

SUPERTRACK SERIES

THE NEW STANDARD OF SATELLITE COMMUNICATION



CONTENTS

- 1 COMPANY PROFILE
- 2 SUPERTRACK LINE UP
- 3 2018 NEW DEVELOPMENT
- 4 CERT & TESTS
- 5 DISTRIBUTION & SERVICE NETWORK
- 6 MAJOR REFERENCE
- 7 KNS PARTNER SUPPORTS

**COMPANY
PROFILE**

SUPERTRACK
LINEUP

2018 NEW
DEVELOPMENT

CERT &
TEST

DISTRIBUTION &
SERVICE NETWORK

MAJOR
REFERENCE

KNS PARTNER
SUPPORT

KNS INTRODUCTION 2018





President	Kevin Jin	
Foundation	26 December 2011	
No. of Staffs	50	
History	2001 2004 2007 2008 2011 2013 2016 2017	Foundation Korea Coast Guard Satellite Terminal Distribution of CBSP Terminal for US Navy Astra Z Connect Launch Europe Distribution Centre Launch Next Generation VSAT Launch (MK3) SATCOM-On-The-Move Launch TACTICAL SATCOM Launch
Certificates	ISO 9001:2008, ISO 14001:2004 CE 0678	

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PROFILE

**SUPERTRACK
LINEUP**

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SUPERTRACK LINE UP

6



SUPERTRACK LINE UP

7

MARINE SATCOM

VSAT	Z Series (MK2)	KU – Band	Z4MK2 (45cm), Z6MK2 (61cm), Z7MK2 (75cm), Z8MK2 (83cm), Z10MK2 (1.0m), Z12MK2 (1.2m), Z24MK2 (2.4m)
		C – Band	Z24MK2-C (2.4m)
	Z Series (MK3)	KU – Band	Z7MK3 (75cm), Z8MK3 (83cm), Z10MK3 (1.0m), Z15MK3 (1.5m)
		KA – Band	Z6MK3-Ka (60cm), Z10MK3-Ka (1.0m)
	A Series	KU – Band	A6 (61cm), A9 (83cm), A10 (1.0m), A12 (1.2m)
TVRO	C Series	KU – Band	C4 (40cm)
	S Series	KU – Band	S4 (45cm), S6 (61cm), S8 (85cm), S10 (1.0m), S12 (1.2m)
	K Series	KU – Band	K4 (39cm), K5 (45cm), K7 (61cm)

SUPERTRACK LINE UP

8

MARINE SATCOM - VSAT

Z _SERIES MK2



KU – Band Z4MK2 (45cm), Z6MK2 (61cm), Z7MK2 (75cm), Z8MK2 (83cm), Z10MK2 (1.0m), Z12MK2 (1.2m), Z24MK2 (2.4m)

C – Band Z24MK2-C (2.4m)

Size : 19" Rack 1U Size
Remote Access : T-monitor, SCS S/W,
Telenet Terminal

SUPERTRACK LINE UP

9

MARINE SATCOM - VSAT

HoneyComb Antenna Radome

KA-180 Antenna Control Unit

3 Types of Gyro Input : NMEA, Synchro
Step by Step

Input Power : 100-120V AC / 200-240V AC
50-60Hz, 8A/4A

Output Power : 48V DC, 4.18A

External I/O : RS232C, Mini USB, Ethernet,
Console

Size : 19" Rack 1U Size

Remote Access : T-monitor, SCS S/W,
Telnet Terminal,
Web Interface



Tracking Speed : More than 90°/sec

Universal Motors for Each Axis

6061 Anodized Chassis
MTBF

45,000 hr (without LNB & BUC)

All-In-One PCU
Remote Upgrade Capable

Shock Absorber & Wire Rope Isolator
MIL-STD-901

CE 0678, MIL-STD-167,
MIL-STD-901, MIL-STD-461

KU – Band Z7MK3 (75cm), Z8MK3 (83cm), Z10MK3 (1.0m),
Z15MK3 (1.5m)

KA – Band Z6MK3-Ka (60cm), Z10MK3-Ka (1.0m)

SUPERTRACK LINE UP

10

MARINE SATCOM - VSAT

Important Features of Z Series MK3

Z _SERIES MK3



All-In-One PCU



Web-based SCS
(SuperTrack Control Software)



