mangOH Red – Get Started
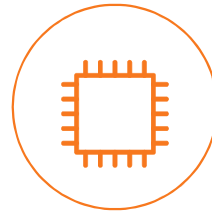
April 10, 2017
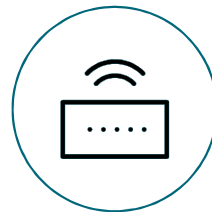
SIERRA WIRELESS®
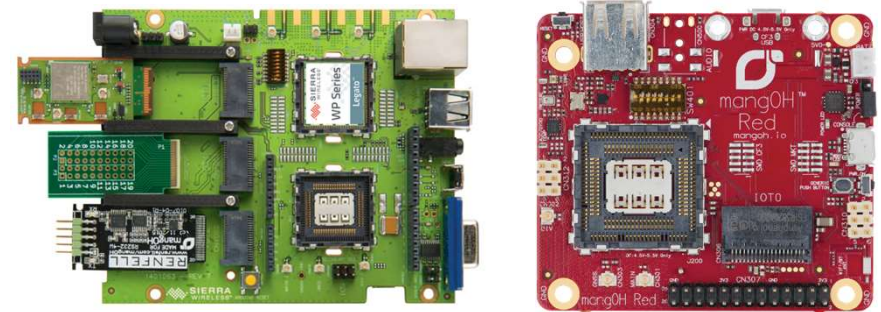
mangOH™

Legato™

IDEA

PROTOTYPE

PRODUCT

SIERRA WIRELESS

mangOH® platforms overview

Platforms

IoT Expansion Cards

Prototyping for IoT - mangOH® Red

CF3™ Socket

Cortex-M4 RTOS

IoT Expansion Card connector

SIM

Raspberry Pi connector

WiFi Bluetooth

Sensors

Audio Jack and USB

Battery connector

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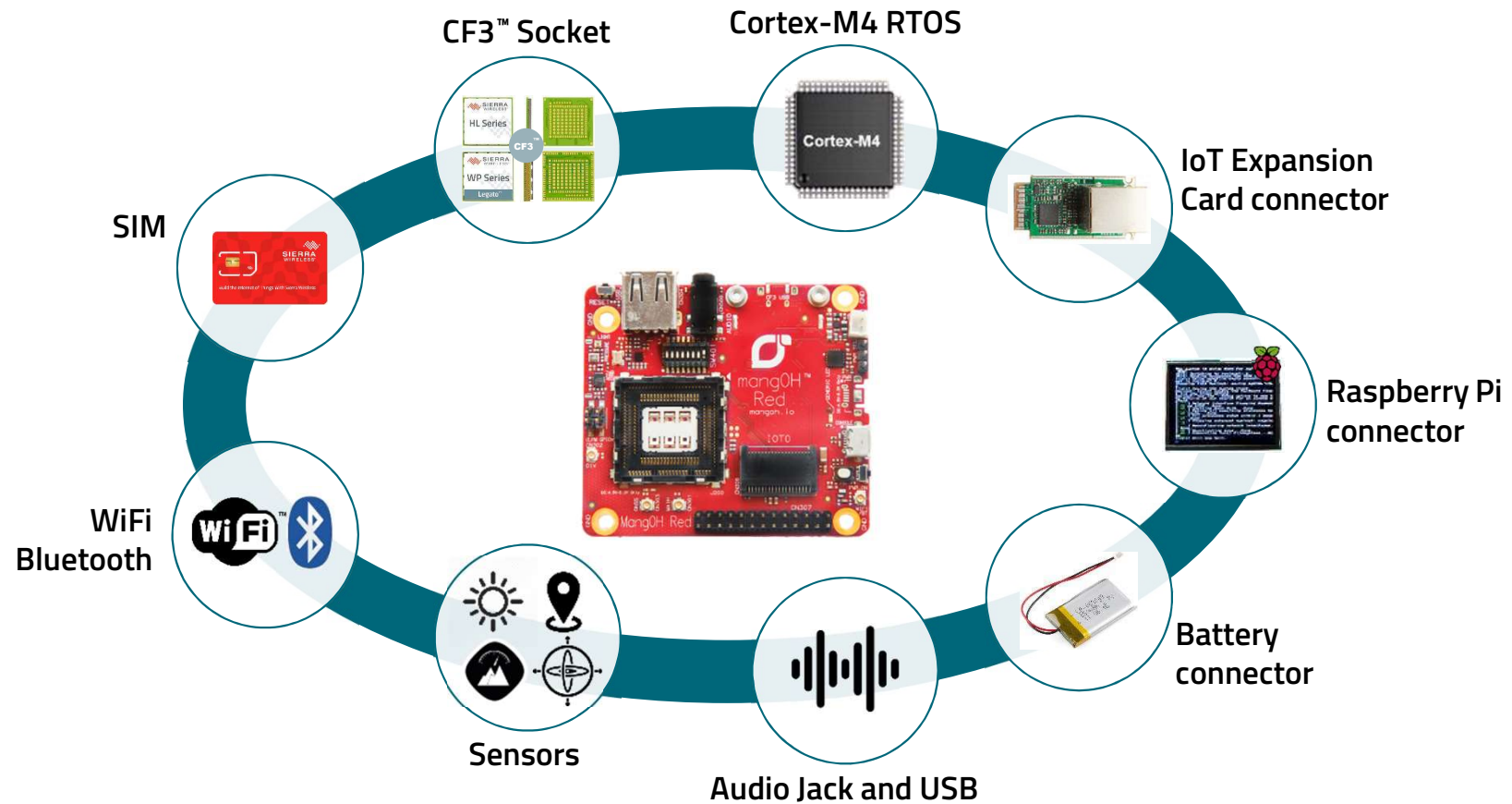
mangOH Red Board Variants

