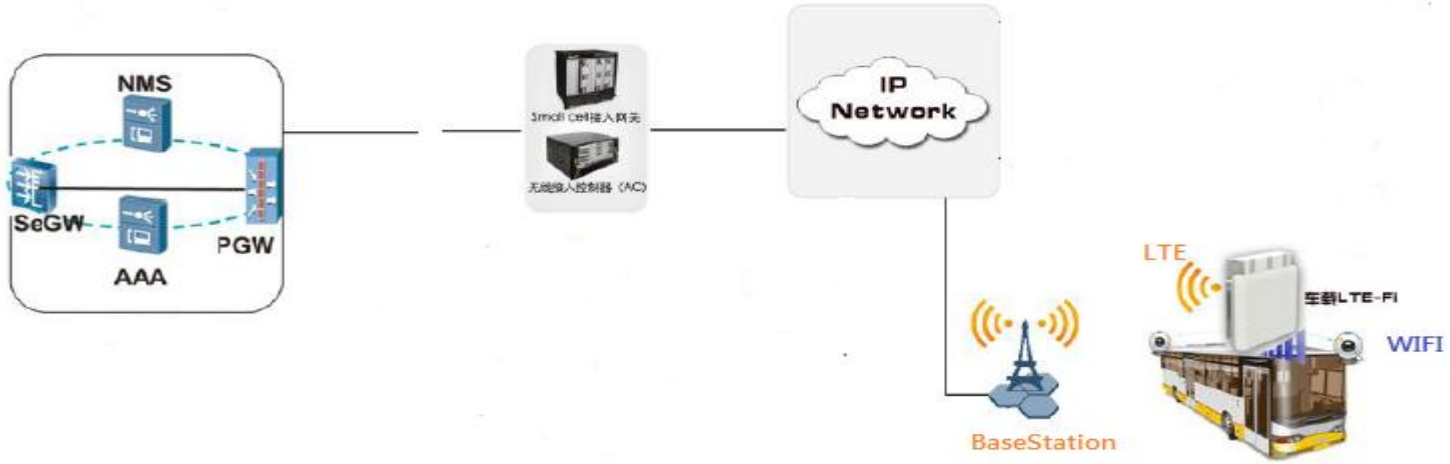
XN-1025 LTE 4G/3G + WiFi (802.11ac / 802.11b/g/n)

V0.5

Overview

- XN-1025 is a WLAN Access Point that integrates access to LTE/3G network. It is an access device to TD-LTE network, and work as a thin AP that can be managed by Access Controller.

