

Rapid Attack Identification Detection Reporting System (RAIDRS)

UNITED STATES AIR FORCE SPACE AND MISSILE SYSTEMS CENTER, Contract Number FA8819-05-C-0018. Space Program Office (SPO) POC is Christine Haight, 310-535-2629, CTR USAF AFSPC SMC/SYFJ [Christine.Haight.Ctr@losangeles.af.mil]

Prime Contractor and FCC license requestor, operator of RAIDRS:

Integral Systems, Inc.
Military and Intelligence Group
985 Space Center Drive, Suite 350
Colorado Springs, CO 80915

Subcontractor and physical address of RAIDRS equipment:

ITT Corporation
Communications Systems
2510 Aviation Way, Suite 100
Colorado Springs, CO 80916

The RAIDRS transmit requirement will use one AN/USC-60A Tri-Band Satellite Terminal. At this point the plan is to only use Ku Band for the single transmit uplink at a frequency assignment between 14.0 and 14.5 GHz. The transmit uplink will be to the Galaxy 19 Satellite, NORAD #33376. From the RAIDRS equipment location the look angle to Galaxy 19 will be 167AZ and 44EL.

AN/USC-60A

FLYAWAY TRI-BAND SATELLITE TERMINAL (FTSAT)



The AN/USC-60A is a Commercial-Off-The-Shelf (COTS) terminal supporting theater deployed communications and special user requirements. It is a small, lightweight tri-band satellite communications terminal. The FTSAT is an affordable field proven satellite communications facility, certified for DSCS and qualified for INTELSAT operation. The FTSAT is currently in production under contract to PM MILSATCOM, Fort Monmouth, New Jersey. The FTSAT incorporates Satellite Networks' unique frequency conversion architecture and antenna design that meets stringent requirements for Defense Satellite Communications System (DSCS) Earth Terminal certification as well as commercial satellite requirements. The AN/USC-60A (FTSAT) is an easily transported satellite communications terminal that is integrated, contained, and transported in rugged

transit cases. All transit case units are commercial airline checkable for ease of deployment. The terminal is also transportable on pallets by military aircraft. Terminal set-up and satellite acquisition is accomplished in less than 50 minutes. The terminal provides worldwide satellite communications over DSCS II and III, North Atlantic Treaty Organization (NATO) III and IV, INTELSAT, European Telecommunications Satellite Organizations (EUTELSAT), Pan American Satellite Organization (PANAMSAT), and domestic and regional satellites (DOMSATS). The modular architecture of the AN/USC-60A terminals easily accommodates capabilities expansions such as digital video, digital voice/fax transmission, secure communication network control, ITOS (In-terim Tactical Order Wire System) and TSSP (Tactical Satellite Signal Processor).

FEATURE OVERVIEW

- Highest Throughput
- DSCS Certified
- INTELSAT Qualified
- Interoperable with JMICS and ATM Switching
- Superior Wind Stability, Pedestal and Antenna
- UNIFOLD™ Lightweight Tripod
- Easily Set-up and Operated
- Integrated Logistics Support
- 2.4 Meter Antenna System
- Modular Architecture
- Highly Transportable

narda
satellite networks
an IBM communications company

PERFORMANCE SPECIFICATIONS

Field Proven FTSAT System Performance

Parameter	C-Band	X-Band	Ku-Band	Units
Receive Frequencies	3.625 to 4.200	7.25 to 7.75	10.95 to 12.75	GHz
Transmit Frequencies	5.850 to 6.425	7.90 to 8.40	14.0 to 14.50	GHz
1.8 Meter Antenna Subsystem AN/AN/USC-60				
Transmit Gain	38.8	41.6	46.4	dBi
Receive Gain	34.7	40.8	44.4	dBi
G/T	15.1	18.7	22.7	dB/K
EIRP (Linear)	58.5	61.5	64.0	dBW
EIRP (Saturated)	63.9	67.5	71.3	dBW
2.4 Meter Antenna Subsystem AN/AN/USC-60A				
Transmit Gain	42.2	45.1	49.3	dBi
Receive Gain	38.2	44.2	47.3	dBi
G/T	18.8	21.7	26.0	dB/K
EIRP (Linear)	61.5	64.8	66.5	dBW
EIRP (Saturated)	67.9	70.8	73.8	dBW

Modulation/Throughput...BPSK, QPSK, OQPSK, 8 PSK
@9.6 kbps to 9.4 Mbps

Temperature ...-20°C to 50°C (Operating)
-40°C to 70°C (Storage)

Antenna Tracking...Standard: Manual
Option: Automatic/Motorized for 2.4 Meter Antenna

Satellites...INTELSAT, DSCS, NATO, PANAMSAT,
EUTELSAT, DOMSATS, etc.

Terminal Packaging...1.8 Configuration: 8 Transit Cases
(Total Maximum Weight is 860 lbs.)
2.4 Configuration: 12 Transit Cases
(Total Maximum Weight is 1,290 lbs.)

Prime Power...110/240 VAC ± 10%, 47 to 63 Hz
Set-up Time...45 Minutes (typical)

Environment Wind Loading:
25 MPH Unstaked
45 MPH Staked
60 MPH Survivability

**The terminal has an extensive
range of options available**

FEATURES

- Lightweight 1.8 Meter or 2.4 Meter Segmented Antenna
- DSCS Certified
- INTELSAT Qualified
- Airline Transportable
- Laptop Computer
- Control and Monitoring Subsystem
- Compact and Lightweight
- Advanced RF Architecture
- UNIFOLD™ (Patented) Mechanical Design
- Hub Independent Set-Up
- Built-in Self Test Capability
- Signal Acquisition and Operational Within Minutes
- GPS Receiver
- Flux Gate Compass
- Tri-Band Test Translator
- Fiber Optic IFL
- IF Spectrum Analyzer
- Environmentally Protected Equipment Operation
- Antenna Tie-Down Provisions for High Wind Operation
- Automatic Tracking Subsystem for the 2.4 Meter Antenna (Patented)
- Interactive Training CD
- OPTIONS
- Single/Dual Band Configuration
- Other Antenna Sizes and Various HPA Power Levels
- Ka-Band
- Orderwire
- TSSP



435 Moreland Road • Hauppauge New York 11788
Tel: 631-231-1700 • Fax: 631-231-1558
Email: SN.mktg@L-3com.com
Website: www.l-3com.com/satellitenetworks
Toll Free For Technical Support 1-800-666-7060
From Outside US +1-631-231-1700 ext.5818

Cleared by DOD/DFOISR for public release
under 01-S-3471 on 9/17/01

ISO 9001