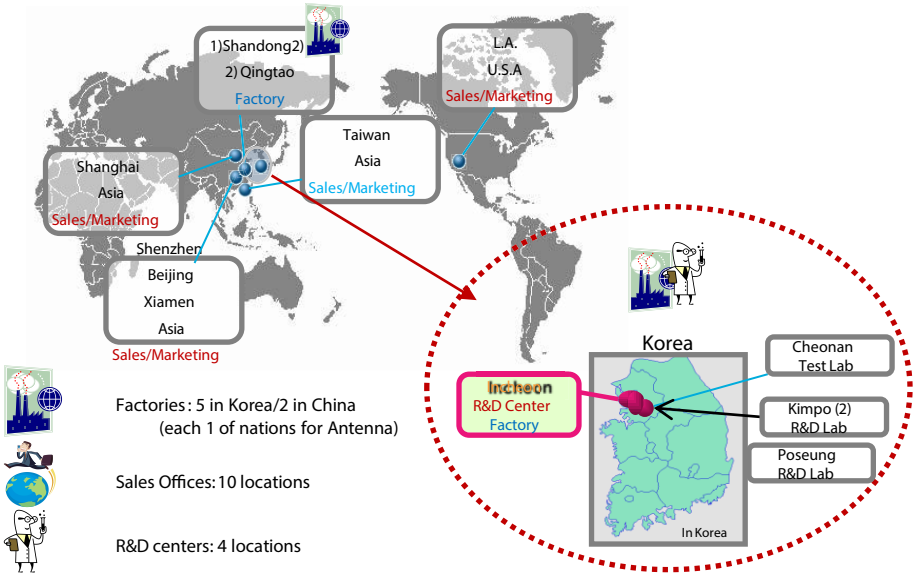


Factories : 5 in Korea/2 in China
(each 1 of nations for Antenna)

Sales Offices: 10 locations

R&D centers: 4 locations

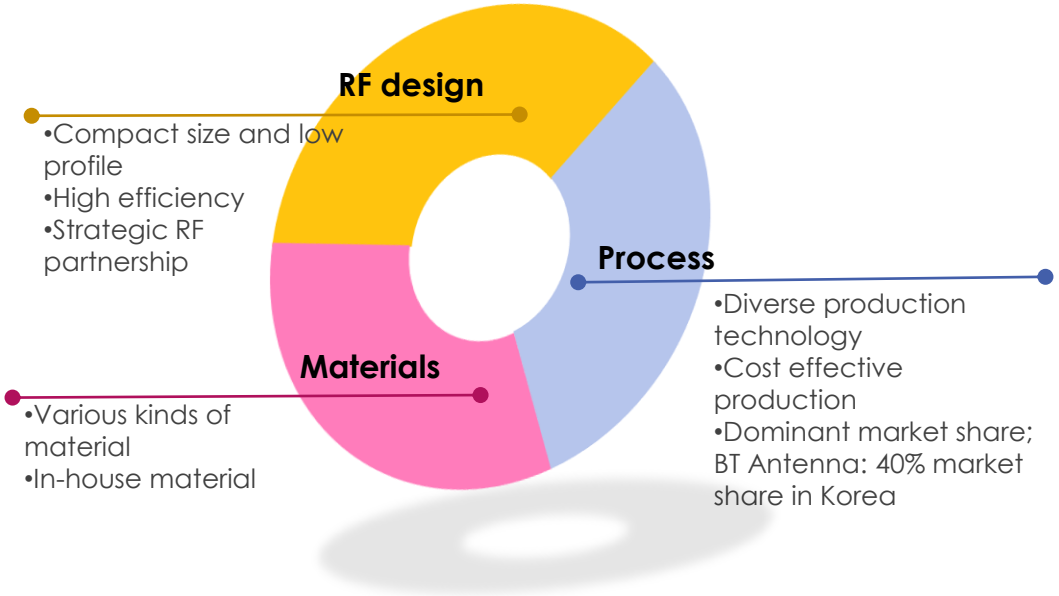
www.amotech.co.kr

AMOTECH ANTENNA

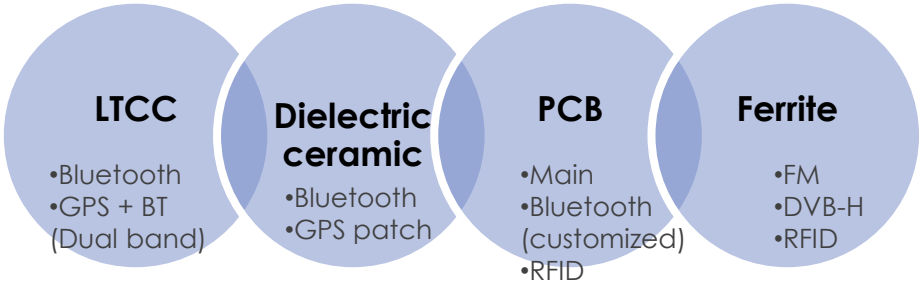
Mobile, Automotive, Laptop & AMR Antenna Solution

Based on advanced material technology and excellent RF design, Amotech's Antennas offer customers with best solutions for the numerous applications which cover from hand held devices to automotive areas. From very low frequencies for FM antennas to UWB antennas, Amotech is dedicated to leading antenna technology

Core Competitiveness



Various Materials for Antennas



Application

BT
WIFI
NFC
GPS

GPS
Cellular

WLAN
WWAN
BT
WIFI

PND
TRACKING
LAPTOP
METERING
MOBILE
AUTOMOTIVE

Cellular
ISM
WIFI

BT
WIFI
FM
GPS/Glonas
s
NFC

GPS/Glonass
SDARS
Cellular
BT
WIFI
FM
NFC

Antennas for Mobile Phone

Functions

- BT, WiFi
- GPS
- FM
- NFC

1. BT, WiFi

Application	Type	Part Number	Size (mm)	Frequency (MHz)	VSWR	Gain (dBi)	
						Average	Peak
BT/ WiFi	Helical type 	ALA321C3	3.2x1.6x1.2	2400~2485	3.0:1	-1.6	2.3
		ALA621C4	6.0x2.0x1.2	2400~2485	2.5:1	-1.0	3.5
		ALA931C5	9.0x3.0x1.2	2400~2485	2.5:1	-0.5	3.5
		ALA131C3	11.0x3.0x1.2	2400~2485	2.5:1	-0.5	4.0
	Mono-Pole	AMAN402012MS01	4.0x2.0x1.2	2400~2485	3.0:1	-1.6	2.6
		AMAN802012MS01	8.0x2.0x1.2	2400~2485	2.5:1	-0.5	3.5
	PIFA type  	AMAN201510ST01	2.0x1.5x1.0	2400~2485	3.0:1	-1.0	3.0
		AMAN301512ST01	3.0x1.5x1.2	2400~2485	3.0:1	-1.0	3.0
		AMAN402012ST01	4.0x2.0x1.2	2400~2485	3.0:1	-1.0	3.0
		AMAN1003030ST03	10.0x3.0x3.0	2400~2485	3.0:1	-1.0	3.0
		AMAN1003030ST02	10x3x3	2400 ~2485 5150~5850	2.5:1	-2.0	-