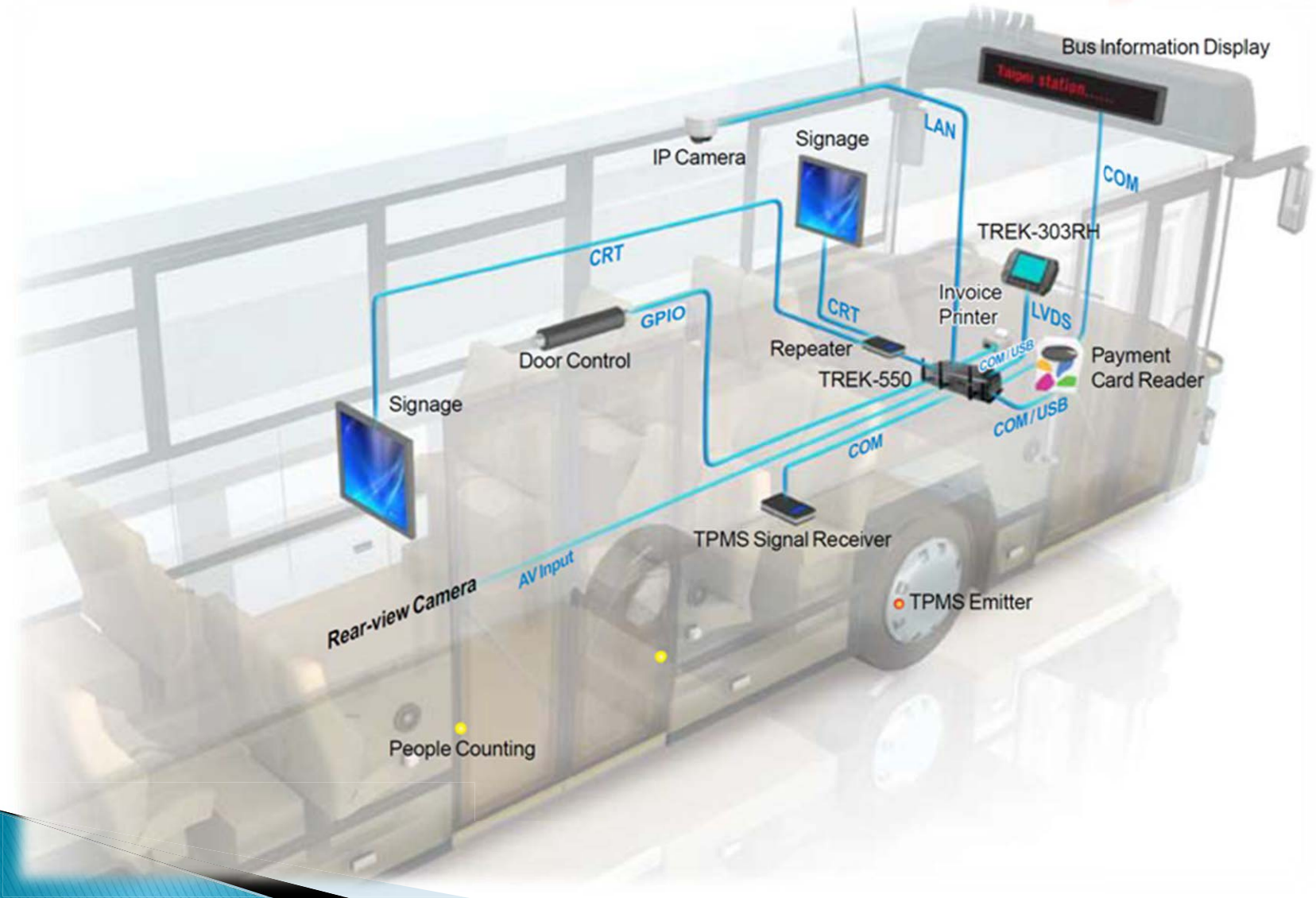
  Supporting the standard of IEEE 802.11b/g/n / 802.11ac that adopt the technology of OFDM (Orthogonal frequency-division multiplexing), XN-1025 offers access with high data rate. It is designed for deployment inside mobile vehicles, with high receiving sensitivity for mobile networking applications.



Application

- Video Monitoring & Data Access in Bus, Subway, Police Car, Ambulance, **Fire Engine,**Rail Way Station and other mobile vehicles.

In Bus System Diagram




Lte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Application Scenario : Bus stations and other places with difficulties to lay cables