Z Series MK3 Shock Test
(MIL-STD-901D)



SUPERTRACK LINE UP

11

MARINE SATCOM - VSAT

A _SERIES

HoneyComb Antenna Radome

KA-75 Antenna Control Unit

Gyro Interface : NMEA
Output Power : 24V DC, 4.17A
External I/O : Mini USB
Size : 253 X 175 X 44 mm

KA-165 ACU apply for A12



Tracking Speed : More than 90°/sec

iLNB (integrated LNB)

BUC : 0.5W / 0.8W (optional) or 0.8W

Gain : 60dB type

*Note : Only available in Europe

Brake System

Rotary Joint

A9, A12 Applied

KU – Band A6 (61cm), A9 (83cm), A10 (1.0m), A12 (1.2m)

MARINE SATCOM - VSAT

C_SERIES

Compact Antenna Radome

Material : Plastic

C_Series Antenna Control Unit

Gyro Interface : NMEA 0183

Output Power : 24V DC, 5A

External I/O : Mini USB, RS-232, Console
, Ethernet

Size : 233 X 123 X 34 mm



4 Axis Stabilization – No Keyhole Effect



Antenna Gain

TX : 33.6 dBi @ 14.25 GHz

RX : 3225 dBi @ 11.75 GHz

Skew Control

-135° to +135°

Elevation Angle

+15° to +115°

Compact & Light

51cm (D) X 53.4cm (H)

17 kg

KU – Band C4 (40cm)

MARINE SATCOM - TVRO

S _SERIES

S-Series Antenna Radome

S4 : ABS Plastic

S6, S8, S10, S12 : HoneyComb FRP

Tracking Speed : More than 90°/sec

Gyro Free Operation Capability
Plug & Play

KA-165 Antenna Control Unit (S10, S12)

KA-75 Antenna Control Unit (S4, S6, S8)

DiSEqC1.2 Function

Gyro Interface : NMEA 0183

Size : 253 X 175 X 44 mm

Input Power : 100 – 240V AC 50/60Hz, 2.8A

Output Power : 24V DC, 4.17A

External I/O : Mini USB



KU – Band S4 (45cm), S6 (61cm), S8 (85cm), S10 (1.0m), S12 (1.2m)

MARINE SATCOM - TVRO

K _SERIES

K-Series Antenna Radome

Material : Plastic

KA-78 Antenna Control Unit

Gyro Interface : NMEA 0183

Size : 230 X 84 X 34 mm

Output Power : 24V DC, 2.5A

External I/O : Mini USB

Hoest 3 Axis System-Stabilized Azimuth and Elevation with a Skew Unit

Gyro Free Operation Capability
Plug & Play

Attitude Heading Reference System
(AHRS)
3 axis Gyro Scope / 2 axis acceleration



KU – Band K4 (39cm), K5 (45cm), K7 (61cm)

SUPERTRACK LINE UP

14

TACTICAL SATCOMS

SOTM 	M Series	KU-Band	M4MK2 (45cm)
		KU-KA Dual Band	M9MK1 (90cm)
NAVAL VSAT	X Series	X-Band	X10MK3 (1.0m), X15MK3 (1.5m)
	10 ULV	Ku-Band Ka-Band	10 ULV Ku (1.0m), 10 ULV Ka (1.0m)

SUPERTRACK LINE UP

15

TACTICAL SATCOMS - SOTM 

M_SERIES

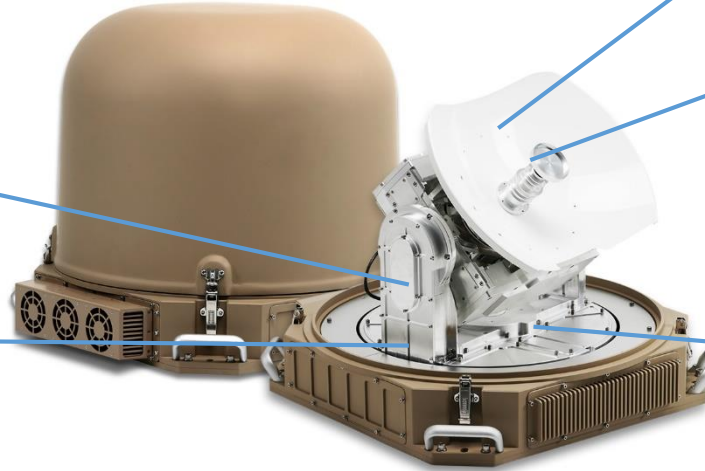
BUC : Built in 25W
LNB : Universal 2LO PLL LNB