Antennas for Mobile Phone

2. GPS

Application	Type	Part Number	Size (mm)	Frequency (MHz)	VSWR	Gain (dBi)	
						Average	Peak
GPS	PIFA type	AMAN1003015ST01	10x3x1.5	1575.42	3.0:1	-1.1	1.0
		AMAN1003015ST02	10x3x1.5	Glonass	3.0:1	-1.1	2.3
		AMAN1003015ST03	10x3x1.5	GPS+Glonass	3.0:1	-0.7, -0.1	2.8, 2.2
		AMAN1003030ST01	10x3x3	1575.42	3.0:1	-0.3	3.7

3. FM

Type	Part Number	Size (mm)	Frequency (MHz)	VSWR	Typ. Gain(dBi)
Chip type 	AMFA1003015V1	10x3x1.5	87.5 ~ 108	6:1	-18.0
	AMFA802015V1	8x2x1.5		6:1	-20.0
Chip type with Radiator 	MFA1003015V1 + Radiator	customize		6:1	-15.0
PCB type 	AMFA2505008ST01	25x5x0.8		6:1	-15.0
ABM 	ABM504012S01	5.0x4.0x1.2		-	14.5dB ± 1.5dB @ 98MHz
	ABM303010M01	3.0x3.0x1.0		-	14.0dB ± 1.5dB @ 98MHz

Antennas for Mobile Phone

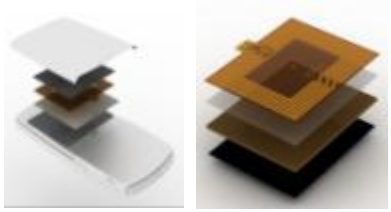
4. NFC

Features

- They are flexible.
- They are suited for thin and shapes.
- Available in a wide range of dimensions and shapes.

Technology

- Material design
- Various antenna solutions for mobile device.



Applications

- Mobile phone with NFC function
- Contactless IC card
- RFID reader/writer
- RFID tag

Type	Part Number	Size (mm)	Frequency	Structure	Impedance	VSWR
Ferrite sheet + FPCB antenna 	ANFA300S002	60.0X40.0X0.30	13.56MHz	multi layer	50Ω	Max 3 : 1
Customizing 	ANFA300S001	14.0X40.0X0.44	13.56MHz	cable Ass'y	50Ω	Max 3 : 1

Automotive Application

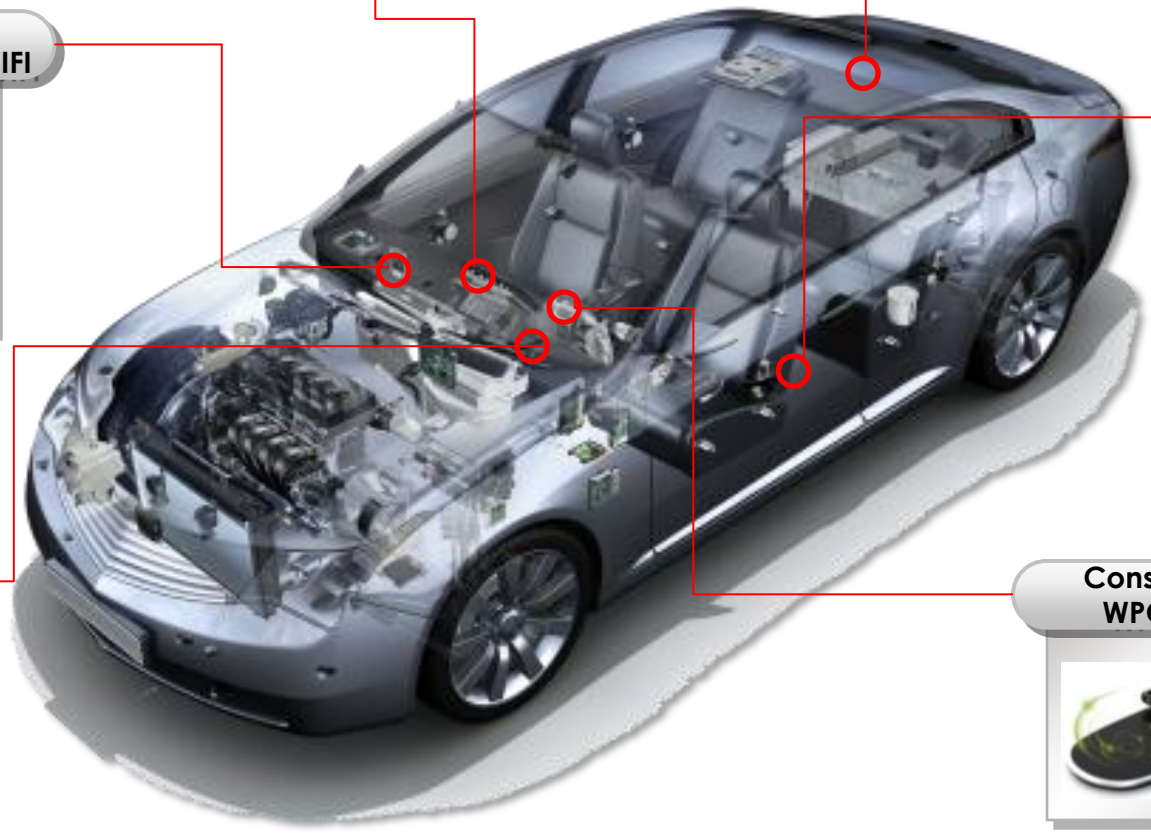
Functions

- GPS/Glonass/Beidou/SDARS
- BT, WiFi
- Cellular
- NFC
- WPC

AVN
- BT/WIFI

Roof/Shark
- GNSS, SDARS

Telematics / e-call
- Cellular, GNSS, BT/WIFI



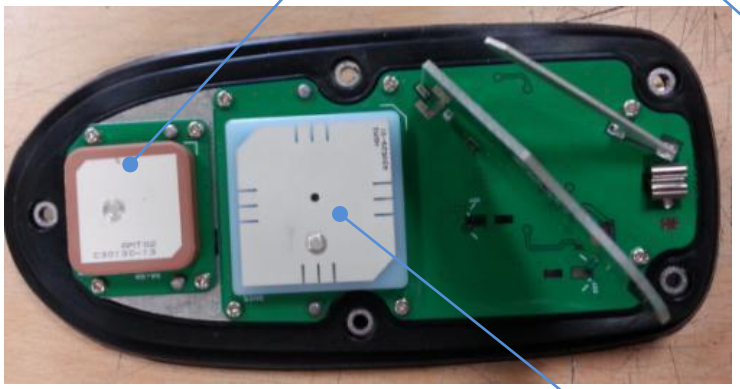
Door
NFC

PAYD
- GNSS, NFC, Cellular

Console Box
WPC/NFC

Antennas for Automotive - Shark

GNSS (GPS/Glonass/Beidou/Galileo)

