

iMesh - Broadband IP Mesh Solution

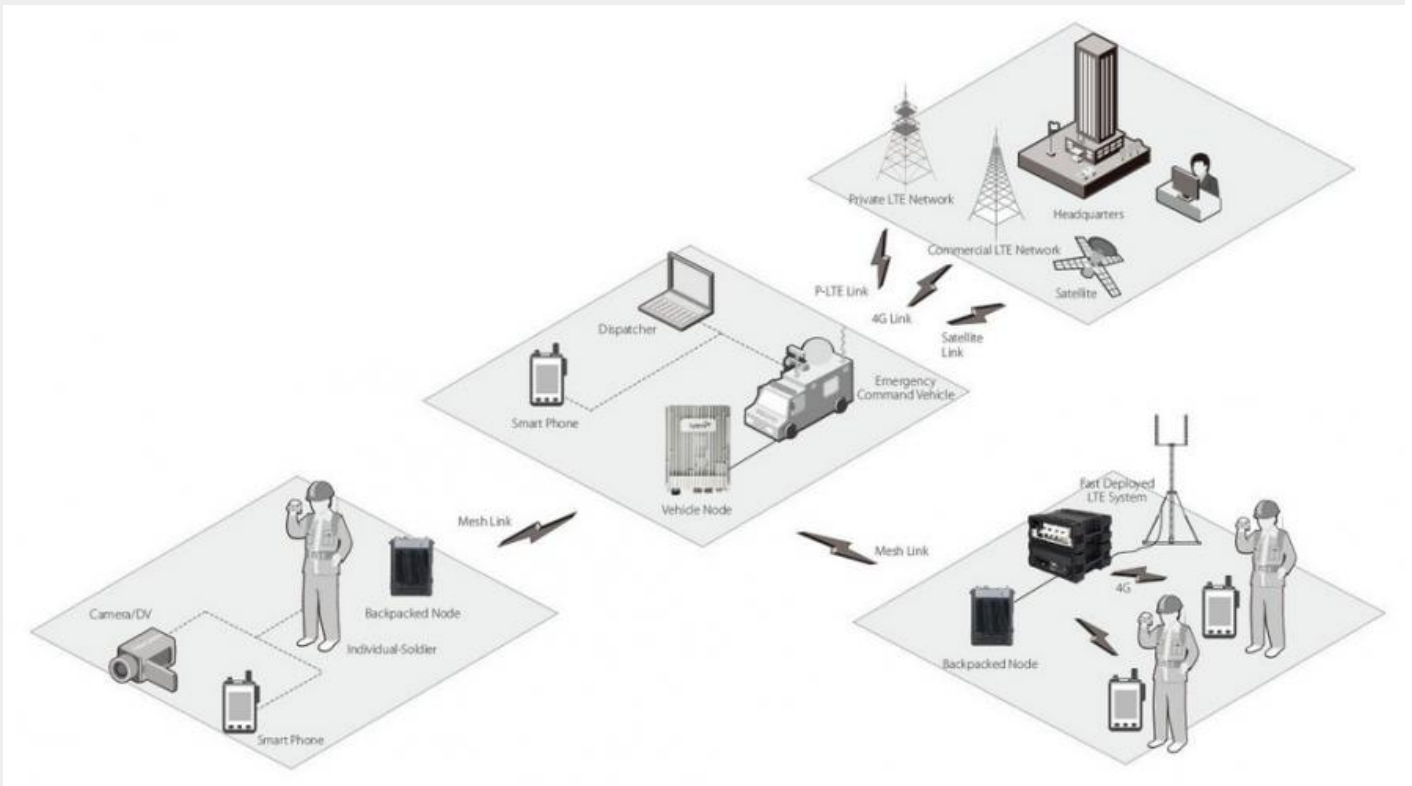
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iMesh Solution

iMesh solution, consisting of vehicle node and backpacked node, provides customers the ability to setup a flexible topology wireless broadband network quickly, which enables voice, video and data transmission services for emergency communication.

The iMesh nodes can be deployed in fixed way by mounting on infrastructure such as walls and poles, or in mobile way by installing on-board moving vehicles and drones. The nodes can not only operate as a standalone network but also co-work with existing cellular or wired network to extend the network coverage in various scenarios.