Quick deployment
Temporary events
Hotspots LTE + WIFI deployments

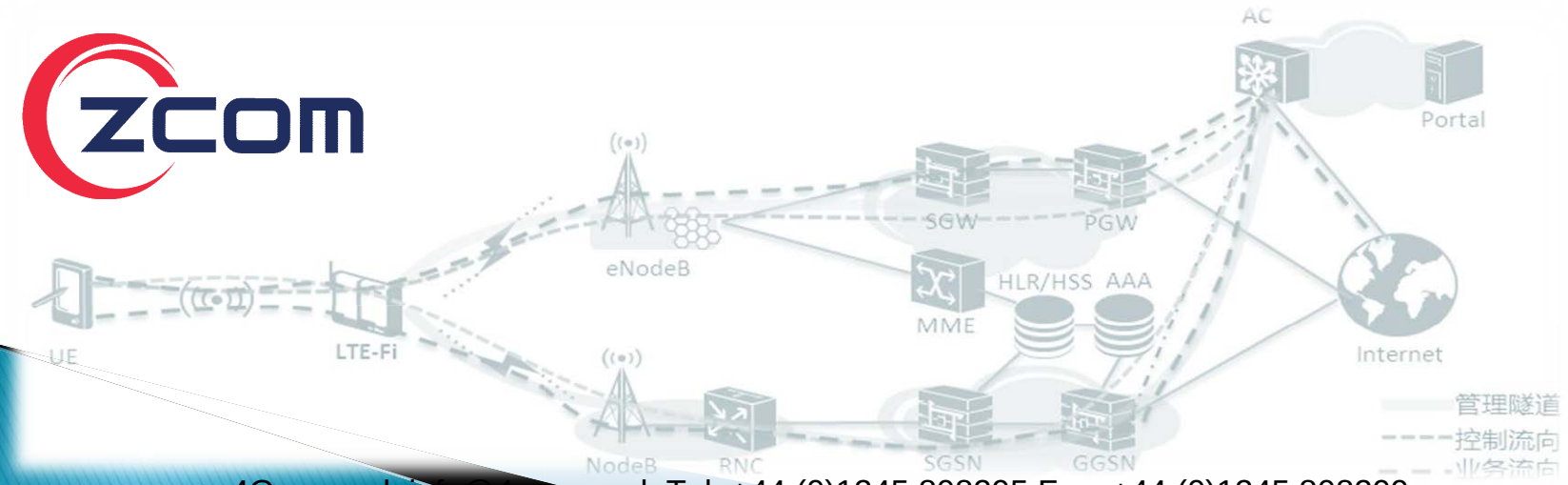
System Structure & Advantages

- The system deploys with LTE-Fi wireless gateway devices on city bus or subway, with WLAN for local service and WAN access to LTE network . Wi-Fi clients on city bus will be provided with data service , and experience the advantage of LTE high bandwidth.

  XN-1025 functions as LTE-Fi wireless access gateway that can accommodate harsh working environment on mobile vehicles. The design is with resistance to vibration and impact with intensity.

  The power supply is with wide range of power input(5V~36V) to meet the special requirement of automotive equipped power.

  XN-1025 LTE-Fi wireless access gateway could be used on city bus , long-distance bus, subway, and railway for wireless Internet access.



Product Hardware Specifications

Hardware /Antenna

Hardware	
Chipset Solution	CPU : AR9557 PHY : AR8334
DDRII	1Gbit*2
FLASH	16MByte
Ethernet PHY	10/100/1000Mbps
LED definition	

	Activity	Description
Power/Test	Green Off	Power is on Power is off
Wireless LAN	Off Blinking Green	WiFi off 2.4GHz WLAN Network activity is occurring
LAN Status	Off Green	No Connect User Connection
PCIe 1: for 3G/4G module	Off Green	Can not find 3G/4G connection 3G/4G module Connection

Antenna Support	LTE External ANT Connector *2 (3dBi) GPS External ANT Connector *1 (0~1dBi) WiFi Internal PCB ANT *2 (5dBi WiFi External Connector *2 (5dBi)

Power/Environmental Test

RF 2.4G Power & Sensitivity Spec			
Output power @ 25℃ (per chain ±2dBm)	11b	11g	
	20dB +/-2dB	20dB +/-2dB	
	11gn(Per chain)	HT20	HT40
		20dB +/-2dB	20dB +/-2dB

- **Operating Temperature** : -20~60 C
- **Waterproof and dustproof** : IP43
- **Vibration Certification** : 5M2
- **Safety**: With GB9254 Class B; GB/T 17626
- **ESD**: Contact +/- 6kv; Air +/- 8kv

