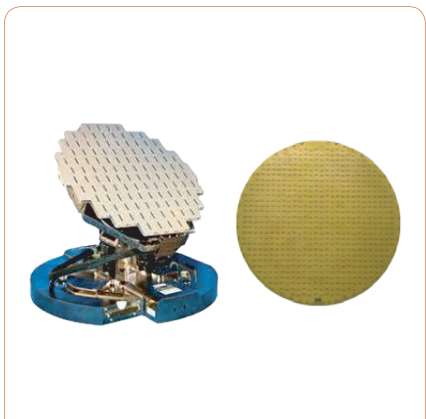
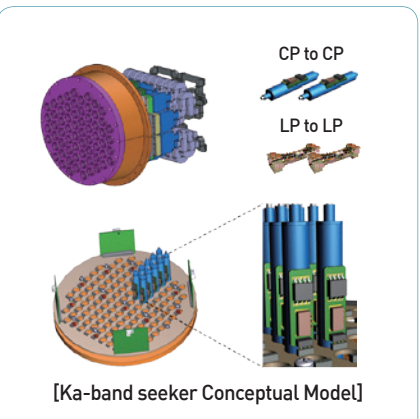



Research & Development




Ka-band Widewall Slot Antenna for Missile Seeker



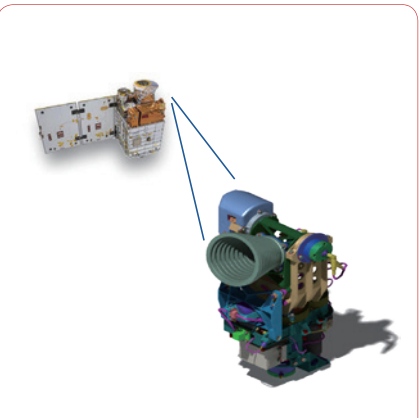
Ka-band Dual Mode Phase Shifter for PESA



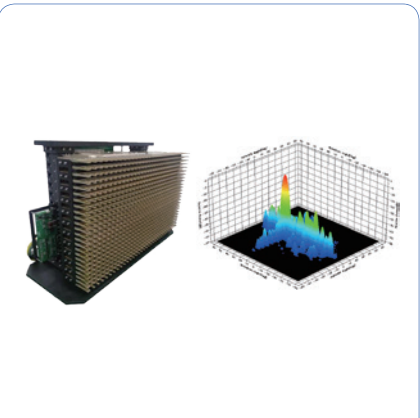
Offset Parabolic Antenna for ITS




UWB UHF/VHF Dipole Antenna for GPR



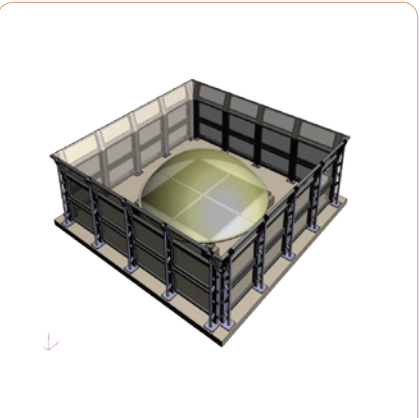
X-Band Corrugated Horn for Satellite Link System



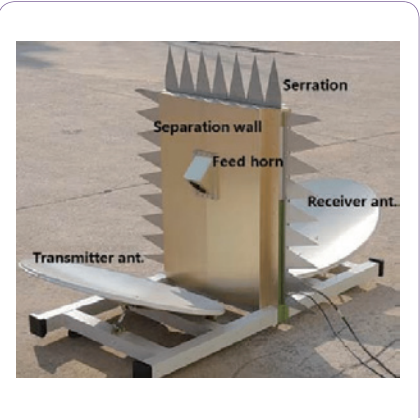
X-Band Planar Array for 3D Radar



Circular Array Antenna for Low Altitude Search Radar



Planar Array Antenna for RWP



Ka-Band Offset Antenna for MRR



SINCE 1993
Defense Company Specializes in the Rader And Communication Antenna



Introduction History, Business Area

Introduction



KUKDONG Telecommunication is National Defense Industry Company
Specialized in the Radar and Communication Antennas, Its Key Components

Company History

- 2020s

 - 2021 Designated 'Sea Surveillance Radar- II' as a National Defense Supplies
 - 2020 Designated 'High Frequency Changeover Switch' as a Localization
- 2010s

 - 2018 Acquired DQMS(Defense Quality Management System) Certification
 - 2017 Selected as an excellent procurement company from DAPA
 - 2015 Designated as Management Innovation Business(MAINBiz) Company
 - 2013 Designated 'CHUN-KUNG Phase Array Module' as a National Defense Supplies
 - 2010 'PKX Tracking' Radar Antenna won the Minister of Defense Award
- 2000s

 - 2008 Acquired ISO 14001 Certification
 - 2007 Established R&D Center
 - 2004 Designated as 'Excellent Company' of dual use technology task with ADD
 - 2003 Designated as a National Defense Industry Company
 - Designated 'PKX Antenna' as a National Defense Supplies
 - 2002 Acquired ISO 9001 Certification
- 1990s