4 Axis Stabilization
Yaw, Level, Tilt, Skew

Antenna Gain
TX : 33.31 dBi @ 14.25 GHz
RX : 32.26 dBi @ 11.75 GHz

Polarization : Linear

Unlimited Azimuth



MIL-STD-461

KU – Band M4MK2

SUPERTRACK LINE UP

16

TACTICAL SATCOMS - SOTM

M_SERIES

Polarization

- KU-Band
Linear (Skew Angle +/- 90° Adjustable)
- KA-Band
Circular (Automatic Switching LHCP/RHCP)

BUC

- KU-Band (40W)
- KA-Band (20W)

LNB

- KU-Band : Universal PLL LNB
- KA-Band : Single PLL LNB

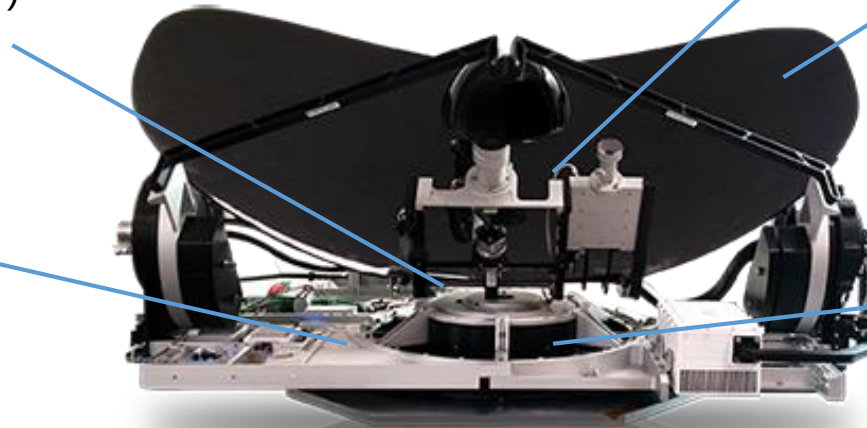
3 Axis Stabilization

Yaw, Level, Skew

Antenna Gain

- KU-Band
TX : 40.66 dBi @ 14.25 GHz
RX : 39.25 dBi @ 11.5 GHz
- KA-Band
TX : 46.65 dBi @ 30.2 GHz
RX : 43.10 dBi @ 20.4 GHz

Unlimited Azimuth



KU/KA –
Dual Band

M9MK1

SUPERTRACK LINE UP

17

TACTICAL SATCOMS - NAVAL VSAT

X_MK3 SERIES

KA-180 Antenna Control Unit

3 Types of Gyro Input : NMEA, Synchro
Step by Step

Input Power : 100-240V AC
50/60Hz, 4.2A MAX

Output Power : 48V DC, 6.6A

External I/O : RS232C, Mini USB, Ethernet,
Console

Size : 19" Rack 1U Size

Remote Access : T-monitor, SCS S/W,
Telnet Terminal,
Web Interface



All-in-One PCU – Easy Maintenance

Remote Upgradable

Shock Absorber & Wire Rope Isolator
MIL-STD-901, MIL-STD-167-1A Comply

X – Band X10MK3 (100cm), X15MK3 (150cm)

TACTICAL SATCOMS - NAVAL VSAT

10 ULV

10 ULV Antenna Control Unit

Gyro Interface : NMEA 0183 (\$xxHDT),
Synchro, Step by Step
Input Power : 85-254V AC
47~63Hz, 12A
External I/O : RS232C, Mini USB, Ethernet,
Console
Size : 19" Rack 1U Size
Monitoring : SMA Female port for RX & TX
STATUS LED : Tracking, Error, GPS