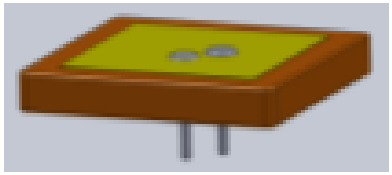


SDARS (2320~2345MHz)

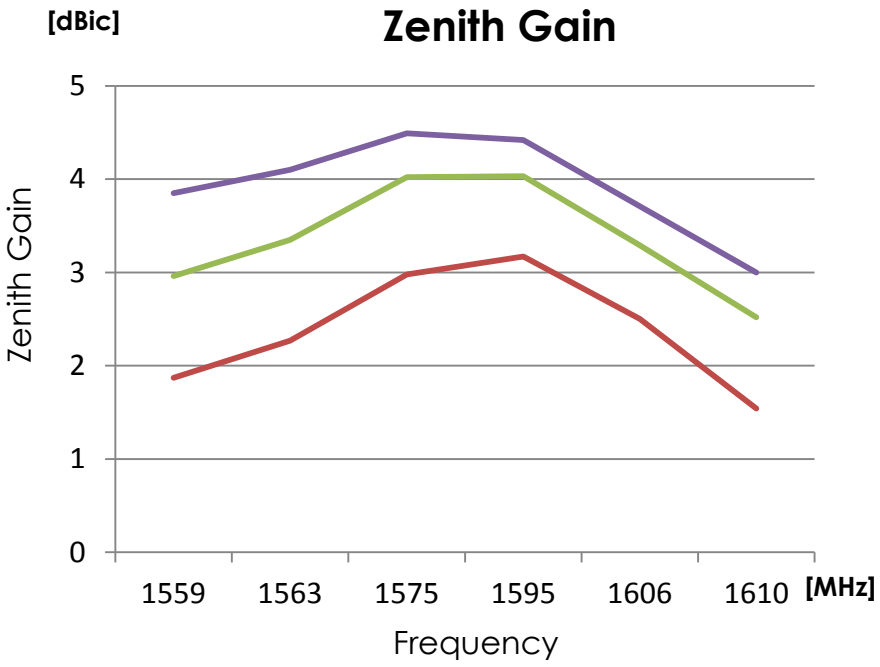
GPS/Glonass/Galileo/Beidou Passive Antenna (N25 Series)

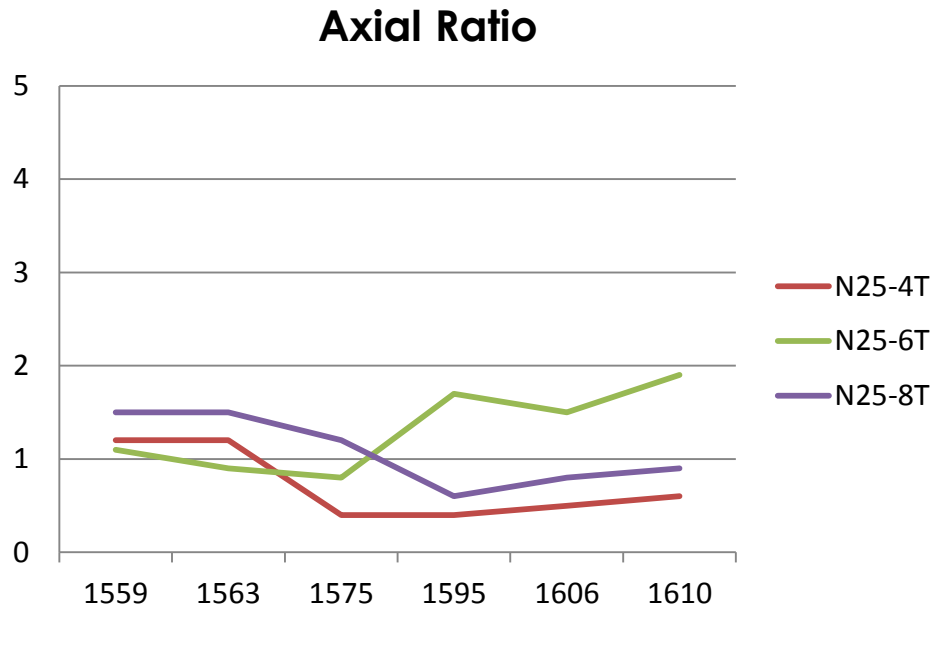
Technology

- One antenna of N25 type is capable of receiving all Satellites signal of GPS/Glonass/Beidou
- Axial Ratio less then 2.0 in all bandwidth of GPS/Glonass/Galileo / Beidou.
- If the thickness is thickened about 2mm, the Gain is improved about 0.8dBic.