 - 1998 Established RF System Laboratory
 - 1996 Designated as Prominent Small & Medium Enterprise IT(INNOBiz) Company
 - 1993 Founded in Nonsan City, Korea

Business Area

- Search & Tracking Radar Antenna
 - Communication Antenna
 - Satellite Tracking Antenna
- Guided Munitions Seeker
 - Ferrite Phase Shifter
 - Antenna System

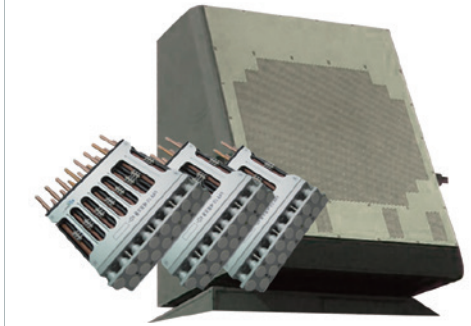
Phase shifter for Electrically Scanned Array Antenna



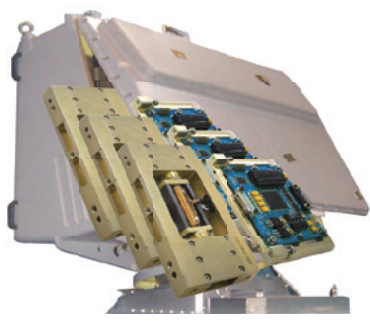
Applications

- CHUNKUNG Multi-Function Radar Phase Shifter Module
- PKG/PKMR Patrol Boat Search Radar Phase Shifter Module

Products



16 Elements Phase Shifter Module for CHUNKUNG Multi-Function Radar



PKG/PKMR Patrol Boat 3D Search Rader Ferrite Phase Shifter Module

Features

- Dual Mode Reciprocal Ferrite Phase Shifter
- Low Insertion Loss
- Fast Switching Time
- High Phase Resolution

Specifications

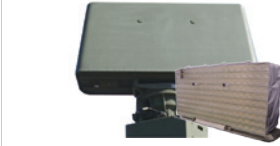
Type	CHUNKUNG MFR Phase Shifter	3D Search Radar Ferrite Phase Shifter
Frequency Band	X-Band	X-Band
Phase Resolution	4bit Latching & Reciprocal Operation	4 or 5bit Latching & Reciprocal Operation
Phase Accuracy	$\leq 6.5^{\circ}$ [rms]_Element $\leq 11.5^{\circ}$ [rms]_Module	$\leq 5^{\circ}$ [rms]
Insertion Loss	Typical 1.0dB	≤ 1.2 dB
Switching Time	$\leq 50\mu s$	$\leq 70\mu s$

Search & Tracking, Navigation Antenna for 2D/3D Radar

Applications

- CHUNMA Short Range Air Defense Antenna
- BIHO, TPS-830K Search Radar Antenna
- PKG/PKMR Patrol Boat Tracking Antenna
- KD-I, II, III Naval Navigation Radar Antenna
- GPS-200K Dual Beam Search Radar Antenna
- SPS-300K Navigation Radar Antenna

Products



CHUNMA Radar Antenna



SPS-95K Surface Search / Navigation Radar Antenna



BI-HO Radar Antenna TPS-830K Radar Antenna



GPS-200K Sea Surveillance Radar-II



PKG/PKMR Tracking Rader Antenna



SPS-300K Navigation Radar Antenna

Features

- Rigid and Light weight Honeycomb Structure
- Low Side Lobe Level Implementation
- Elaborate Electrical and Mechanical Parts
- Low Loss Air-Strip Transmission Line
- Optimized Sum and Delta Patterns

Specifications

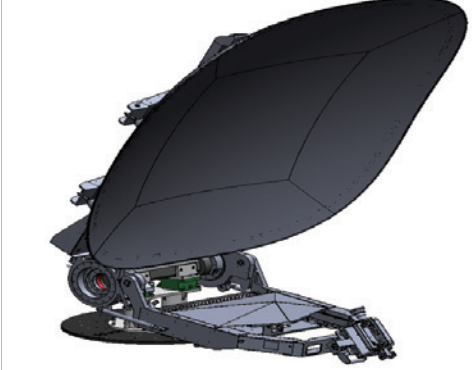
Type	CHUN-MA Antenna	SPS-95K Search Antenna	BI-HO / TPS-830K Antenna	GPS-200K Antenna	PKG/PKMR Tracking Antenna	Navigation Antenna
Frequency Band	S-Band	C-Band	L-Band(IFF), X-Band	L-Band(IFF), C-Band	Ku-Band	X-Band
Polarization	Horizontal	Horizontal	Liner/Circular Selectable	Liner/Circular Selectable	Vertical	Horizontal
Gain	≥ 24.0 dBi	≥ 30.0 dBi	≥ 30.5 dBi ≥ 33.0 dBi	≥ 37.3 dBi	≥ 40.0 dBi	≥ 31.00 dBi
3dB Beamwidth	Azimuth 5.2° Elevation 11°	Azimuth 2.3° Elevation 11°	Azimuth 1.4° Elevation 6°	Azimuth 0.95° Elevation 2.6°	Azimuth 1.4° Elevation 1.4°	Azimuth 0.8° Elevation 20°
V.S.W.R	$\leq 1.7:1$	$\leq 1.5:1$	$\leq 1.5:1$	$\leq 1.5:1$	$\leq 1.7:1$	$\leq 1.5:1$