All-in-One PCU – Easy Maintenance

Shock Absorber & Wire Rope Isolator
MIL-STD-901, MIL-STD-167-1A Comply

10 ULV Test Items

Description	Specification
Shock	MIL-STD-901D
Vibration	MIL-STD-167-1A
EMC	MIL-STD-461F
Environmental (Temperature & Solar Radiation)	MIL-STD-801G

Ku-Band	10 ULV Ku (100cm)
Ka-Band	10 ULV Ka (100cm)

TACTICAL SATCOMS - NAVAL VSAT

10 ULV

10 ULV Antenna System Specification

Above Deck	Specification	Above Deck	Specification
Antenna Type	Dual reflector type	Operating Platform	3 Axis + 1 (Skew in auto mode)
Dish Diameter	1.0m	Polarization Control	Automatic ($\pm 90^\circ$)
Radome Size	1450(D) x 1525(H) mm	Azimuth Angle	-20° to $+110^\circ$
Antenna Weight	200Kg (Estimated)	Elevation Angle	$\pm 35^\circ$
Operating Frequency	TX : 13.75 ~ 14.5 GHz RX : 10.7 ~ 12.75 GHz	BUC	8W / 16W / 80W (options with inbuilt 1+1 auto switching configuration for 8W and 16W)
Antenna Gain	TX : 41 dBi @ 14.25 GHz RX : 40 dBi @ 11.75 GHz	Tracking Speed	More than $90^\circ/\text{sec}$
		Shock & Vibration	Wire Rope Included
Ship Motion	Roll : $\pm 24^\circ$ at 8-12 sec periods Pitch : $\pm 14^\circ$ at 6-12 sec periods Yaw : $\pm 8^\circ$ at 15-20 sec periods	GPS Receiver	Included in the ADE
		Operating Temp.	-20°C to $+55^\circ\text{C}$

KNS VCS (VSAT Cross-Over Switch)

- Selectable Antenna Switching System
- Modem Ethernet interface for ABS (Automatic Beam Switching)
- Manual antenna selection
- RX and TX monitoring port built in front side (SMA type)
- Possibility of RF attenuator control
- M & C control is available between antenna and ACU using USB or DB-9 serial port.
- Built-in internal 10MHz circuit
- Modern 10MHz reference signal detection available