WP8548 Global 2G 3G
WP7700 Global LPWA
WP7702 Global 2G LPWA

WP7601-1 Verizon 4G
WP7601 Verizon 4G
WP7603-1 AT&T 3G 4G
WP7603 AT&T 3G 4G

WP7607 EMEA 2G 3G 4G

WP7608 India, CN 2G 3G 4G

SIERRA WIRELESS®
WP Series
Legato®
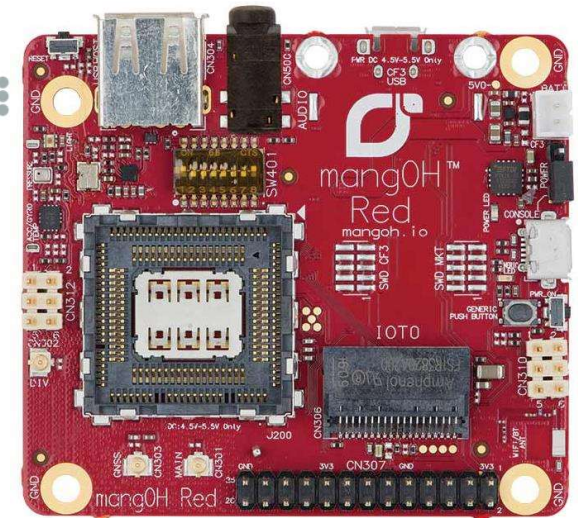
= Cellular Modem + Application Processor + GNSS Receiver

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Coverage according to the GSMA (Jan 2018)

