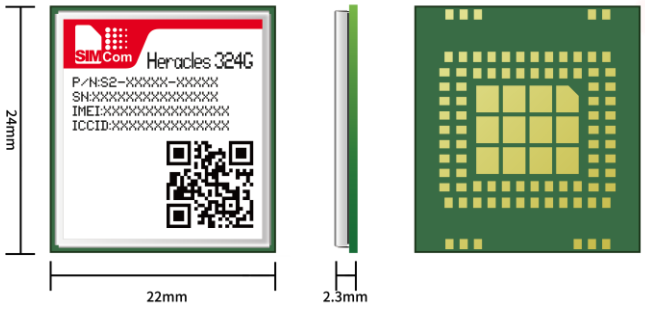
V: 2020.09

HERACLES 324 Series

SIMCom LPWA Module



Global-Band

Cat-M/NB

MQTT

LWM2M

Compact Size

FOTA

TCP/UDP

PSM/eDRX

HTTP/SSL

Product Description

The HERACLES 324 series is LPWA module which supports wireless communication modes of Cat-M/Cat-NB/GPRS/EDGE.

The HERACLES 324 series adopts LGA form factor and has a compact size of 24mm*22mm which makes it ideal for compact products design.

The HERACLES 324 series has powerful expansibility with abundant interfaces including UART, GPIO, PCM, SPI, I2C etc. The HERACLES 324 series is designed for applications that need low latency, low throughput data communication in a variety of radio propagation conditions. Due to the unique combination of performance, security and flexibility, this module is ideally suited for M2M applications.

Key Benefits

- With Power Saving Mode(PSM) and Extended Discontinuous Reception(eDRX), the HERACLES 324 series can extend battery life up to 10 years
- The HERACLES 324 series provides deeper coverage enhancement compared to GSM
- The form factor and AT commands of the HERACLES 324 series are compatible with Heracles 2G and Heracles 224G
- Ultra-low power application processor with 512KB of Flash and 160 KB of SRAM and 33 GPIO.
- Up to 500MB of prepaid data packages for EU for 10 years

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Building B, SIM Technology Building, No.633, Jinzhong Road Changning District, Shanghai P.R.China
Tel: 86-21-31575100 Email: support@simcom.com Web: www.simcom.com

Product		HERACLES 324G	HERACLES 324M	IOTMOD 324G	HERACLES 324S
Form Factor		LGA, 99PIN	LGA, 99PIN	LGA, 99PIN	LGA, 99PIN
Dimensions(mm)		24*22*2.3	24*22*2.3	24*22*2.3	24*22*2.3
Frequency Bands	Cat-M	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85	B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26/B27/B28/B66/B85
	Cat-NB	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B28/B66/B71/B85
	GSM	850/900/1800/1900MHz	850/900/1800/1900MHz	850/900/1800/1900MHz	850/900/1800/1900MHz
LTE RF Power Class		Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)	Class 5 (Typ. 21dbm)
GNSS		o	o	o	o
Temperature		-40℃ ~ +85℃	-40℃ ~ +85℃	-40℃ ~ +85℃	-40℃ ~ +85℃
Electrical Features					
Supply Voltage Range(V)		3.0~ 4.6	3.0~ 4.6	3.0~ 4.6	3.0~ 4.6
Power Consumption	@PSM(uA)	4	4	4	4
	@Sleep(mA)	0.8	0.8	0.8	0.8
	@Idle(mA)	10	10	10	10
Data Transfer					
Cat-M(Kbps)		589(DL)/1119(UL)	589(DL)/1119(UL)	589(DL)/1119(UL)	589(DL)/1119(UL)
Cat-NB(Kbps)		127(DL)/158.5(UL)	127(DL)/158.5(UL)	127(DL)/158.5(UL)	127(DL)/158.5(UL)
EGPRS(Kbps)		296(DL)/236.8(UL)	296(DL)/236.8(UL)	296(DL)/236.8(UL)	296(DL)/236.8(UL)
Software Features					
Protocol		TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT	TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT	TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT	TCP/UDP/HTTP/HTTPS/FTP/TLS/DTLS/PING/LWM2M/COAP/MQTT
FOTA		●	●	●	●
Embedded AT		●	●	●	●
Firmware Upgrade		USB/FOTA	USB/FOTA	USB/FOTA	USB/FOTA
Interfaces					
SIM Card		1.8V	1.8V	1.8V	1.8V
UART		●	●	●	●
USB		●	●	●	●
PCM/I2S		●	●	●	●
SPI		●	●	●	●
I2C		●	●	●	●
Embedded SIM		●	●		●
MCU	33 GPIO		●		●
	RTC & 32,768 khz clock		●		●
Secure element					●
Prepaid data package					
50MB for EU for 5 years		o	o		o
500MB for EU for 10 years		o	o		o
Certification					
Regulatory		CE*/RoHS/REACH	CE*/RoHS/REACH	CE*/RoHS/REACH	CE*/RoHS/REACH
Carrier					

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●: support o: optional *: on going