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KNS INTRODUCTION 2018



VSAT + TVRO Hybrid Antenna



SPATIAL ADVANTAGE

Only one antenna for
two systems

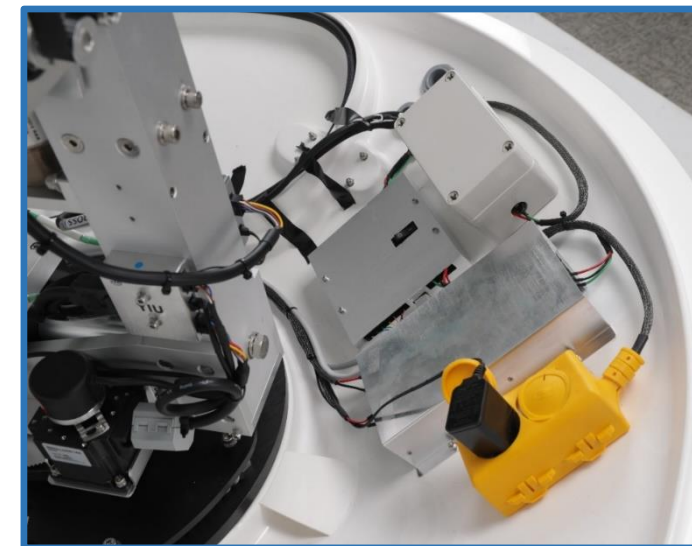
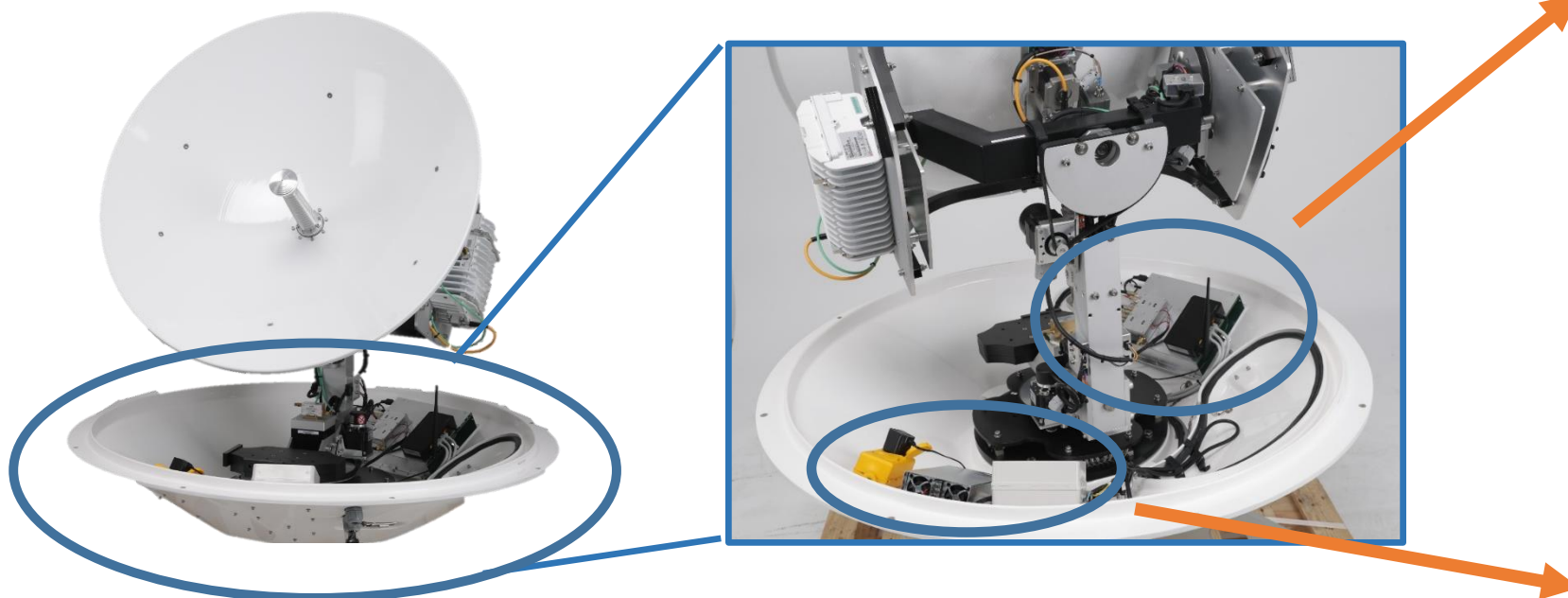
COST EFFECIENT

Two systems for competitive one
antenna price level

All Z-Series VSAT Antenna Applicable

All-In-One Antenna

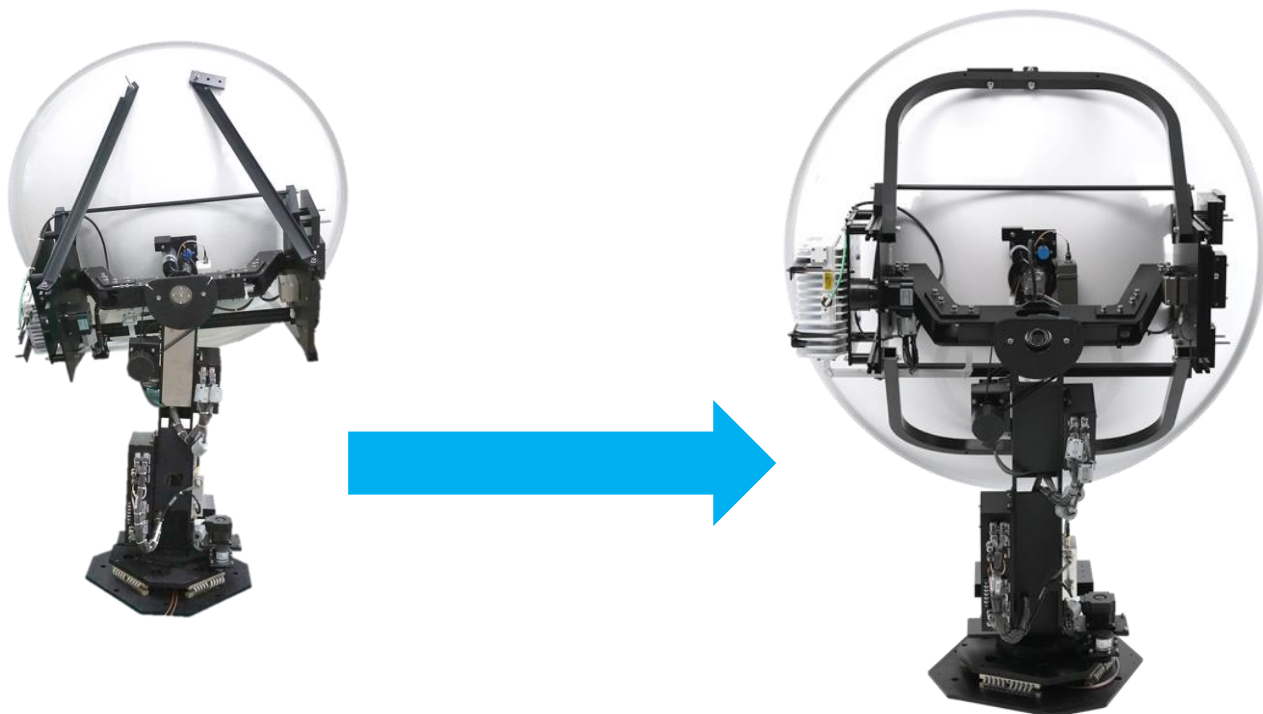
All compartments for BDU
(Below Deck Unit)