Source: https://www.gsma.com/iot/deployment-map/
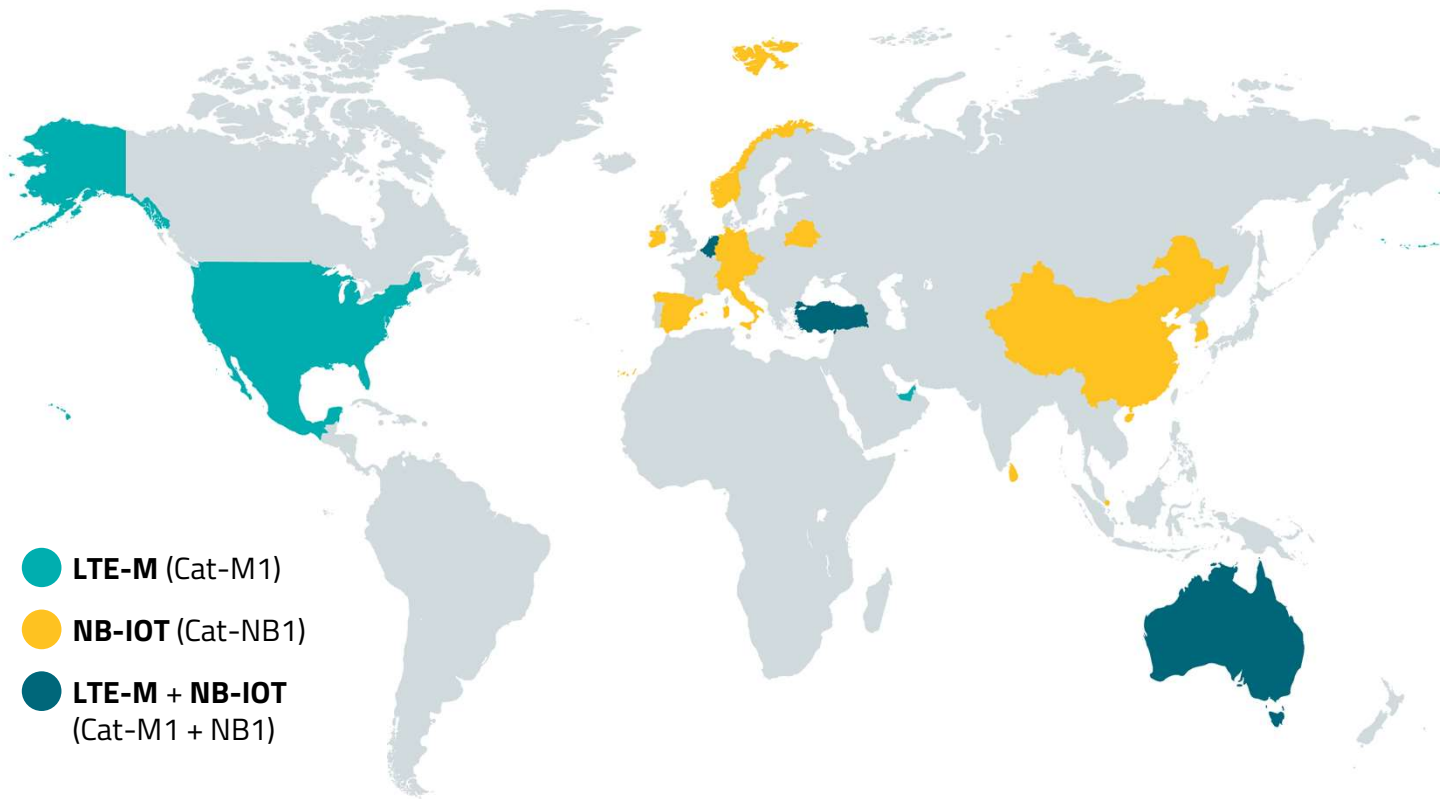
COUNTRY	LPWAN
Australia	Both
Austria	NB-IoT
Belarus	NB-IoT
Belgium	Both
China	NB-IoT
Czech Republic	NB-IoT
Germany	NB-IoT
Hong Kong	NB-IoT
Ireland	NB-IoT
Italy	NB-IoT
Mexico	LTE-M
Netherlands	Both
Norway	NB-IoT
Singapore	NB-IoT
South Korea	NB-IoT
Spain	NB-IoT
Sri Lanka	NB-IoT
Turkey	Both
UAE	Both
USA	LTE-M

● **LTE-M** (Cat-M1)

● **NB-IOT** (Cat-NB1)

● **LTE-M** + **NB-IOT** (Cat-M1 + NB1)

Proprietary and Confidential

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LPWA : Expected coverage by the end of the 2018

LTE-M (Cat–M1)

NB-IOT (Cat–NB1)