With 4G cutting-edge technologies, iMesh solution is featured with high spectral efficiency, lower latency, plug and play, flexibility and stability, intelligent data route as well as end-to-end Quality of Service (QoS) and security mechanism. The solution is a edge tool for emergency communication in public safety, military, energy, forestry as well as other related booming industry.



iMesh Backpacked Node

iMesh Backpacked Node is mainly used for individual-soldier in backpacked or portable way in emergency or tactical communication.

Features

- ✓ High throughput: 60Mbps(10MHz)
- ✓ Self-Organizing Network
- ✓ Long Range: 2km(Non-LOS), 10km(LOS)
- ✓ E2E QoS and Security
- ✓ 5kg including battery
- ✓ Golden Pin Awarded ID Design

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iMesh Vehicle Node

iMesh Vehicle Node is mainly mounted on vehicle in mobile way or on infrastructure in fixed way. It can be also used for individual-soldier in portable way and powered by external battery.

Features

- ✓ High throughput: 60Mbps(10MHz)
- ✓ Self-Organizing Network
- ✓ Long Range: 5km (Non-LOS), 40km(LOS)
- ✓ E2E QoS and Security
- ✓ 7Kg without battery
- ✓ Ruggedized Design





Highlights

Flexible

- ✓ Self-Organizing Network
- ✓ Chain, Star, Random Topologies
- ✓ All IP, both Layer-2 or Layer-3 Connection

High Capacity

- ✓ High Spectral Efficiency: 6bps/Hz
- ✓ High Throughput: 60Mbps (10MHz)

Quality of Service

- ✓ Quality of typical service(3GPP-Compliant)
- ✓ Default / Dedicated traffic bearer
- ✓ QoS-based scheduling algorithm

Secured

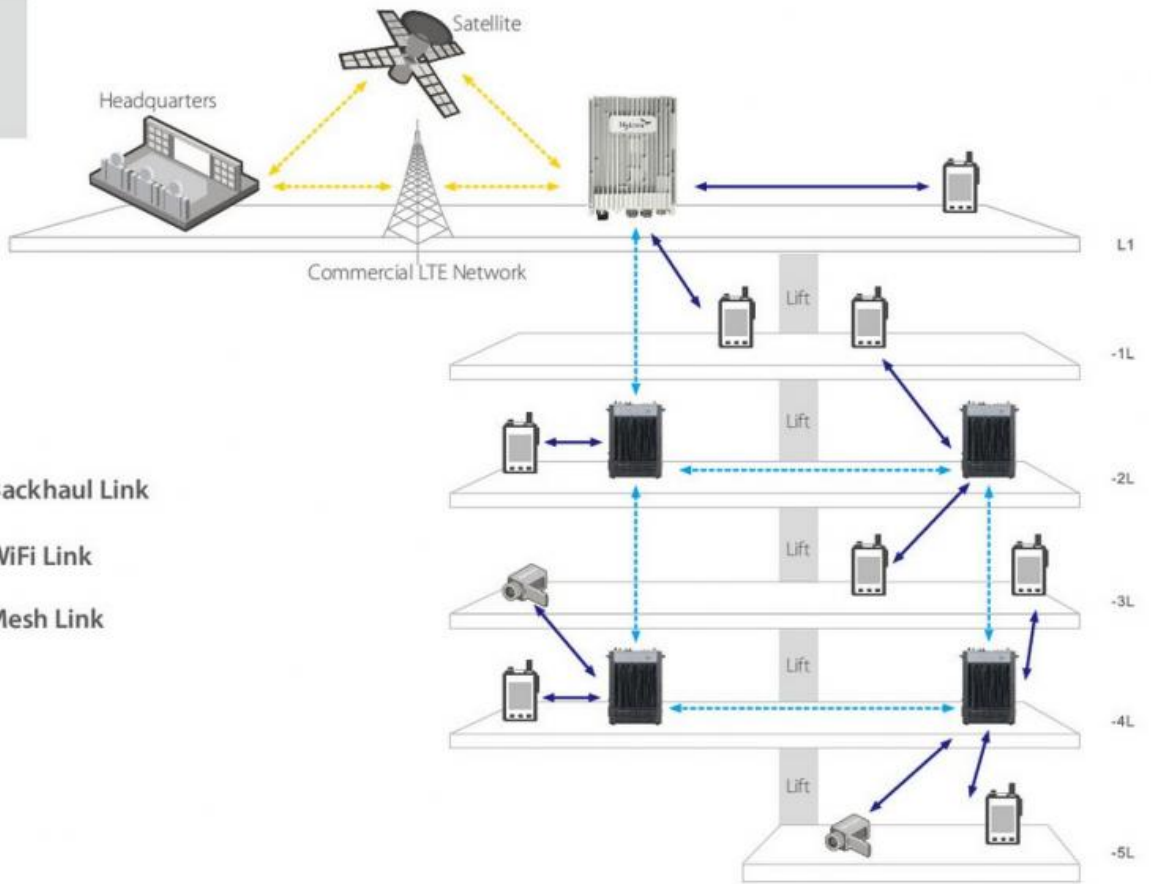
- ✓ Encryption: Snow3G, AES, IPSec etc
- ✓ Mesh Authentication: USIM, AKA
- ✓ WiFi Authentication: EAP-SIM, EAP-Radius, WPA/WPA2