Z-Series 60cm ~ 1.2m VSAT Antenna Applicable

NEW COMPLETE BODY STRUCTURE

- Enhanced Reliability & Endurance
- Easier Maintenance
- Higher Stabilized Connection



2018 NEW DEVELOPMENT

23

C4 : 40cm VSAT with 4-axis



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PROFILE

SUPERTRACK
LINEUP

2018 NEW
DEVELOPMENT

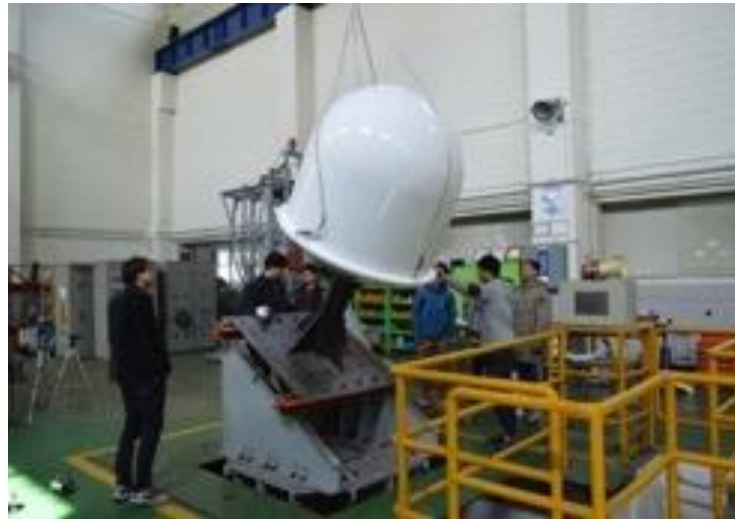
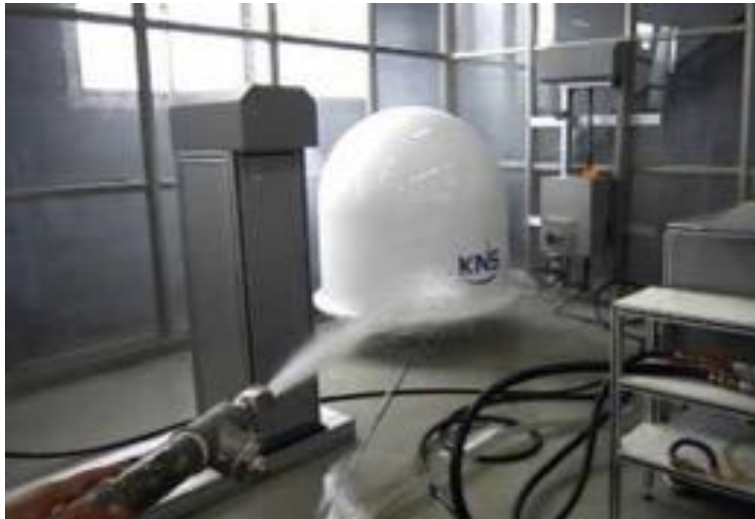
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KNS QA Test / Z-Series Test & Certificates

