



Norsat
International Inc.

*Marine***Link**

NAVAL SATELLITE SYSTEMS



Norsat MarineLink Naval Series

Norsat's MarineLink Naval Series of satellite solutions provide reliable military VSAT solutions in Ka, Ku, and X-bands. These advanced multi-axis high-performance antennas are designed exclusively for naval operations, offering:

- Fast tracking speeds (90 deg/s) for accurate and dependable signal lock
- 3-axis operating platform for reliable operations even in rough sea states (up to Sea State 6)
- Built-in motor brake, shock absorber, and wire-rope isolator for longevity and reliability
- Unlimited azimuth for precise tracking and ease of cable management



COM070KU



COM080KU



COM100KU



COM100KA

ABOVE DECK

Dish Diameter	75 cm (30")	83 cm (33")	100 cm (39")	100 cm (39")
Antenna Dimensions	102 cm (D) x 104 cm (H)	113 cm (D) x 117 cm (H)	144 cm (D) x 152 cm (H)	144 cm (D) x 152 cm (H)
Antenna Weight	86 kg	103 kg	120 kg	120 kg
Radome Material	FRP	FRP	FRP	FRP
Frequency Band	TX : 13.75 ~ 14.5 GHz RX : 10.7 ~ 12.75 GHz	TX : 13.75 ~ 14.5 GHz RX : 10.7 ~ 12.75 GHz	TX : 13.75 ~ 14.5 GHz RX : 10.7 ~ 12.75 GHz	TX: 29.0 ~ 30.0 GHz RX: 19.2 ~ 21.2 GHz
G / T	16.37 dB/K	16.89 dB/K	18.89 dB/K	20.72 dB/K
RX / TX Gain	37.5 dBi / 39.1 dBi	38 dBi / 39.9 dBi	40 dBi / 41 dBi	44.5 dBi / 47.8 dBi
LNB	Internal PLL 1000 Series Universal LNB	Internal PLL 1000 Series Universal LNB	Internal PLL 1000 Series Universal LNB	Internal PLL 9000 Series Universal LNB
BUC	2 / 3 / 4 / 6 / 8 / 10 / 16 / 20 / 40 W	2 / 3 / 4 / 6 / 8 / 10 / 16 / 20 / 40 W	2 / 3 / 4 / 6 / 8 / 10 / 16 / 20 / 40 W	25 / 50 W
Operating Platform	3-Axis	3-Axis	3-Axis	3-Axis
Cross Angle	±35°	±35°	±35°	±35°
Ship Motion (Roll/Pitch/Yaw)	±25° / ±15° / ±8°	±24° / ±14° / ±8°	±25° / ±15° / ±8°	±24° / ±14° / ±8°
Tracking Speed	More than 90° / sec	More than 90° / sec	More than 90° / sec	More than 90° / sec
Azimuth Range	Unlimited	Unlimited	Unlimited	Unlimited
Skew Control	Automatic (-95° ~ +95°)	Automatic (-95° ~ +95°)	Automatic (-95° ~ +95°)	Automatic (-95° ~ +95°)
Elevation Angle	-10° ~ +100°	-20° ~ +105°	-20° ~ +105°	-20° ~ +105°
Vibration Damper	Rubber Damper	Rubber Damper	Wire Rope Isolator/ Shock Absorber	Wire Rope Isolator/ Shock Absorber
Temperature	-20°C to 55°C	-20°C to 55°C	-20°C to 55°C	-20°C to 55°C
Humidity	Up to 100% @ 40°C	Up to 100% @ 40°C	Up to 100% @ 40°C	Up to 100% @ 40°C
Antenna Input Power	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A

BELOW DECK

ACU Size	19" Rack 1 U size	19" Rack 1 U size	19" Rack 1 U size	19" Rack 1 U size
External I / O	RS-232C, Mini USB, Ethernet	RS-232C, Mini USB, Ethernet	RS-232C, Mini USB, Ethernet	RS-232C, Mini USB, Ethernet
Input Power	100 to 240V~, 50/60 Hz, 4.5A	100 to 240V~, 50/60 Hz, 4.5A	100 to 240V~, 50/60 Hz, 4.5A	100 to 240V~, 50/60 Hz, 4.5A
Gyro Interface	NMEA, Synchro, Step-by-Step	NMEA, Synchro, Step-by-Step	NMEA, Synchro, Step-by-Step	NMEA, Synchro, Step-by-Step
Output Power (Tx/Rx)	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A

CERTIFICATIONS / QUALIFICATIONS

MIL-STD-167-1A,
MIL-STD-901D, MIL-STD-461G
CE0678
Anatel

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MIL-STD-901D, MIL-STD-461G
CE0678
Anatel