Reliable

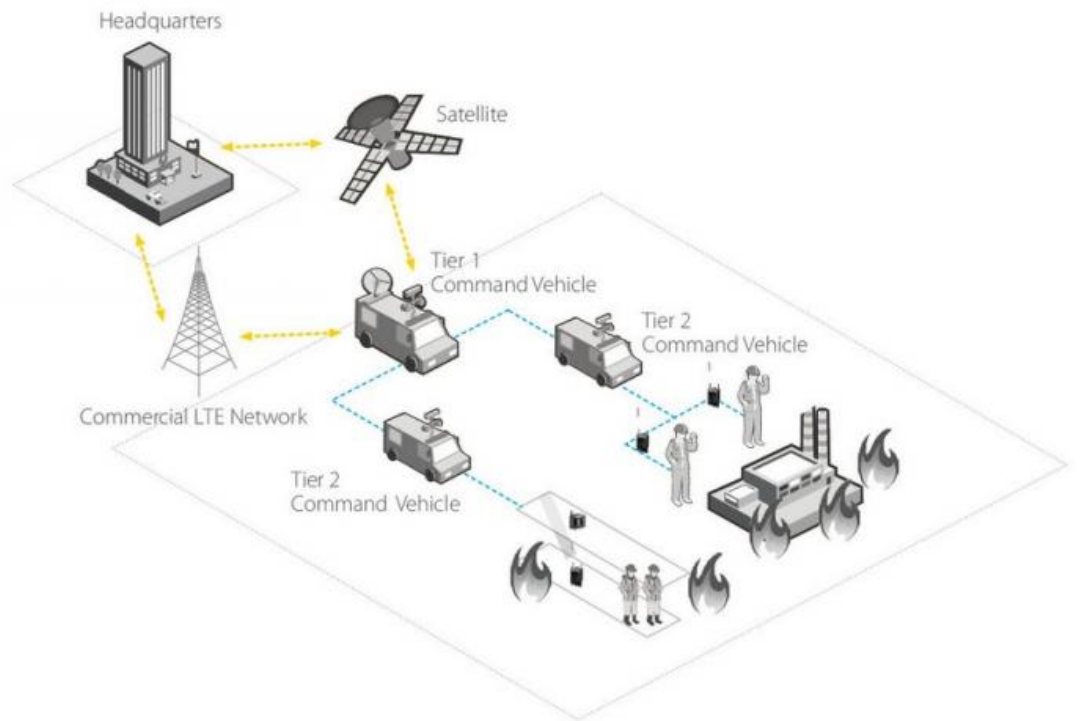
- ✓ Adaptive Modulation and Coding (AMC)
- ✓ Hybrid-ARQ (HARQ)
- ✓ Power control