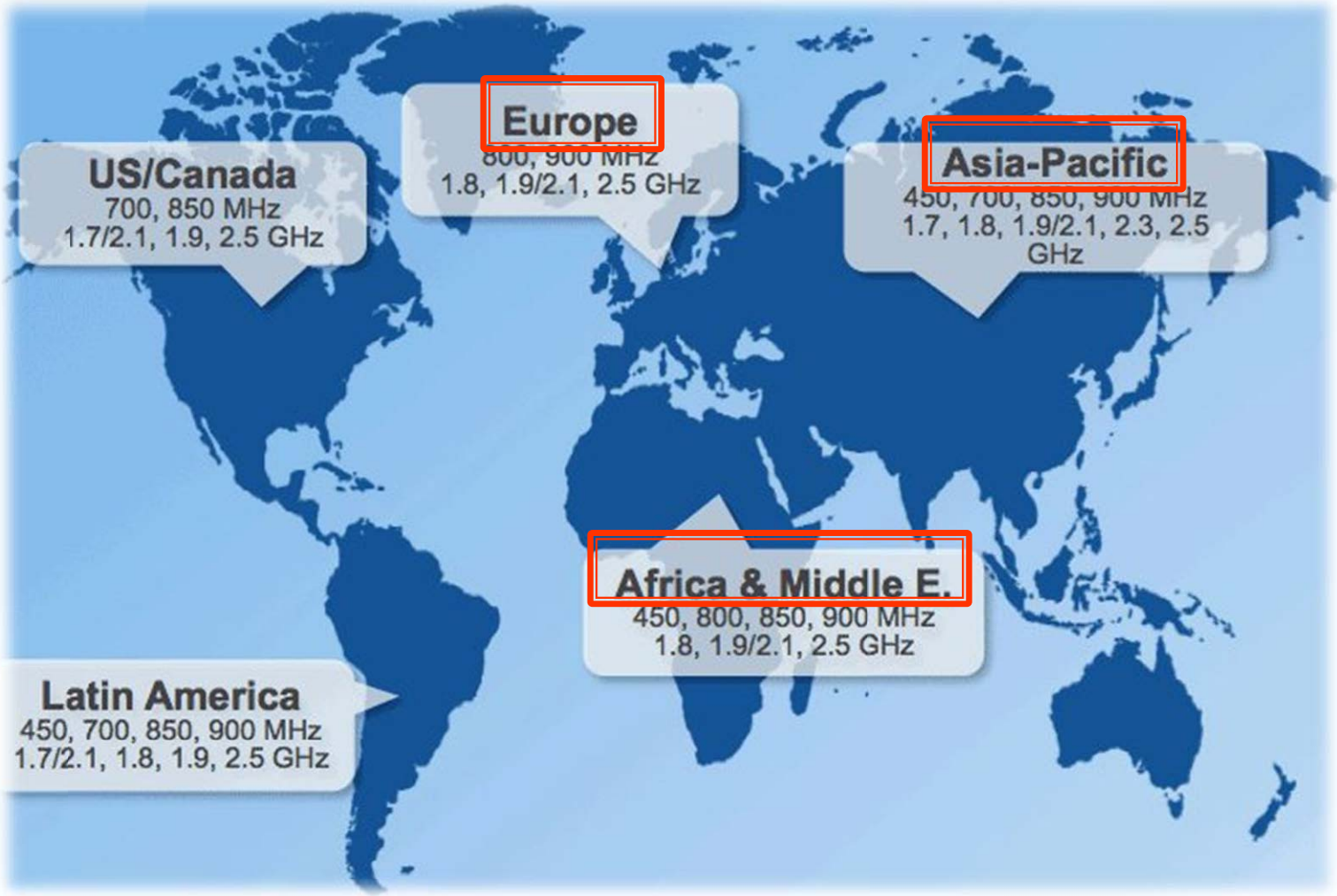
Vibration

- Vibration Certification：5M2

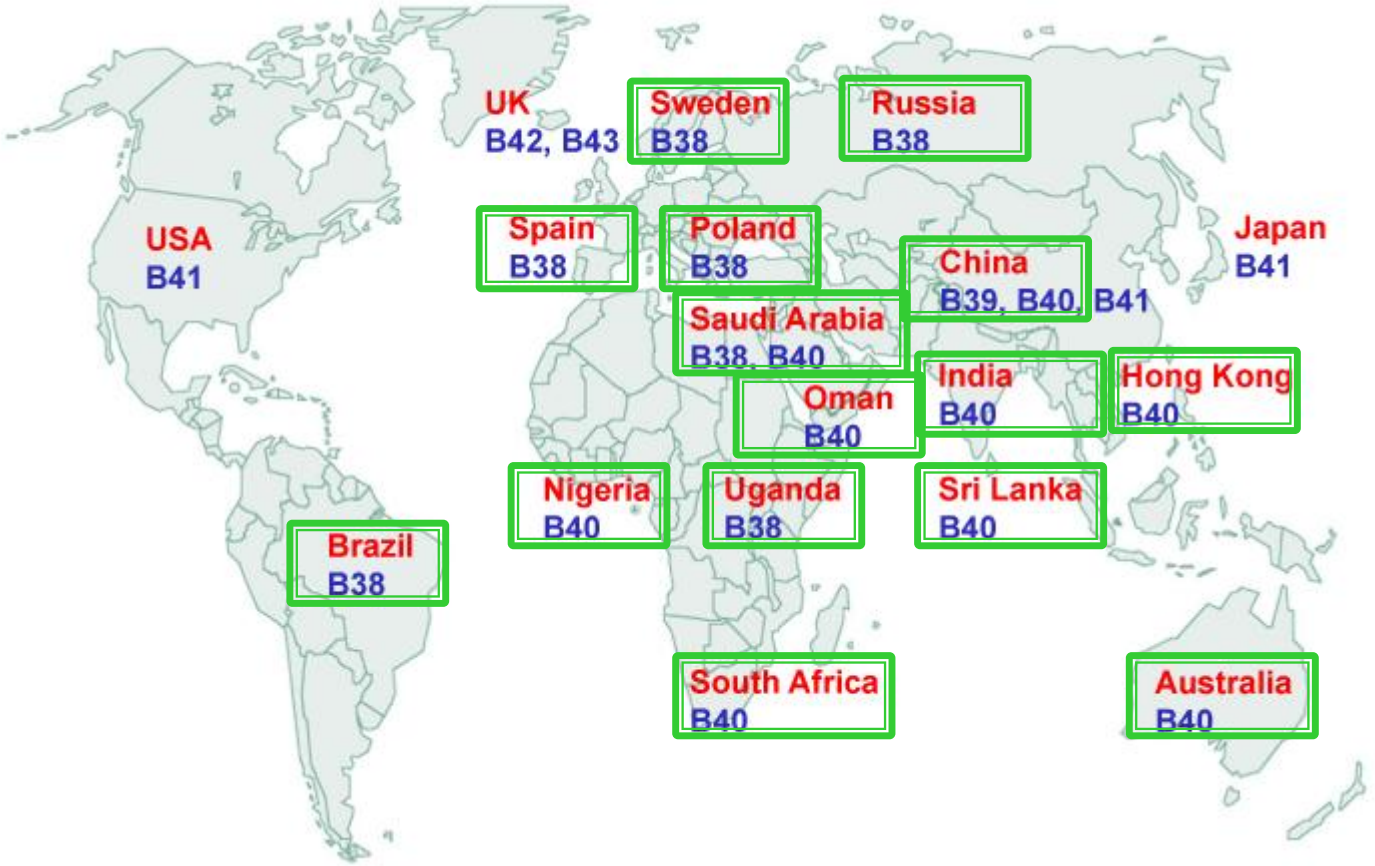
表 6　机械条件等级

环境参数	单位	等级										
		5M1		5M2			5M3			5M4		
稳态正弦振动[a]												
位移幅值	mm	1.5		3.3			7.5			7.5		
加速度幅值	m/s^2		5		10	15		20	40		20	40
频率范围	Hz	2～9	9～200	2～9	9～200	200～500	2～8	8～200	200～500	2～8	8～200	200～500
平稳随机振动[b,c]												
加速度谱密度	m^2/s^3	0.3	0.1	1		0.3	3		1	10		3
频率范围	Hz	10～200	200～500	10～200		200～500	10～200		200～500	10～200		200～500
非稳态振动(包括冲击)[b]												
冲击响应谱Ⅰ型加速度峰值 $\hat{a}$	m/s^2	50		100			300			300		
冲击响应谱Ⅱ型加速度峰值 $\hat{a}$	m/s^2	无		300			1 000			1 000		
外界物体碰撞石头	J	无		5			20			20		