Patent pending



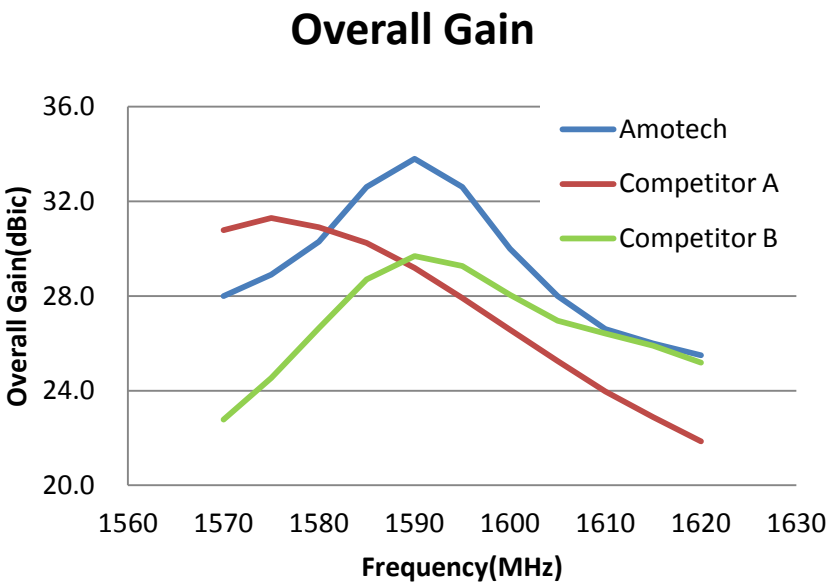


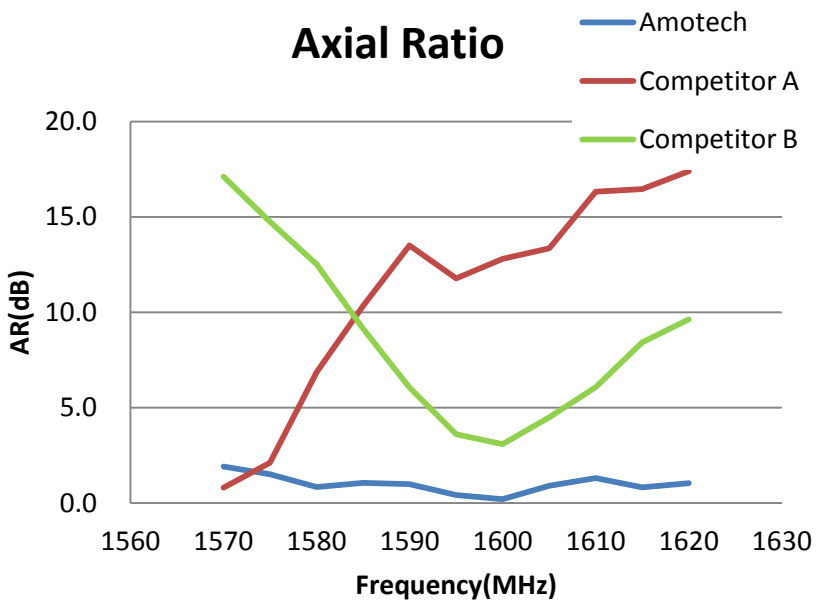
※ Measured on 70x70mm sq ground plane.

GPS/Glonass/Galileo/Beidou Active Antenna

Technology

- One antenna of N25 type is capable of receiving all Satellites signal of GPS/Glonass/Beidou
- Axial Ratio less then 2.0 in all bandwidth of GPS/Glonass/Galileo / Beidou.



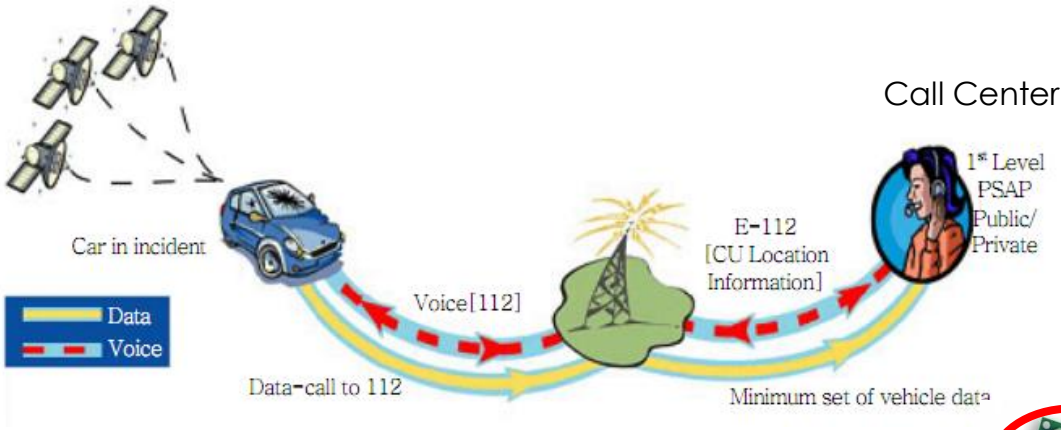


※ Measured on 70x70mm sq ground plane.

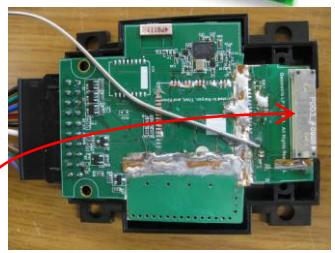
Antennas for Automotive – Telematics/E-call

E-Call System to be on European Cars by 2015

Legislation of E-call system loading in 2015y

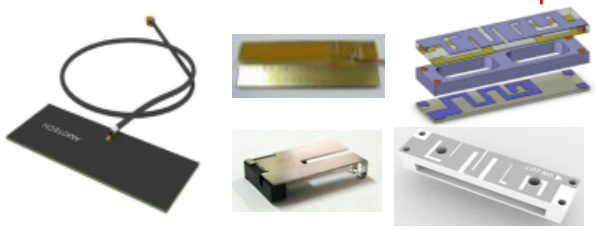


GNSS (GPS/Glonass/Beidou/Galileo)

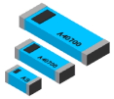


Cellular :

Chip type/ PCB Cable assembly



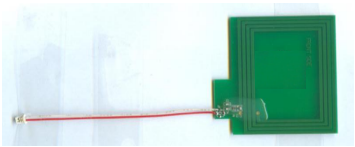
Chip (BT/WIFI) : SMD Type

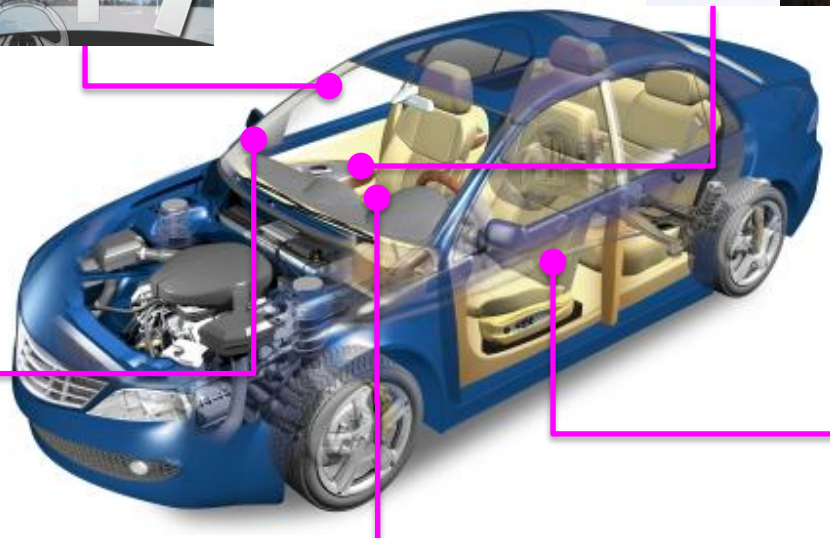


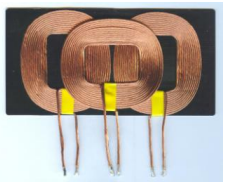
Antennas for Automotive – NFC/WPC TX

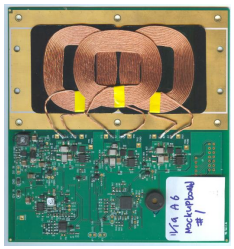
Car Information

Comfort System

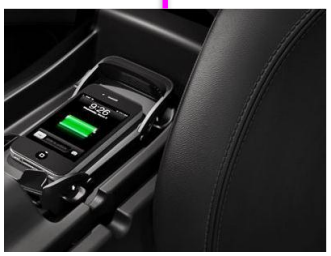








A6- Ferrite + Coil
(Low power 5W)



