



# Mi-OGC

## MIMOS Off-Grid Communication

- ◆ **Mi-OGC** is a mobile device that connects to a smartphone to enable connectivity with other smartphones when there is no availability of cellular service or Wi-Fi network.



WINNER



National Intellectual  
Property Award 2018



Malaysia Good Design  
Award (MGDA) 2019

## MIMOS in Wireless Innovation

MIMOS is Malaysia's national applied research and development (R&D) centre focussing on generating technology solutions that enable the government and industry to deliver value through digital transformation.

Crucial to digital transformation is communications technology. MIMOS innovation in wireless communications cuts across key applications such as smart agriculture, smart manufacturing, environment monitoring, oil and gas, mission-critical and disaster management, and smart city as well as rural communication.

Backed by strong R&D capabilities in advanced and emerging technologies, MIMOS is at the forefront of driving wireless innovation as a cornerstone for Malaysia's digital transformation.



**Mi-OGC** enables communication between smartphones without the need for cellular or Wi-Fi network. The device is designed to work in the ISM 900MHz band, allowing users to send and receive voice and text messages, use off-line map, share location with other Mi-OGC users within range, as well as functions as a backup battery for smartphones. Mi-OGC has a point-to-point range of up to 5km LOS. With a mesh network, the communication link can be further extended.

## VALUE

Mi-OGC provides a smart and secure connectivity solution for users in zones where mobile network or Wi-Fi coverage is not available such as in forests, hilly terrains or remote villages. The device can be an especially useful tool for disaster mitigation and in search and rescue (SAR) missions, emergency beacon broadcasting, and as a substitute for walkie-talkie. It offers peace of mind for people involved in off-grid activities; and provides an important means for the rural community to stay connected and reachable.





## TECHNOLOGY BENEFITS

Among the many benefits of Mi-OGC are



**Reliable, 24/7 connectivity** - Enables individuals to be connected and informed at all times, even in out-of-reach locations.



**Emergency network** - Mi-OGC is a standalone device that works independently of cellular or Wi-Fi network, so it comes handy in emergency situations.



**Secure communications** - Audio and text messages sent through Mi-OGC are encrypted for secure communication.

## FEATURES

Mi-OGC offers basic but salient features:

**ISM 900MHz band** - Better wave propagation enables longer communication range in 900MHz band.

**Audio and text messaging** - Supports free audio and text messaging, with delivery confirmation; without any cellular or data carrier charges.

**Navigation** - Enables off-line map and location sharing.

**Mesh networking** - Extended communication range, which is useful in Line of Sight (LOS) and Non Line of Sight (NLOS) situations.

**Emergency beacon broadcast** - Emits an emergency beacon broadcast in time of crisis.

**Water resistant and dust tight (IP65)** - Can be deployed in harsh outdoor or stringent indoor environments for reliable communication.

**Rechargeable battery** - Can store up to 3,000 mAH for phone charging.

**Lightweight and portable** - Measures 130.6mm x 71.2mm x 19.9mm and weighs only 145g

**Android compatible** - Compatible with Android operating system, secured and easy to use.

## FUTURE PLAN

Future versions of Mi-OGC will include more features such as improved capabilities for sending and receiving media including videos, built-in camera, and more seamless text messaging function including group chat; and extending compatibility with Apple iOS operating system.



## SPECIFICATIONS

Mi-06C	
System Specifications	
Compatible operating system	Android 5.1 (Lollipop) minimum
Bluetooth	BLE 4.1
Radio Specifications	
Frequency Band	ISM 900MHz Band (919 - 923 MHz)
Modulation	GFSK
RF Output Power	+26.5 dBm
Receive Sensitivity	-110 dBm
Product Specifications	
Dimensions	130.6mm x 71.2mm x 19.9mm
Weight	145 gram
Battery	Rechargeable 3,000 mAh
Ingress protection	IP65

## INTELLECTUAL PROPERTY

1. 20170001989 - System and method to extend coverage of off-grid wireless communication (Patent (P) Filed).

## ACHIEVEMENTS

1. National Intellectual Property Award 2018 (1st runner-up for Design category) awarded by Intellectual Property Corporation of Malaysia (MyIPO).
2. Malaysia Good Design Award (MGDA) 2019 presented by Malaysia Design Council (MRM).