LTE FDD Support Frequencies



LTE TDD Support Frequencies



LTE Frequencies Band

FDD Mode
Band 1~28

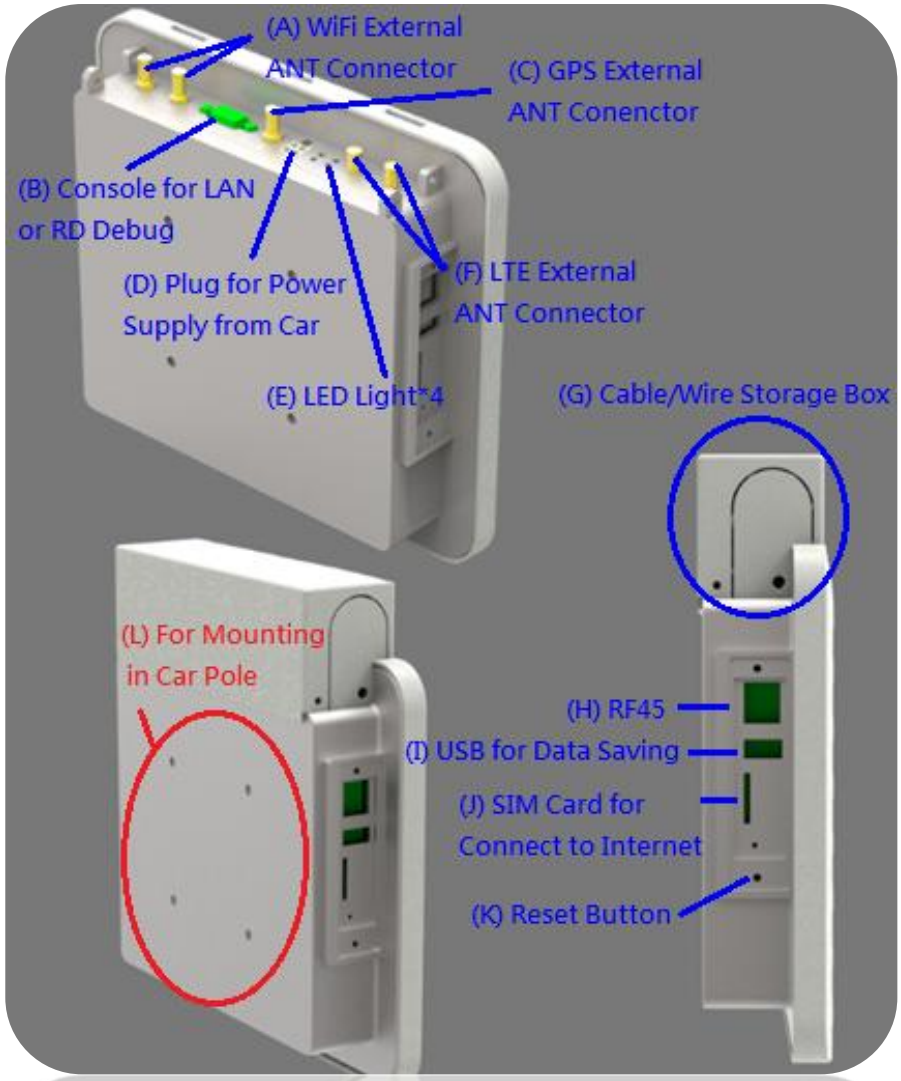
TDD Mode
Band 33~44

Band	UL (MHz)	DL (MHz)	Simp. BW (MHz)	Total BW (MHz)	Mode	Notes
1	1920 - 1980	2110 - 2170	60	120	FDD	EMEA, Japan
2	1850 - 1910	1930 - 1990	60	120	FDD	Quad band GSM
3	1710 - 1785	1805 - 1880	75	150	FDD	Quad band GSM. DCS 1800
4	1710 - 1755	2110 - 2155	45	90	FDD	AWS
5	824 - 849	869 - 894	25	50	FDD	Quad band GSM
6	830 - 840	875 - 885	10	20	FDD	Not applicable to 3GPP
7	2500 - 2570	2620 - 2690	70	140	FDD	EMEA
8	880 - 915	925 - 960	35	70	FDD	Quad band GSM. GSM 900
9	1749.9 - 1784.9	1844.9 - 1879.9	35	70	FDD	1700 MHz. Japan
10	1710 - 1770	2110 - 2170	60	120	FDD	Extended AWS
11	1427.9 - 1452.9	1475.9 - 1500.9	25	50	FDD	1.5 GHz Lower, Japan
12	698 - 716	728 - 746	18	36	FDD	Lower 700 MHz, C Spire+USCC-LTE
	N/A	716 - 722	6	6	DL only	Originally Ch.55 for QCOM mDTV venture - MediaFLO. Spectrum was sold to AT&T.
13	777 - 787	746 - 756	10	20	FDD	Upper 700 MHz, VzW-LTE
14	788 - 798	758 - 768	10	20	FDD	US FCC Public Safety
15	1900 - 1920	2600 - 2620	20	40	FDD	
16	2010 - 2025	2585 - 2600	15	30	FDD	
17	704 - 716	734 - 746	12	24	FDD	AT&T-LTE
18	815 - 830	860 - 875	15	30	FDD	Japan 800 MHz Lower
19	830 - 845	875 - 890	15	30	FDD	Japan 800 MHz Upper
20	832 - 862	791 - 821	30	60	FDD	800 MHz EMEA
21	1447.9 - 1462.9	1495.9 - 1510.9	15	30	FDD	1.5 GHz Upper. Japan
