

# ARC-M4 B1

# SIMULTANEOUS X/KA-BAND WIDEBAND VSAT SYSTEM

with 3-axis and 1.3m Reflector Diameter



# FEATURES

# DESIGNED FOR RESILIENCY

The ARC-M4 Block 1 is the first tri-band antenna that provides simultaneous X- and MIL Ka-band service which ensures connectivity on WGS even during bad weather and when other band-specific interference occurs. Also designed to work with other commercial Ka-band service providers, this antenna opens up a new, broader set of connectivity options than the US Navy has ever had before. This terminal is designed to meet the MILSTD ruggedization requirements of the US Navy.

# FLECTRONIC BAND SWITCHING

All frequency band changes are electronic, not mechanical. The ARC-M4 Block 1 is designed and engineered to operate on both X- and Military Ka-Bands simultaneously, without the need to replace the reflector and feed assembly. The system is supplied with X- and 3.5GHz Wideband Ka-Band RF packages.

# 3.5GHZ WIDE KA-BAND OPTIMIZED

The ARC-M4 Block 1 is optimized to operate in the full Commercial and Military Ka-Band spectrums. The ARC-M4 Block 1 supports the current Commercial Ka-Band GEO/MEO constellations and Military Ka-Band GEO constellations , as well as upcoming GSO/NGSO Ka-Band constellations.

## MEO/LEO/HEO TRACKING CAPABILITY

The ARC-M4 Block 1 provides assured access to every SATCOM arc of interest, include MEO, LEO and HEO. The ARC-M4 Block 1 can access current and future GSO/NGSO constellations in X and Ka-Band. The ARC-M4 Block 1 increases the overall resiliency of Naval communications by supporting dynamic switching between multiple frequencies and alternative orbits.

# RESILIENCE FOR THE WARFIGHTER

This system supports single-, dual-, triple- or even up to eight terminal installations. Shipboard blockage zones, sea state conditions or other conditions are dealt with automatically. Up to 8 modems or waveforms can be automatically switched in and out. And these Intellian systems supports the policy-driven shipboard automation system we call Intellian Orchestra ™

# SUPPORT FOR THE WARFIGHTER

Intellian built and is currently delivering the AN/OE-4706 COTS terminal. Like all of our systems for the US Government, it combines MIL-STD rugged designs with innovation, elegant implementation, and COTS sensibilities.



# ARC-M4 B1

#### TECHNICAL SPECIFICATIONS

#### ABOVE DECK UNIT

Radome Height x Diameter  $193.5 \, \mathrm{cm} / 76.2 \, \mathrm{x} \, 182.5 \, \mathrm{cm} / 71.9 \, \mathrm{x}$ 

Reflector Diameter $129.3 \, \mathrm{cm} / 50.9^{\circ}$ Weight $352.8 \, \mathrm{kg} / 777.8 \, \mathrm{lbs}$ Azimuth RangeUnlimitedElevation Range $-15^{\circ}$  to  $110^{\circ}$ Cross-level Range $\pm 30^{\circ}$ 

Stabilization Accuracy 0.2° peak miss-pointing @max ship motion condition

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27.5 ~ 30.0 GHz, 7.9 ~ 8.4 GHz Tx Frequency 30.0 ~ 31.0 GHz 37.6 dBi @ 8.15 GHz 47.8 dBi @30.0 GHz Tx Gain 17.7 ~ 20.2 GHz 7.25 - 7.75 GHz Rx Frequency 20.2 ~ 21.2 GHz Rx Gain 37.3 dBi @ 7.5 GHz 45.5 dBi @20.2 GHz 14.7 dB/K 19.5 dB/K G/T (@7.5 GHz,10°EL) (@20.2 GHz ,10°EL)

RF Power 100W 100W

Polarization Circular (RHCP & LHCP) Circular (RHCP & LHCP)

Antenna Cable 50 ohm Coaxial Cable / Fiber Optic Cable

# **ENVIRONMENTAL SPECIFICATIONS**

Temperature	Operational	-28 °C to +50 °C, Power On (IEC-60945) MIL-STD-810H
	Survival	-40 °C to +70 °C, Powered On and a non-functional state (IEC-60945)
Vibration	Operational	IEC-60945 MIL-STD-167-1A
	Survival	IEC-60721-3-6 Class 6M3 DNV Standard No. 2.4, Class C MIL-STD-167-1A
Shock	Operational	IEC-60068-2-27 Method Ea 20 g, 7 ms MIL-DTL-901E
	Survival (Transient)	IEC-60721-3-6 Class 6M3 type II 30 g, 6 ms MIL-DTL-901E
	Survival (Bump)	IEC60721-3-6 Class 6M3 25g/6 ms MIL-DTL-901E
EMI / EMC		MIL-STD-461G / MIL-STD-464D

### BELOW DECK TERMINAL

STD. ACU	Dimensions (WxDxH) Weight	43.1 cm x 39.0 cm x 4.4 cm / 16.97" x 15.35" x 1.73" 6.0 kg / 13.23 lbs
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Fiber BDE	Dimensions (WxDxH)	43.1 cm x 40.0 cm x 4.4 cm / 16.97" x 15.37" x 1.73"
	Weight	5.6 kg / 12.3 lbs
Display		OLED Display
Gyrocompass Interface		NMEA 0183
Modem Interface		Ethernet port / I/O Console
Remote Management		Yes
Management Port		Yes
Intellian LAN Port		Yes
Power Requirement		100 ~240 VAC, 50~60Hz

## Global HQ

Innovation Center Intellian Technologies, Inc T +82 31 379 1000

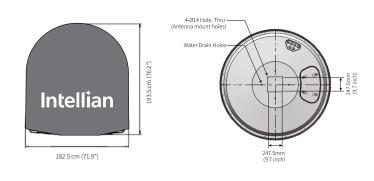
#### **APAC**

Seoul Intellian Technologies, Inc. T +82 2 511 2244

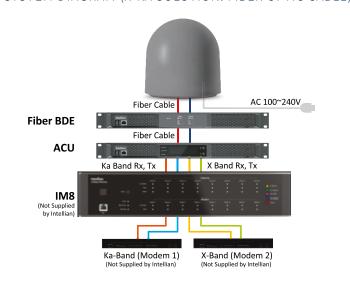
**Americas** 

Irvine Intellian Technologies USA, Inc. T +1 949 727 4498 Toll Free +1 888-201-9223

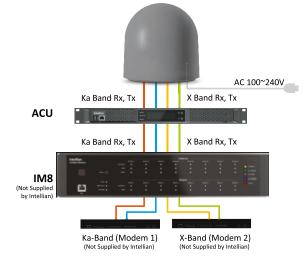
#### ABOVE DECK UNIT DIMENSION



# SYSTEM DIAGRAM (X-KA SOLUTION: FIBER OPTIC CABLE)



# SYSTEM DIAGRAM (X-KA SOLUTION: COAXIAL CABLE)



**EMEA** 

Rotterdam

Intellian B.V.

T+31 1 0820 8655

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