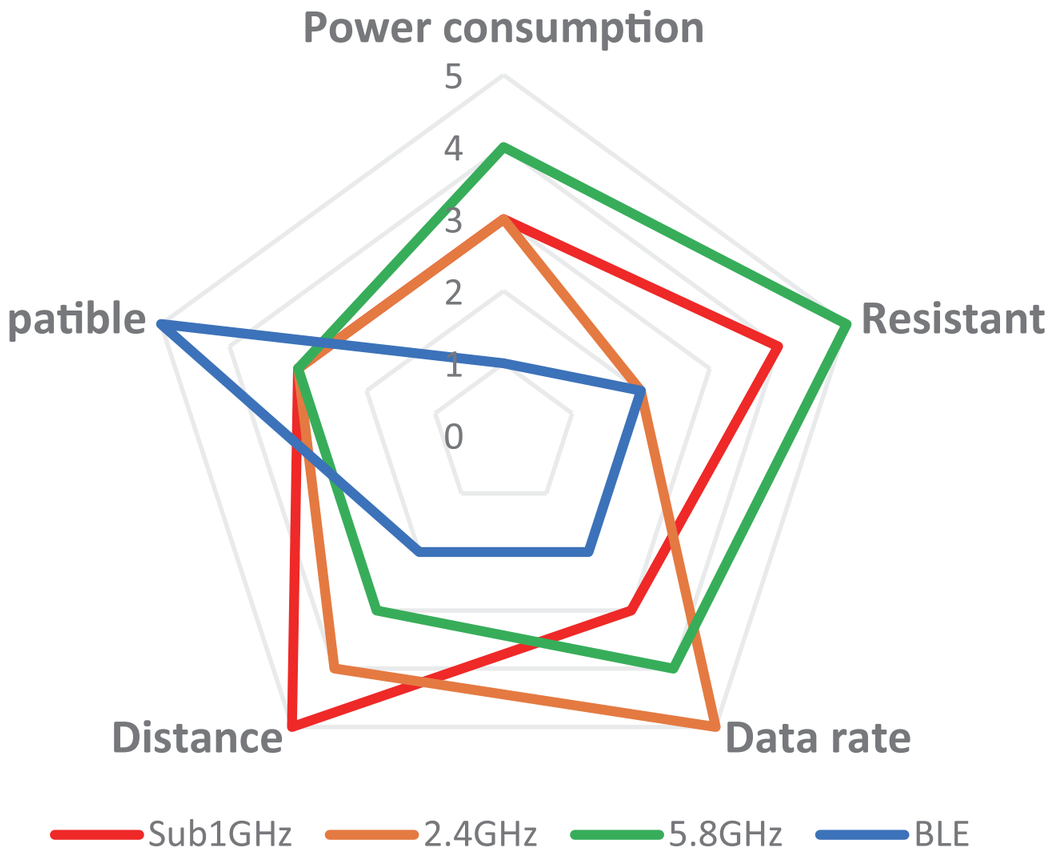
EK7105-G2



Reference circuit



Reference Layout



本公司提供完整的無線通訊產品線，涵蓋 Sub1GHz、2.4GHz、5.8GHz 與 BLE 等多種 RF 解決方案，可滿足不同應用場景與市場需求。其中，Sub1GHz 具備長距離傳輸與高抗干擾特性，適合智慧抄表、工業控制與遠距通訊應用；2.4GHz 則兼具傳輸速度與通用性，廣泛應用於消費性電子與智慧裝置。

5.8GHz 方案擁有更高資料傳輸速率與優異抗干擾能力，適用於高頻寬與即時傳輸需求；BLE（Bluetooth Low Energy）則具備低功耗、高相容性的優勢，非常適合穿戴裝置、智慧家庭與 IoT 應用。

透過完整的 RF 技術布局，我們可依據客戶對距離、功耗、傳輸速度、抗干擾能力與相容性的需求，提供最合適且高整合度的無線通訊解決方案。

Our company provides a complete wireless connectivity product portfolio, covering Sub1GHz, 2.4GHz, 5.8GHz, and BLE RF solutions to meet diverse application and market requirements.Among them, Sub1GHz offers long-range transmission and strong interference resistance, making it ideal for smart metering, industrial control, and remote communication applications.

The 2.4GHz solution delivers a balanced combination of data rate and compatibility, widely used in consumer electronics and smart devices.

The 5.8GHz solution provides higher data throughput and superior anti-interference performance, making it suitable for high-bandwidth and real-time transmission applications. BLE (Bluetooth Low Energy) features low power consumption and excellent compatibility, making it an ideal choice for wearable devices, smart home products, and IoT applications.

With a comprehensive RF technology portfolio, we are able to provide the most suitable and highly integrated wireless solutions based on customer requirements for transmission distance, power consumption, data rate, interference resistance, and compatibility.

笙科獲獎記錄
AMICCOM Awards

A7108 2012 China ACE Award 年度最佳射頻無線產品獎
A7108 2012 China ACE Award Best RF Wireless Product of the Year

Deloitte Technology Fast 500 Asia Pacific 2012

A7131 2013 China ACE Award 年度最佳射頻無線產品獎
A7131 2013 China ACE Award Best RF Wireless Product of the Year

A7129 低接收功耗的無線射頻技術
2013 EDN China 創新獎的創新技術優秀獎
Wireless RF technology with low receiving power
2013 EDN China Innovation Award for Excellence in Innovation Technology

A5130/A5125 2017 China ACE Award 年度最佳 RF 無線 IC
A5130/A5125 2017 China ACE Award Best RF/Wireless IC of the year

A7157 2021 EDN 亞洲金選獎 : 年度最具前景產品
A7157 2021 EDN EE Asia AWARD: The promising Product of the year

A8131M0 2022 EDN 亞洲金選獎 : 年度最佳 RF 無線 IC
A8131M0 2022 EDN EE Asia AWARD: Best RF/Wireless IC of the year

A7149 2023 EDN 亞洲金選獎 : 金選潛力標竿
A7149 2023 EDN EE Asia AWARD: Most Promising Awards

2024 EE Awards 亞洲金選獎 - 年度最佳 RF/Wireless IC

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