Satellite Antenna & Communication Antenna for Data and Voice Transmission

Applications

- Multi-Band Satellite Antenna
- HCTRS(High Capacity Trunk Radio System) Data Transmission Antenna

Products



TRC-861K Satellite Antenna



AS-701K/702K Data Transmission Antenna

Features

- X/Ka Simultaneous Communication
- Single Offset Parabolic Reflector
- Low PIM Structure & Components
- Dual Linear Polarization
- Various Dish Size Depending on the adopted Operating Frequency and Antenna Gain

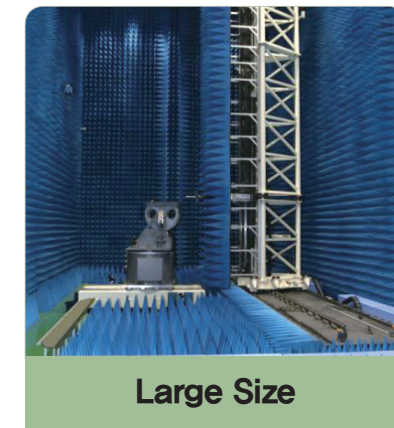
Specifications

Type	Satellite Antenna X/Ka Simultaneous Commuications		HCTRS [Data Transmission Antenna]	
Frequency Band	SHF(X-Band)	EHF(Ka-Band)	UHF(L-Band)	SHF(X-Band)
Polarization	Circular (LHCP & RHCP)		Vertical and Horizontal	
Gain (Min)	44,4dBi	55,0dBi	20dBi	30dBi
3dB Beam width (Typical)	1.1°	0.4°	15°	4°
V,S,W,R	$\leq 1.5:1$	$\leq 1.5:1$	$\leq 1.5:1$	$\leq 1.5:1$
Dimensions	2.5m x 2.8m (W x L)		$\varnothing 1.1$ m	$\varnothing 0.7$ m

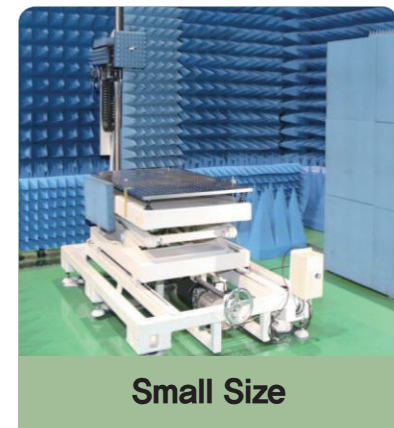
Antenna Measurement Facility



Near-field Measurement Systems



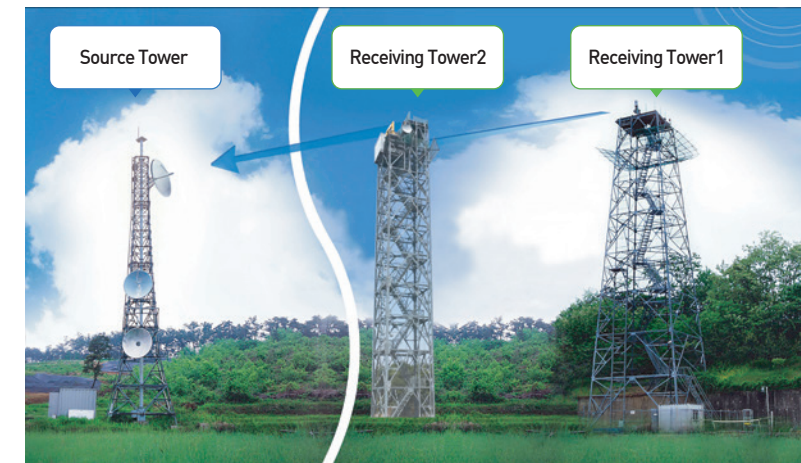
Large Size



Small Size

Type	Near Field	
	Large Size	Small Size
Frequency Range	0.1 ~ 40,0GHz	0.1 ~ 40GHz
Scan Area	18.0m X 9.0m	2.5m X 2.0m

Out-door Far-field Test Ranges



Type	Far Field	
	Receiving Tower1	Receiving Tower2
Frequency Range	≤ 40 GHz	≤ 40 GHz
Range	≤ 200 m	≤ 1.7 Km

Directional Finding Antenna Calibration Range



Type	Calibration Range
Frequency Range	2 ~ 3,000MHz
Angle Range	360°
Sensitivity	-100dB