WPC TX

Bluetooth Pairing

Door Lock

Antennas for Automotive

1. GPS / Glonass / Beidou / SDARS : Passive

Features

- Pin / SMD Type Patch antennas
- GPS/Glonass/Beidou/SDARS antennas

Technology

- No 1 market share in automotive GPS built in navigation system
- Matching service based on various experience
- High yield & capacity lead to competitive price and short term delivery
- Small size Antenna
- RoHS compliant

Type	Part Number	Size (mm)	Frequency (MHz)	Gain@zenith (dBi)	Axial Ratio (dBi)	Polarization	G/P Size (mm)
Patch Antenna 	YDRA-A15-1575	15x15x4	GPS(L1)	0.9	Typ.2.0	RHCP	30x30
	YDRA-A18-1575	18x18x4	GPS(L1)	3.4	Typ.2.0	RHCP	50x50
	A20-4565753-STD60	20x20x4	GPS(L1)	4.8	Typ.2.0	RHCP	60x60
	YDRA-A25-1575	25x25x4	GPS(L1)	5.8	Typ.2.0	RHCP	70x70
	B35-3452753-STD35	35x35x3	GPS(L1)	2.4	Typ.2.0	RHCP	35x35
	B18-4T (SMD)	18x18x4	GPS(L1)	4.0	Typ.2.0	RHCP	70x70
	G25-4T (SMD)	25x25x4	GPS(L1)	5.8	Typ.2.0	RHCP	70x70
	A25-4102920-AMT02	25x25x4	GPSL1/Glonass	3.7	Typ. 8	RHEP	70x70
	A25-6102920-AMT05	25x25x6	GPSL1/Glonass	4.0	Typ. 8	RHEP	70x70
	N25-4102820-GNS5	25x25x4	GPS/Glonass/ Galileo/Beidou	2.0	2.0	RHCP	70x70
	N25-6102920-GNS6	25x25x6	GPS/Glonass/ Galileo/Beidou	3.0	2.0	RHCP	70x70
	S25-4102387-STD70	25x25x4	SDARS	5.0	2.0	LHCP	70x70
	SB34-STD70	34x34x3.2	SDARS	5.0	2.0	LHCP	70x70

Antennas for Automotive

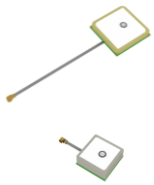
2. GPS / Glonass / Beidou : Active

Features

- GPS Embedded Active Antennas
- GPS External Active Antennas

Technology

- No 1 market share in automotive GPS built in navigation system
- Matching service based on various experience
- High yield & capacity lead to competitive price and short term delivery
- Small size Antenna
- RoHS compliant

Type	Part Number	Size (mm)	Frequency (MHz)	LNA Gain (dB)	NF (dB)	Current (mA)	Cable(mm)/connector
Embedded 	**AGA121202-S0-A3**	12x12-4.8T	GPS	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA121204-S0-A10	12x12-6.8T	GPS	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA121204-S0-A11	12x12-6.8T	GPS/Glonass	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA151502-S0-A1	15x15-4.8T	GPS	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA151504-S0-A7	15x15-6.8T	GPS	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA151504-S0-A8	15x15-6.8T	GPS/Glonass	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA181802-S0-A3	18x18-4.8T	GPS	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA181804-S0-A7	18x18-6.8T	GPS	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA181804-S0-A8	18x18-6.8T	GPS/Glonass	Typ. 19	Typ. 1.2	Typ. 4.0 @ 3V	Φ=1.13, L=100
	AGA252502-S0-A5	25x25-6.5T	GPS	Typ. 30	Typ. 1.5	Typ. 11 @ 3V	Φ=1.13, L=100
	AGA252502-S0-A6	25x25-6.5T	GPS/Glonass	Typ. 30	Typ. 1.5	Typ. 11 @ 3V	Φ=1.13, L=100
	AGA252504-S0-A6	25x25-8.5T	GPS	Typ. 30	Typ. 1.5	Typ. 11 @ 3V	Φ=1.13, L=100
	AGA252504-S0-A7	25x25-8.5T	GPS/Glonass	Typ. 30	Typ. 1.5	Typ. 11 @ 3V	Φ=1.13, L=100
External Ant. 	**AGA363913-S0-A2**	36x39-13T	GPS	Typ. 30	Typ. 1.5	Typ. 14 @ 5V	RG174 Φ2.8, L=3,000/ SMA
	AGA363913-S0-A3	36x39-13T	GPS/Beidou	Typ. 30	Typ. 1.5	Typ. 14 @ 5V	RG174 Φ2.8, L=3,000/ SMA
	AGA363913-S0-A4	36x39-13T	GPS/Glonass	Typ. 30	Typ. 1.5	Typ. 14 @ 5V	RG174 Φ2.8, L=3,000/ SMA
	AGA363913-S0-A1	36x39-13T	GPS/Glonass /Beidou	Typ. 30	Typ. 1.5	Typ. 14 @ 5V	RG174 Φ2.8, L=3,000/ SMA

Antennas for Automotive

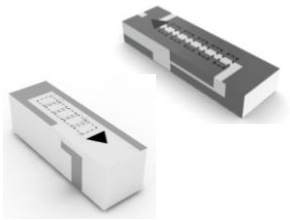
3. BT, WiFi

Features

- Multi-layer Chip
- Dielectric Chip
- PCB & Cable Assembly

Technology

- Chip type
  : Small size & High durability
- PCB & Cable Assembly type
  : Low profile & high efficiency
  : Usable Customizing

Type	Part Number	Size (mm)	Frequency (MHz)	VSWR	Gain (dBi)	
					Average	Peak
Multi Layer Chip Antenna 	ALA321C3	3.2x1.6x1.2	2400~2485	3.0:1	-1.6	2.3
	ALA621C4	6.0x2.0x1.2		3.0:1	-1.0	3.5
	ALA621C5	6.0x2.0x1.0		2.5:1	-1.0	3.5
	ALA931C5	9.0x3.0x1.2		2.5:1	-0.5	3.5
	ALA131C3	11.0x3.0x1.2		2.5:1	-0.5	4.0
Dielectric Chip Antenna 	AMAN1003015ST04	10.0x3.0x1.5	5150~5850	3.0:1	-1.4	3.5
	AMAN1003015ST05		5150~5850	3.0:1	-1.6	3.5
	AMAN1003015ST06		2400~2485 / 5150~5850	3.0:1	-0.3 / -1.2	3.0
	AMAN1003030ST02	10.0x3.0x3.0	2400~2485 / 5150~5850	3.0:1	-0.1 / -1.6	3.0
	AMAN1003030ST03	10.0x3.0x3.0	2400~2485	4.0:1	-3.5	2.0
Customizing 	PCB & Cable Type	User Option	2400~2485	-	-	-

Antennas for Automotive

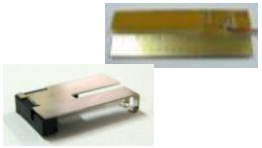
4. Cellular

Features

- PCB / FPCB with Cable Assembly
- Chip
- Press / FPCB with Carrier Assembly

Technology

- Chip type
  : Small size & High durability
- PCB & Cable Assembly type
  : Low Profile & high efficiency
- Press / FPCB with Carrier : Usable Customizing