LTE-M + **NB-IOT**
(Cat–M1 + NB1)
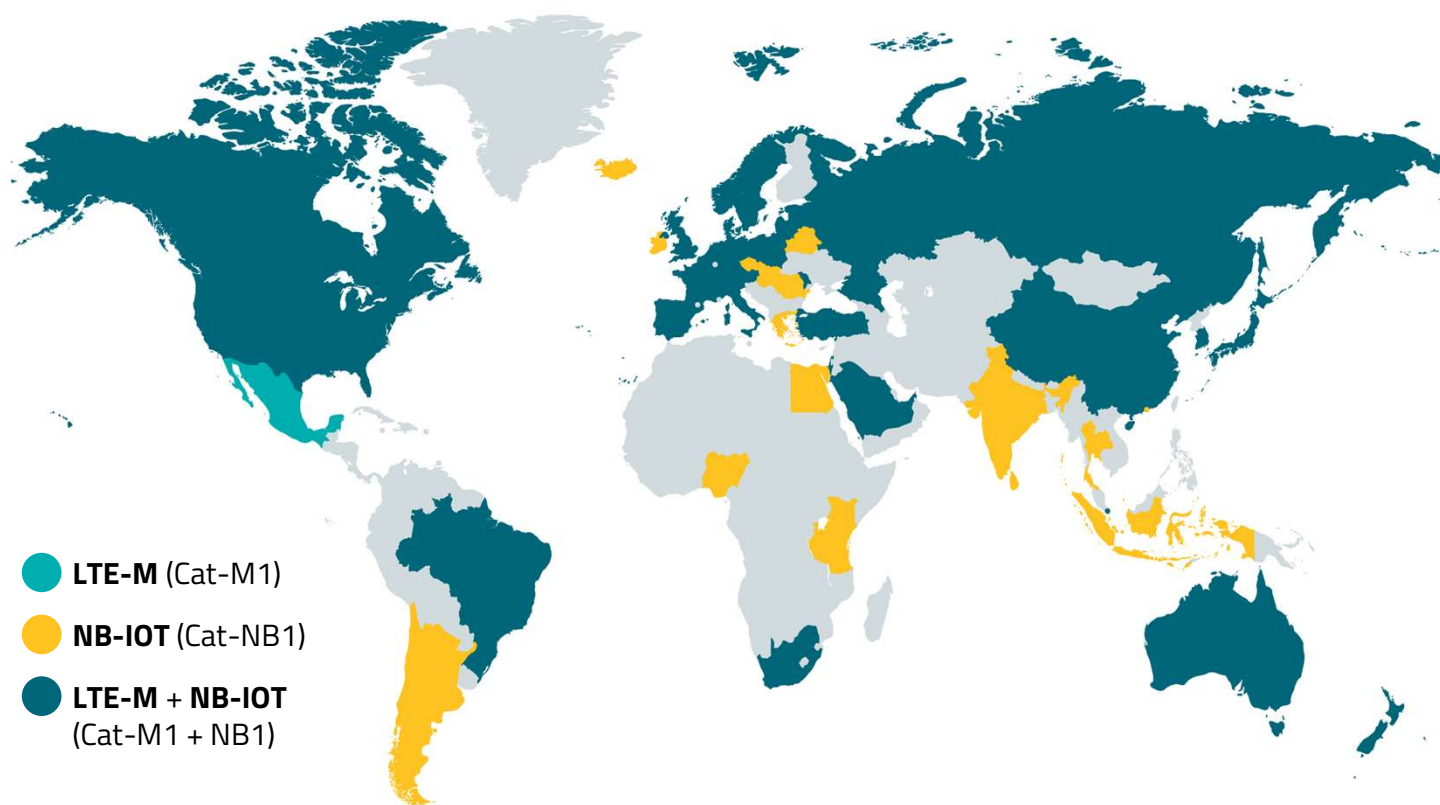
COUNTRY	LPWAN	COUNTRY	LPWAN
Argentina	NB-IoT	Latvia	Both
Australia	Both	Lithuania	Both
Austria	Both	Mexico	LTE-M
Belarus	NB-IoT	Moldova	Both
Belgium	Both	Netherlands	Both
Brazil	Both	New Zealand	Both
Canada	Both	Nigeria	NB-IoT
Chile	NB-IoT	Norway	Both
China	Both	Poland	Both
Czech Republic	NB-IoT	Portugal	Both
Denmark	Both	Romania	NB-IoT
Egypt	NB-IoT	Russia	Both
Estonia	Both	Saudi Arabia	Both
Finland	Both	Singapore	Both
France	Both	Slovakia	NB-IoT
Germany	Both	South Africa	Both
Greece	NB-IoT	South Korea	Both
Hong Kong	NB-IoT	Spain	Both
Hungary	NB-IoT	Sri Lanka	NB-IoT
Iceland	NB-IoT	Sweden	Both
India	NB-IoT	Switzerland	Both
Indonesia	NB-IoT	Tanzania	NB-IoT
Ireland	NB-IoT	Thailand	NB-IoT
Israel	Both	Turkey	Both
Italy	Both	UAE	Both
Japan	Both	UK	Both
Kenya	NB-IoT	USA	Both

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LPWA WP77xx considerations for design

Low Power
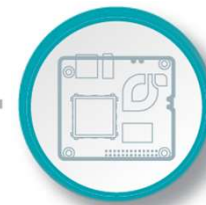
2G Fallback

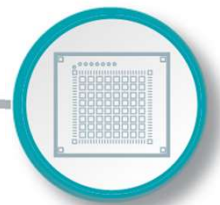**Multi-Mode Support**

Embedded SIMs

Integrated GNSS

Ensure you have a way to upgrade the software to take advantage of
- Latest network security patches
- 3GPP Release 14 features including Cat-NB2
- Upgrade to 5G LTE networks in the future

Reference Designs

Scalable Form Factor

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Getting Started with Red – Part 1

Step 1: Order

i. Buy → Order → Get ready
ii. Register → Login

Step 2: Set up the hardware

i. i. Kit content
ii. Drivers
iii. Assemble

Step 3: Set up the software

i. VM download & setup
ii. FW download and go
iii. Make mangOH system

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Getting Started with Red – Part 2

Step 4: Connectivity

i. Network connection

Step 5:

i. Air Vantage
ii. Play with sensors

Next Hangout : May 22nd

- Get Started with mangoh Red WiFi
- Customer use case series: Brnkl.io (start to product)
- Q&A
- We might do a hangout before if there is a technical question asked by community

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