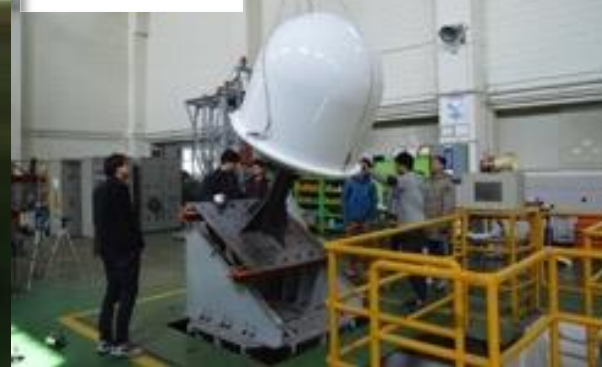
Vibration Test



Heat / Damp



Shock Test



Water Protection Test



System Integration



EMC Test



CE 0678

MIL-STD-167

MIL-STD-901

MIL-STD-461

INTELSAT Type Approval

SuperTrack Z10 (1m) & Z12 (1.2m) VSAT Antenna

⇒ Approved to be used for Intelsat Networks throughout the world.



2018 PLAN of CERT & TEST

- **60cm & 1m KA-Band Antenna**
- **KU – to – KA Band Upgrade Kit**
- **Inmarsat Global GX Approval**

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PROFILE

SUPERTRACK
LINEUP

2018 NEW
DEVELOPMENT

CERT &
TEST

**DISTRIBUTION &
SERVICE NETWORK**

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SUPPORT

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KNS Global Network



COMPANY
PROFILE

SUPERTRACK
LINEUP

2018 NEW
DEVELOPMENT

CERT &
TEST

DISTRIBUTION &
SERVICE NETWORK

**MAJOR
REFERENCE**

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KNS INTRODUCTION 2018



KNS Major Reference

Satellite Operator / Service Provider



Distributor



Military



KNS Major Target Industry & Market



* For more in detail, please refer additional document 'KNS Reference 2018 Update'