Type	Part Number	Size (mm)	Frequency	VSWR	Gain (dBi)		EVB Size (mm)
					Average	Peak	
PCB/FPCB & Cable Assembly Antenna 	**AMMAP007**	40.0x15.0x0.55	GSM850 GSM900 DCS1800 PCS1900 WCDMA UMTS	3:1	Min. -3.9	-	-
	AMMAP008	40.0x15.0x0.14		3:1	Min. -3.4	-	-
	AMMAP009	40.0x15.0x0.14		3:1	Min. -4.5	-	-
Customizing 	**Press / FPCB Type With Carrier**	User Option		-	-	-	-
Main Chip Antenna (SMD) 	**AMMAP003(F)**	24.0x5.5x4.4		3.5:1	Min. -3.7	4	114x45
	AMMAP005(R)	24.0x5.5x4.4		3.5:1	Min. -3.7	4	114x45
	AMMAQ002	22.0x5.5x4.4		3.5:1	Min. -3.3	3	114x45

Antennas for Automotive

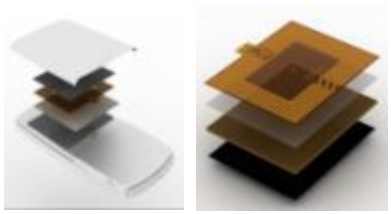
5. NFC

Features

- They are flexible.
- They are suited for thin and shapes.
- Available in a wide range of dimensions and shapes.

Technology

- Material design
- Various antenna solutions for mobile device.



Applications

- Mobile phone with NFC function
- Contactless IC card
- RFID reader/writer
- RFID tag

Type	Part Number	Size (mm)	Frequency	Structure	Impedance	VSWR
Ferrite sheet + FPCB antenna 	**ANFA300S002**	60.0X40.0X0.30	13.56MHz	multi layer	50Ω	Max 3 : 1
Customizing 	**ANFA300S001**	14.0X40.0X0.44	13.56MHz	cable Ass'y	50Ω	Max 3 : 1

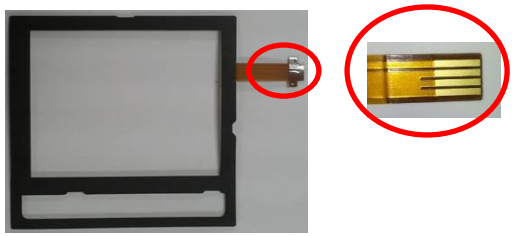
Antennas for Automotive

6. NFC/WPC TX

NFC Reader

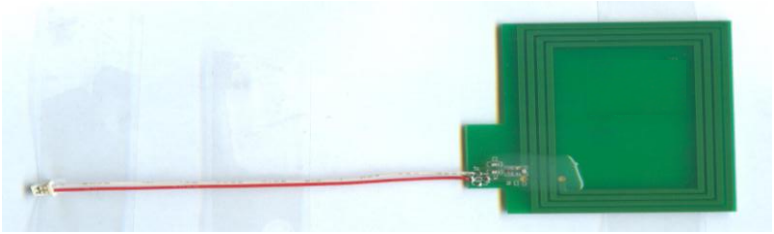
Antenna to Board Connection

1) FPCB Connector Type

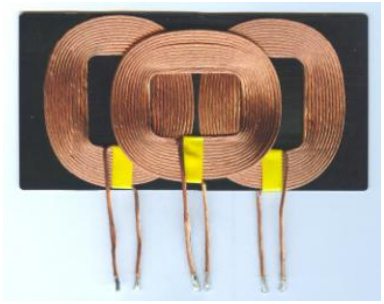


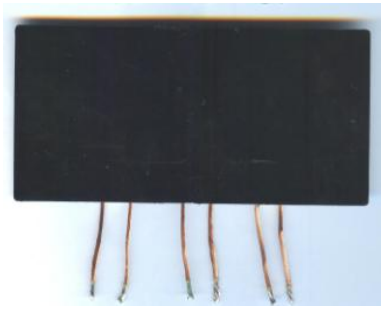
2) Coaxial Cable Type

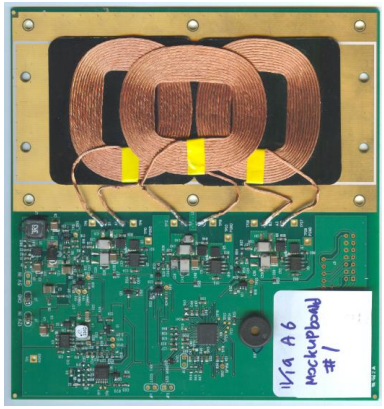
3) UTP Cable Type



WPC TX





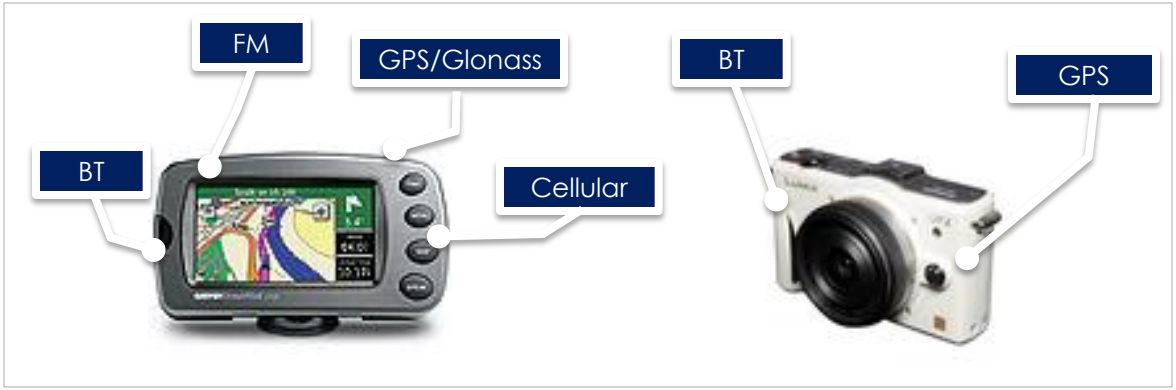


WPC TX A6	
Operating Voltage	12V
Standby Current	max 5mA without Load
Transfer Power	5W(1A/5V)
Operation Frequency	110 ~ 205kHz