MIL-STD-167-1A,
MIL-STD-901D, MIL-STD-461G
CE0678
Intelsat

MIL-STD-167-1A,
MIL-STD-901D, MIL-STD-461G
CE0678
Intelsat

Norsat MarineLink Naval Series



COM100X

COM120KU

COM150KU

COM150X

ABOVE DECK

Dish Diameter	100 cm (39")	120 cm (47")	150 cm (59")	150 cm (59")
Antenna Dimensions	144 cm (D) x 152 cm (H)	161 cm (D) x 163 cm (H)	212 cm (D) x 206 cm (H)	212 cm (D) x 206 cm (H)
Antenna Weight	120 kg	138 kg	260 kg	314 kg
Radome Material	FRP	FRP	FRP	FRP
Frequency Band	TX: 7.9 ~ 8.4 GHz RX: 7.25 ~ 7.75 GHz	TX: 13.75 ~ 14.5 GHz RX: 10.7 ~ 12.75 GHz	TX: 13.75 ~ 14.5 GHz RX: 10.7 ~ 12.75 GHz	TX: 7.9 ~ 8.4 GHz RX: 7.25 ~ 7.75 GHz
G / T	16.37 dB/K	20.79 dB/K	22.89 dB/K	19.7 dB/K
RX / TX Gain	36.5 dBi / 8.15 dBi	40.95 dBi / 42.87 dBi	43.8 dBi / 45.25 dBi	39 dBi / 40 dBi
LNB	Internal PLL	Internal PLL 1000 Series Universal LNB	Internal PLL 1000 Series Universal LNB	Internal PLL
BU C	50 / 100 / 125 / 150 / 175 W	2 / 3 / 4 / 6 / 8 / 10 / 16 / 20 / 40 W	2 / 3 / 4 / 6 / 8 / 10 / 16 / 20 / 40 W	50 / 100 / 125 / 150 / 175 W
Operating Platform	3-Axis	3-Axis	3-Axis	3-Axis
Cross Angle	±35°	±35°	±35°	±35°
Ship Motion (Roll/Pitch/Yaw)	±24° / ±14° / ±8°	±25° / ±15° / ±8°	±25° / ±15° / ±8°	±25° / ±15° / ±8°
Tracking Speed	More than 90° / sec	More than 90° / sec	More than 90° / sec	More than 90° / sec
Azimuth Range	Unlimited	Unlimited	Unlimited	Unlimited
Skew Control	Automatic (-95° ~ +95°)	Automatic (-95° ~ +95°)	Automatic (-95° ~ +95°)	Automatic (-95° ~ +95°)
Elevation Angle	-20° ~ +105°	-10° ~ +120°	-10° ~ +120°	-10° ~ +120°
Vibration Damper	Wire Rope Isolator/ Shock Absorber	Rubber Damper/ Shock Absorber	Wire Rope Isolator/ Shock Absorber	Wire Rope Isolator/ Shock Absorber
Temperature	-20°C to 55°C	-20°C to 55°C	-20°C to 55°C	-20°C to 55°C
Humidity	Up to 100% @ 40°C	Up to 100% @ 40°C	Up to 100% @ 40°C	Up to 100% @ 40°C
Antenna Input Power	48VDC, 3.2A / 48VDC, 2.3A	90 to 264V~, 47/63Hz, 17A	90 to 264V~, 47/63Hz, 17A	90 to 264V~, 47/63Hz, 17A

BELOW DECK

ACU Size	19" Rack 1 U size	19" Rack 1 U size	19" Rack 1 U size	19" Rack 1 U size
External I / O	RS-232C, Mini USB, Ethernet	RS-232C, Mini USB, Ethernet	RS-232C, Mini USB, Ethernet	RS-232C, Mini USB, Ethernet
Input Power	100 to 240V~, 50/60 Hz, 4.5A	100 to 240V~, 50/60 Hz, 4.5A	100 to 240V~, 50/60 Hz, 4.5A	100 to 240V~, 50/60 Hz, 4.5A
Gyro Interface	NMEA, Synchro, Step-by-Step	NMEA, Synchro, Step-by-Step	NMEA, Synchro, Step-by-Step	NMEA, Synchro, Step-by-Step
Output Power (Tx/Rx)	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A	48VDC, 3.2A / 48VDC, 2.3A

CERTIFICATIONS / QUALIFICATIONS

MIL-STD-167-1A, MIL-STD-901D, MIL-STD-461G CE0678 Intelsat	MIL-STD-167-1A, MIL-STD-901D, MIL-STD-461G CE0678 Intelsat, Anatel	MIL-STD-167-1A, MIL-STD-901D, MIL-STD-461G CE0678 Intelsat	MIL-STD-167-1A, MIL-STD-901D, MIL-STD-461G WGS Certified, CE0678 Intelsat
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ABOUT NORSAT

Norsat International Inc., founded in 1977, is a leading provider of innovative communication solutions that enable the transmission of data, audio and video for remote and challenging applications. Norsat's products and services include customizable satellite components, portable satellite terminals, maritime solutions and satellite networks. The company's products and services are used extensively by telecommunications services providers, emergency services and homeland security agencies, military organizations, health care providers and Fortune 1000 companies. Norsat provides the same level of broadband connectivity in the middle of the ocean as it does on land, meeting maritime fleet needs to be in constant communication with various stakeholders.



KEY DESIGN ADVANTAGES

The Norsat MarineLink Naval Series terminals offer intelligent design:

- Common motor design for all axis for simplicity and ease of servicing
- Multiple PCB modules integrated into a single PCU for fast and easy maintenance
- 1RU / 19" Antenna Control Unit uses 3 gyro inputs and offers access via RS-232, Mini USB, or Ethernet
- Unlimited azimuth enables accurate tracking and eliminates cable loop
- Honeycomb FRP radome provides light, strong protection against harsh environmental impacts
- Optional radome heater / cooling units
- Dual antenna operation with Optional VCS

OPERATIONAL STANDARDS & CERTIFICATIONS

Norsat's MarineLink Naval Series are designed to meet the demanding requirements of modern navies as outlined in the following Military Standards:

- Mechanical Shipboard Vibration: MIL-STD-167-1A
- High-Impact Shipborne Shock: MIL-STD-901D
- Military EMI / EMC: MIL-STD-461G

Additionally, the MarineLink Naval series are certified for use on the following networks:

- WGS Qualified
- Intelsat
- Anatel

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