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SUPERTRACK
LINEUP

2018 NEW
DEVELOPMENT

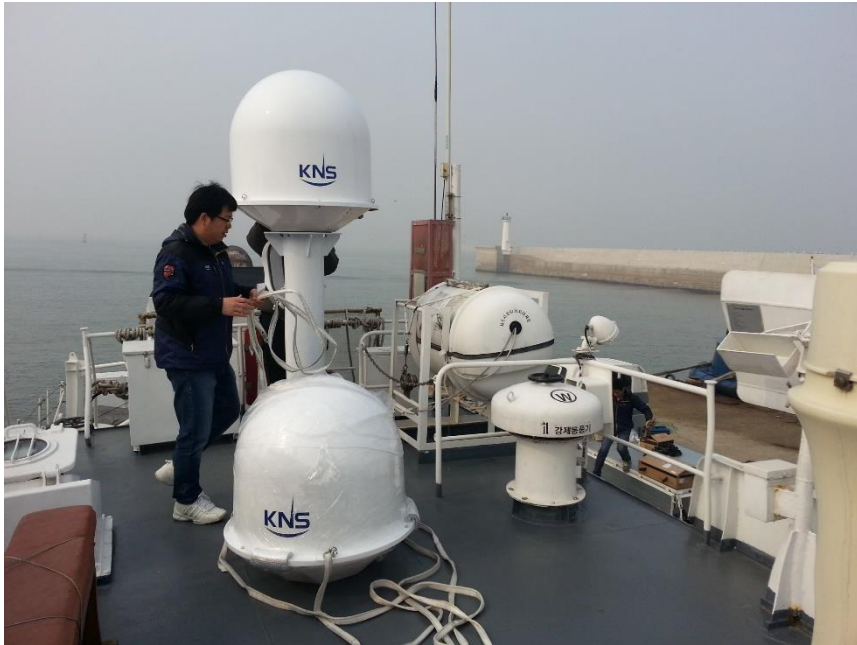
CERT &
TEST

DISTRIBUTION &
SERVICE NETWORK

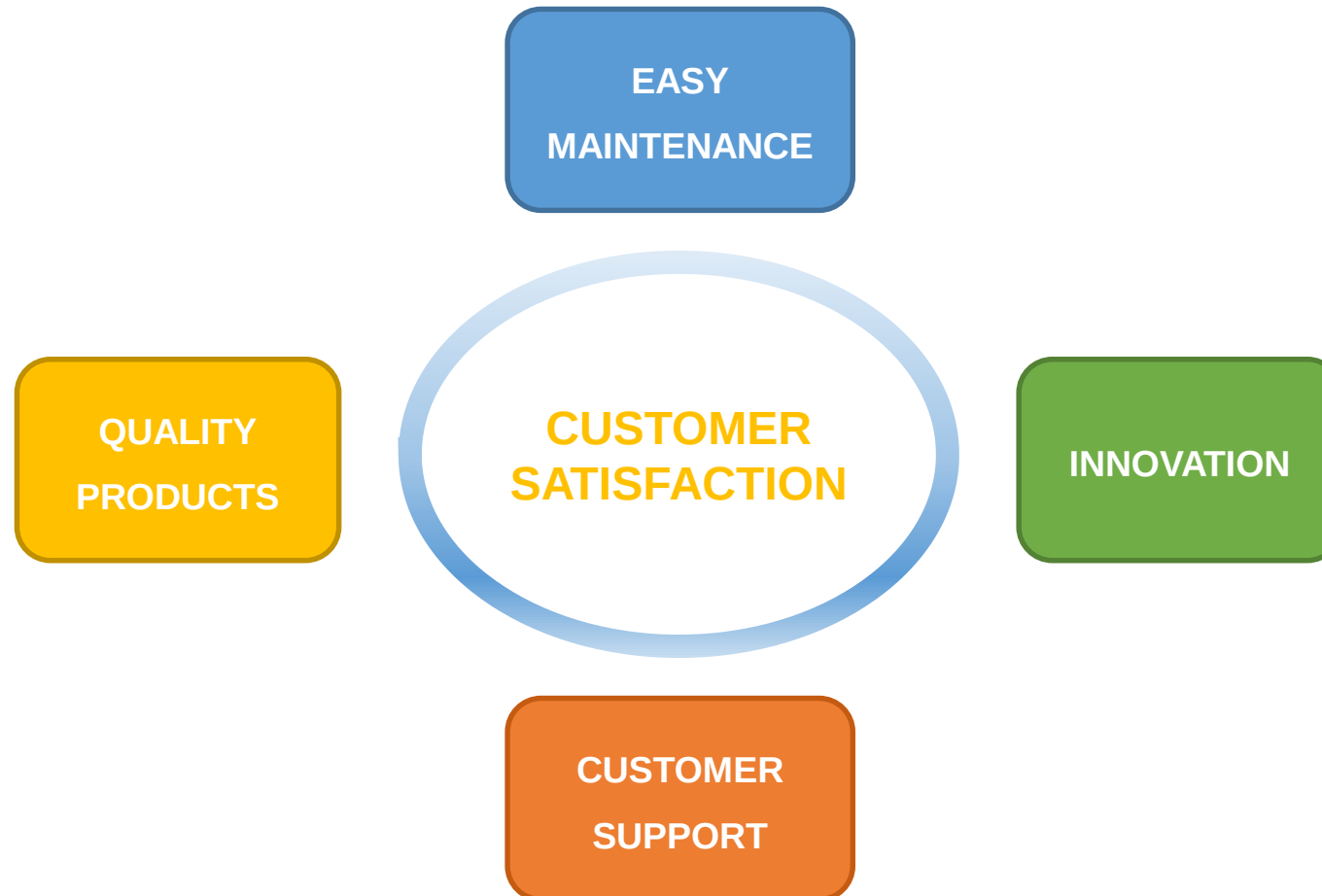
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KNS Key Values



KNS Training

- Antenna Installation
- Antenna Hardware
- ACU Operation
- Trouble Shooting
- SCS Software



* Training Program is available in Korea HQ
Curriculums in detail is available along the requests.



THANK YOU!

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