Antennas for PND and DSC

Functions

- GPS/Glonass
- BT, WiFi
- Cellular



1.GPS/Glonass

Type	Part Number	Size (mm)	Frequency (MHz)	Gain@zenith (dBic)	Axial Ratio (dBi)	Polarization	G/P Size (mm)
Patch Pin type 	D12-2D79753-STD12	12x12x2	GPS(L1)	-4.5	3.0	RHCP	12x12
	D12-4579753-STD12	12x12x4	GPS(L1)	-2.0	3.0	RHCP	12x12
	D12-4179920-AMT04	12x12x4	GPS L1/Glonass	-4.0	Typ. 10	RHEP	30x30
Patch SMD type	E12- GPS	12x12x4	GPS(L1)	-3.3	3.0	RHCP	About 14x17
				-0.5	3.0	RHCP	On Set
	E12 GNSS	12x12x4	GPS L1/Glonass	--6.5	Typ. 10	RHEP	About 14x17
				-3.8	Typ. 10	RHEP	On set

Type	Part number	Size	Frequency (MHz)	Average Gain	Peak Gain	Polarization	VSWR
Chip type (Mono Block) 	AMAN1003015ST01	10x3x1.5	1575.42	-0.72	3.08	Linear	2.5:1
	AMAN1003030ST01	10x3x3	1575.42	-0.32	3.12	Linear	2.5:1

Antennas for PND and DSC

2.BT, WiFi

Type	Part Number	Size (mm)	VSWR	Gain (dBi)	
				Average	Peak
Helical type 	**ALA321C3**	3.2x1.6x1.2	3.0:1	-1.6	2.3
	ALA621C4	6.0x2.0x1.2	2.5:1	-1.0	3.5
	ALA621C5	6.0x2.0x1.0	2.5:1	-1.0	3.5
	ALA931C5	9.0x3.0x1.2	2.5:1	-0.5	3.5
	ALA131C3	11.0x3.0x1.2	2.5:1	-0.5	4.0
Mono-Pole	**AMAN402012MS01**	4.0x2.0x1.2	3.0:1	-1.6	2.6
	AMAN802012MS01	8.0x2.0x1.2	2.5:1	-0.5	3.5
PIFA type 	**AMAN201510ST01**	2.0x1.5x1.0	3.0:1	-1.0	3.0
	AMAN301512ST01	3.0x1.5x1.2	3.0:1	-1.0	3.0
	AMAN402012ST01	4.0x2.0x1.2	3.0:1	-1.0	3.0
	AMAN1003030ST03	10.0x3.0x3.0	3.0:1	-1.0	3.0

3.Cellular

Type	Part Number	Size (mm)	Frequency	VSWR	Gain (dBi)		EVB Size (mm)
					Average	Peak	
Main Chip Antenna 	**AMMAP003**	24.0x5.5x4.4	GSM850, GSM900, DCS, PCS, UMTS	3.5:1	Min. -3.7	4.0	114x45
	AMMAQ002	22.0x5.5x4.4	GSM900, DCS, PCS, UMTS	3.5:1	Min. -3.3	3.0	114x45
FPCB/PCB type -Penta band 	**AMMAP008(FPCB)**	40.0x15x0.24	GSM850, GSM900, DCS, PCS, UMTS	3:1	Min . -3.0	4.0	-
	AMMAP007(FR4)	40.0x15x0.75	GSM850, GSM900, DCS, PCS, UMTS	3:1	Min. -1.0	3.0	-

Antennas for PND and DSC

4. FM

Type	Part Number	Size (mm)	Frequency (MHz)	VSWR	Typ. Gain(dBi)
Chip type 	AMFA1003015V1	10x3x1.5	87.5 ~ 108	6:1	-18.0
	AMFA802015V1	8x2x1.5		6:1	-20.0
Chip type with Radiator 	MFA1003015V1 + Radiator	customize		6:1	-15.0
PCB type 	AMFA2505008ST01	25x5x0.8		6:1	-15.0
ABM 	ABM504012S01	5.0x4.0x1.2		-	14.5dB ± 1.5dB @ 98MHz
	ABM303010M01	3.0x3.0x1.0		-	14.0dB ± 1.5dB @ 98MHz

Antennas for Laptop

Functions

- WLAN
- WWAN
- BT/WiFi

Application	Type	Size(mm)	Frequency (Band)	VSWR	Gain (dBi)	
					Average	Peak
WLAN	Metal Press 	20.0x30.0x3.0	WLAN 2.4GHz/2.5GHz/5GHz WiMax 2.3GHz/3.5GHz	3.0:1	Min. -4.5	2.0
	PCB type 	20.0x30.0x0.5	WLAN 2.4GHz/2.5GHz/5GHz WiMax 2.3GHz/3.5GHz	3.0:1	Min. -4.5	2.0
WWAN	PCB + Carrier type 	61.0x9.0x4.0	GSM850, GSM900, DCS, PCS, UMTS	2.0:1	Min. -4.0	4.0
	FPCB +Carrier type 	78.0x10.0x4.0	LTE,GSM850, GSM900, GPS, DCS, PCS, UMTS	3.0:1	Min. -5.0	4.0

Type	Part Number	Size(mm)	Frequency (Band)	VSWR	Gain (dBi)	
					Average	Peak
BT/WIFI	ALA621C5 	6.0x2.0x1.0	2.4 GHz	2.5:1	-1.0	3.5
	AMPCBC001 	13.7x8.4x2.5	2.4 GHz	3.5:1	-1.5	4.0

Antennas for Tracker

Features

- Main Chip Antennas
- GPS Antennas

Applications

- Automotive Tracking & Tracing
- Personal Tracking & Tracing

Technology

- Small size
- High durability

Type	Part Number	Size (mm)	Frequency	VSWR	Gain (dBi)		EVB Size (mm)
					Average	Peak	
Main Chip Antenna 	**AMMAP003**	24.0x5.5x4.4	GSM850, GSM900, DCS, PCS, UMTS	3.5:1	Min. -3.7	4	114x45
	AMMAQ002	22.0x5.5x4.4	GSM900, DCS, PCS, UMTS	3.5:1	Min. -3.3	3	114x45
FPCB/PCB type -Penta band 	**AMMAP008(FPCB)**	40.0x15x0.24	GSM850, GSM900, DCS, PCS, UMTS	3:1	Min . -3.0	4.0	-
	AMMAP007(FR4)	40.0x15x0.75	GSM850, GSM900, DCS, PCS, UMTS	3:1	Min. -1.0	3.0	-
Type	Part Number	Size (mm)	Frequency (MHz)	Gain@zenith (dBi)	Axial Ratio (dBi)	Polarization	G/P Size (mm)
Patch type 	**D12-4579753-STD12**	12x12x4	GPS(L1)	-2.0	3.0	RHCP	12x12
	YDRA-A15-1575	15x15x4	GPS(L1)	0.9	2.7	RHCP	30x30
	YDRA-A18-1575	18x18x4	GPS(L1)	3.4	2.0	RHCP	50x50
	A20-4565753-STD60	20x20x4	GPS(L1)	4.8	2.1	RHCP	60x60
	YDRA-A25-1575	25x25x4	GPS(L1)	5.8	0.9	RHCP	70x70
	D12-2D79753-STD12	12x12x2	GPS(L1)	-4.5	3.0	RHCP	12x12

Antenna for AMR(Automatic Meter Reading)