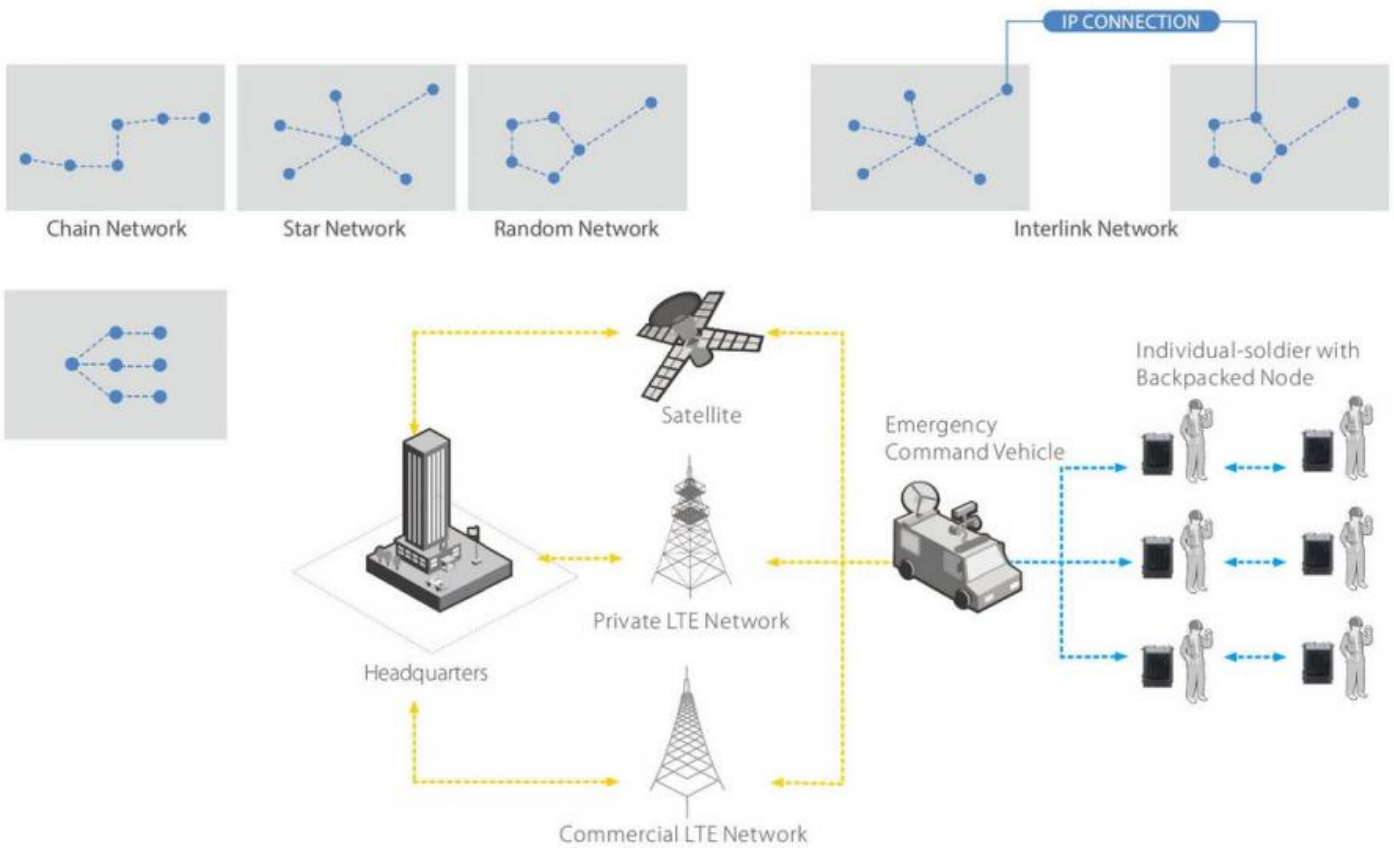


Typical Scenario



- Backhaul Link
- WiFi Link
- Mesh Link





Specification

	iMesh 3800V		iMesh 3800P
Bandwidth	≤ 10MHz	Bandwidth	≤ 10MHz
MIMO	2T2R	MIMO	2T2R(Typ.) 1T1R
Tx Power	2x5W	Tx Power	2x2W 1x5W
Sensitivity	≤-105dBm(10MHz)	Sensitivity	≤-105dBm(10MHz)
Throughput	60Mbps(10MHz)	Throughput	60Mbps(10MHz)
Transmission Delay	5~10ms	Transmission Delay	5~10ms
Number of Nodes	32	Number of Nodes	24
Range	40km(LOS), 5km(NLOS)	Range	10km(LOS), 2km(NLOS)
Encryption	AES, Snow 3G	Encryption	AES, Snow 3G
WLAN	802.11 a/b/g/n, 2.4GHz/5.8GHz	WLAN	802.11 b/g/n, 2.4GHz
Dimensions	L 330mm, W 240mm, H 114mm	Dimensions	L 266mm, W 206mm, H 87mm
Weight	7Kg	Weight	5Kg (Including battery)
DC input	12~24V	DC input	12V (178Wh)
Power Consumption	40W(Typ.), 70W (Max.)	Power Consumption	20W(Typ.), 40W (Max.)
Temperature	-40°C to +65°C	Temperature	-40°C to +65°C
Humidity	5%RH ~ 100%RH	Humidity	5%RH ~ 100%RH
Sealing	IP67	Sealing	IP67

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