22	3410 - 3490	3510 -3590	80	160	FDD	3.5G
24	1626.5 - 1660.5	1525 - 1559	34	68	FDD	
25	1850 - 1915	1930 - 1995	65	130	FDD	AWS-G. Sprint LTE within this band
	1915 - 1920	1995 - 2000	5	10	FDD	AWS-H, will be auctioned by Feb. 2015.
26	814 - 849	859 - 894	35	70	FDD	Sprint / Nextel iDen
27	807 - 824	852 - 869	17	34	FDD	Lower 850 MHz
28	703 - 748	758 - 803	45	90	FDD	700 MHz APAC
	2000 - 2020	2180 - 2200	20	40	FDD	Dish Network to deploy LTE-A by 2016.
33	1900 - 1920		20		TDD	
34	2010 - 2025		15		TDD	China Mobile (CM) TD-SCDMA
35	1850 - 1910		60		TDD	
36	1930 - 1990		60		TDD	
37	1910 - 1930		20		TDD	
38	2570 - 2620		50		TDD	European - TD-LTE
39	1880 - 1920		40		TDD	CM TD-SCDMA
40	2300 - 2400		100		TDD	CM TD-LTE
41	2496 - 2690		194		TDD	TDD 2.5 GHz
42	3400 - 3600		200		TDD	TDD 3.5 GHz
43	3600 - 3800		200		TDD	TDD 3.6 GHz
44	703 - 803		100		TDD	700 MHz APAC

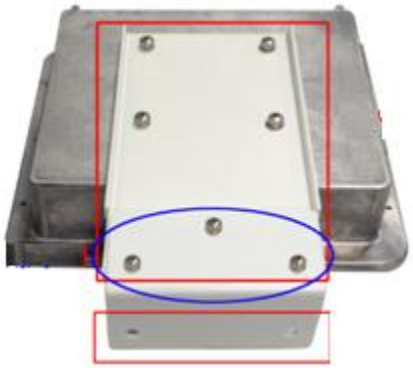
Housing Outlook

Interface

External Interface:	
(A)	External WiFi 2.4G Antenna*2
(B)	DB9 for LAN(10/100) or Console*1
(C)	External GPS Antenna Connector*1
(D)	Power Socket*1
(E)	LED Light*4
(F)	External LTE Antenna Connector*2
(G)	Cable/Wire Storage Box
(H)	RJ45 for LAN(10/100/1000)*1
(I)	USB*1
(J)	SIM Card Slot*1
(K)	Reset Button*1
(L)	For Mounting in Car Pole



Installation



Installation Scenario-1

- Can be installed on the pole as following photo:

Thank You!