Features

- Excellent RF performance
- Discreet design
- Quick and easy to install
- Durable

Applications

- Zigbee Module
- Smart Meter

Technology

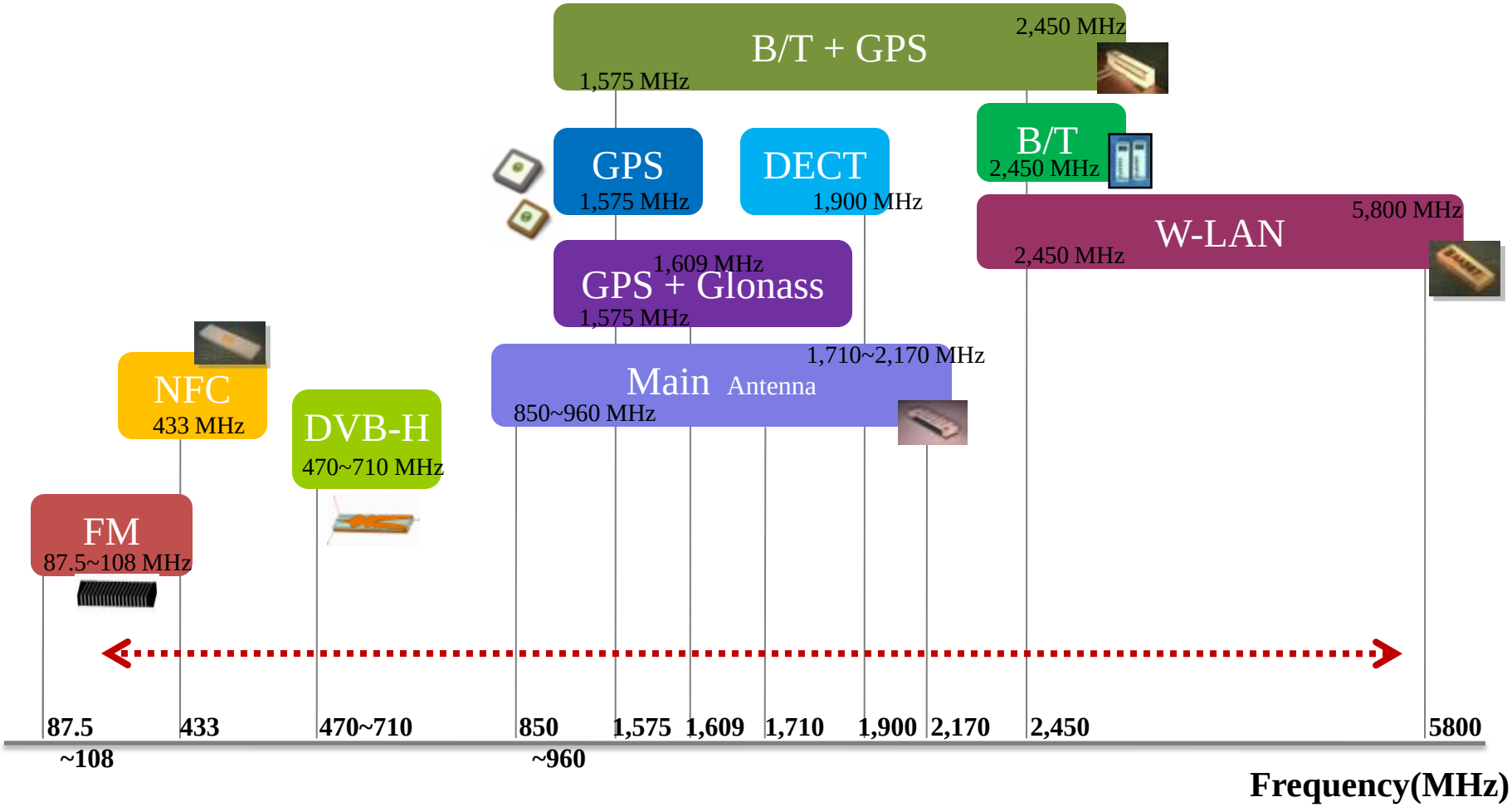
- Accumulated in-house production technology involving ceramic process
- Optimization of antenna performance and customization based on various application experiences
- Strong R&D design capability

Type	Part Number	Size (mm)	Frequency (MHz)	VSWR	Gain (dBi)	
					Average	Peak
Helical type 	ALA321C3	3.2x1.6x1.2	2400~2485	3.0:1	-1.6	2.3
	ALA621C4	6.0x2.0x1.2	2400~2485	2.5:1	-1.0	3.5
	ALA621C5	6.0x2.0x1.0	2400~2485	2.5:1	-1.0	3.5
	ALA931C5	9.0x3.0x1.2	2400~2485	2.5:1	-0.5	3.5
	ALA131C3	11.0x3.0x1.2	2400~2485	2.5:1	-0.5	4.0
PCB type - 169/315/433MHz Helical type - MAC Mono-pole 	AMFA6518P1-48	65x18x0.12	169MHz	2.0:1	-15.0	-11.0
	AMPA250502ST01	25.0x5.0x2.0	315MHz / 433MHz	3:1	-	-
	AMAN1255020ST01	12.5x5.0x2.0	315MHz / 433MHz	3.5:1	-	-
Helical type - MAC Mono-pole -868/915MHz 	AMAN903012ST05	9.0x3.0x1.2	868MHz	2;1	-7	-3.4
		9.0x3.0x1.2	915MHz	2:1	-4	-1.3
	AMMAS002	34.0x7.0x0.75	868MHz	3:1	-	1.9
	AMMAS001	34.0x7.0x0.75	915MHz	3:1	-	2
FPCB/PCB type - Penta band 	AMMAP008(FPCB)	40.0x15x0.24	Penta band	3:1	-3.0	4.0
	AMMAP007(FR4)	40.0x15x0.75	Penta band	3:1	-1.0	3.0

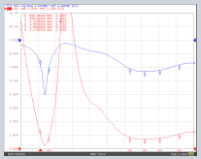
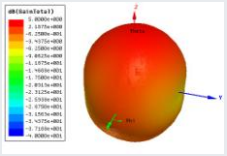
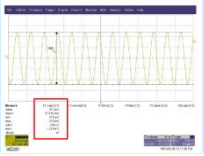
Various Product range by frequency

RoHS H/F

Amotech's Antennas cover wide variety frequency range



Measurement Equipment

	Item	Result	Equipment
Passive Test	Center Frequency & Return-loss (VSWR)		Network Analyzer 
	2D/3D Anechoic Chamber		8x4x4(2D) / 6x3x3(3D) / 2.8x1.6x1.8(3D) 
Active Test	GPS Signal Generator		Spirent STR4500
	NFC EMVCo		3 sets of EMVCo full test bench  
	BT Tester		TC3000C (Tescom) 
	WIFI Tester		MT9960C R&S PTW70 (Anritsu) 
	Cellular TRP/TIS		E5515C 8960 (Agilent)