

☆ STARC4SYS



TropoFusion

Man-pack Troposcatter terminal combining BUC, Modem, LNB, and 1m manual flyaway antenna.

Introducing the TropoFusion[™] Series: Revolutionizing Beyond Line-of-Sight Communication The TropoFusion[™] Series, a collaborative innovation by IRT Technologies and Datum Systems, sets a new standard in man-pack troposcatter communication. This fully integrated solution combines BUC, Modem, LNB, and RF Filters in a ruggedized, compact package, offering unprecedented portability and performance.

Man-packable Tropo-BUC (NanoTopo[™] Series) provides up to 20W saturated output power and 20W minimum linear output power in ultra-compact and light package perfectly suitable for man-pack application. It also comes in integrated with the best in class M7 Tropo Dual or Quad-Diversity Modem. TropoFustion[™] Series features best in class RF characteristics, embedded output isolator, extensive monitor and control capabilities, enabled via Ethernet, Serial and/or Analog Interfaces.

New IRT Technologies and Datum Systems Man-pack Troposcatter is designed for BLOS links with min. 5 Mbps data rates at minimum distance of 60 km.

1m manual flyaway antenna is highly portable and designed to meet beyond line of sight communication requirements in harsh environments. The antenna features a multi-segmented carbon fiber composite reflector. Assembly time is less than 10-15 minutes. The elevation-overazimuth pedestal provides excellent stiffness characteristics and convenience for the user when pointing and peaking to a remote terminal. The system is designed to meet international performance specifications for Compact Trans Horizon Communication System Digital Loop Carrier System for Over the Horizon Communication/ BLOS.

Key Features

- Ultra compact design and light weight for up to 40W Psat and 20W linear output power
 - Ultra-Lightweight design: 8 lbs (3.62 kg)
 Compact package: 6.25"x7.5"x3.75"
 (160mm x 190mm x 95mm)
- Superior RF performance
 - Superior Phase Noise: 8 dB better than IESS308/309 recommendation
 - Low Noise Power density below -80dBm/Hz
 - Spurious emission below -60 dBc
 - Wide range Gain Control
 - Highest Linearity and small back off
- Input and output True RMS power detection
- Field upgradable software
- Status LED

DVBS2X

- LDPC Backwards Compatible
- Adaptive and ACM Control
- Auto Uplink Power Control
- Two Sigma/Tau Performance
- Just Beyond LOS Microwave
- Integrated BUC & Modem Solution
- Dual and Quad Diversity Modes
- DCCL, Line-of-Sight (LOS), Obstructed Line-of-Sight (OLOS), Over-The-Horizon (OTH) Communications
- Designed for 0–70-mile range.
- Designed to be packed in ruggedized cases.

70 Dr. lacob Felix Street,

Bucharest Romania, 011041

• Setup and operational in 15 minutes.

ADISAM TELECOM

1 Dimitrie Cantemir Blvd Sitraco Center, Bucharest Romania, 040231

+40 21 316 6950 sales@adisam.com www.adisam.com

9 Ion Cretescu Street, Bucharest Romania, 060139

☆ STARC4SYS

+40 31 425 0973 executiv@starc4sys.ro www.starc4sys.ro KERRTEL TELESPAZIO a LEONARDO and THALES company

> +40 21 319 6804 rartel@rartel.ro www.rartel.ro





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Output Frequency Band, GHz 4.4-5.0GHz Lo Frequency, MHz 59.5GHZ (single conversion): inverted) Linear Power Plin 40dBm (10W) min, 43dBm (20W) typ. Gain Stability, dB -11.1000 (1000 min, 43dBm (20W) typ. Gain Stability, dB +/-14.5 maximum over full band Linearity, dB +/-14.5 maximum over full temperature range Linearity at Pout-Plin: 2 tools (2000 min, 400 min, 40	BUC Parameters	
Input Leand Frequencies. MHz 950 - 1550 MHz Linear Power Plin 5.956/tz (single conversion. inverted). Conversion Gain, dB 68 minimum, 70 typ. Gain Flatness, dB +/-1 typical +/-1.5 maximum over full band +/-10 maximum over full temperature range +/-1.5 maximum over full band Linearly at Pout=Plin: 2 tone IMD Gain Stability, dB +/-1.5 maximum over full temperature range Linearly at Pout=Plin: 2 tone IMD Spectral Regrowth -30dBc for QPSK at 1.5xsymbol rate Phase Noise, dBc/Hz -70 @ 100Hz; -80 @ 1kHz, -90 @ 10kHz Modulator Outputs 1 or 2, Modulation Common to Both Carriers, Freq Independent Diversities Single, Dual or Quad Maximal Ratio Combiner Freq Domain Combiner/ Fqualizer Min Symbol Rate Hibps / 80 Msps Max Data Rate 1 by 529 Mbps (Modeo Dependent) Freq April Adaptive Macods Search/SK,8PSK,16APSK,25APSK,256APSK Mod Roli-Off Factor % QPSK,8APSK,8FSK,16APSK,25APSK,256APSK Mod Roli-Off Factor % QPSK,8APSK,8FSK,16APSK,256APSK FEC Type DVS-S2X FEC Block Sizes Short: 16k, Normai 64k (Bits)		4.4-5.0GHz
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Maximal Ratio Combiner Freq Domain Combiner/Equalizer Min Symbol Rate / Max Symbol Rate 1Msps / 80 Msps Max Data Rate Up to 529.9 Mbps (Modcod Dependent) Freq Range L-Band 950 to 2250 MHz, 1 Hz Steps Modulation Types QPSK,8APSK,8PSK,16APSK,32APSK,64APSK,128APSK,256APSK FEC Type DVB-S2X FEC Type DVB-S2X FEC Type OPSK,8APSK,84PSK,16APSK,32APSK,48APSK,156APSK,256APSK FEC Type DVB-S2X FEC Type DVB-S2X FEC Type O-200ms Modulation Typess Forced Air Fast ACM and Adaptive Modcods Seamless ACM/Adaptive Data Rate Interleaver 0-200ms Mochanical & Environment Cooling Size BUC module only 6.25*x7.5*x3.75" (160x190x95mm) Size BUC module only 8lbs (3.62kg) Weight BUC module only 8lbs (3.62kg) Weight BUC module only 8lbs (3.62kg) Weight BUC module only 8lbs (3.62kg) TROPOSCATTER-BAND PLL LNB Terequency (BHz) Frequency (BHz) 4.4 – 5.0 L.O. Frequency (GHz)		
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Max Data RateUp to 529.9 Mbps (Modcod Dependent)Freq Range L-Band950 to 2250 MHz, 1 Hz StepsMod Roll-Off Factor %20, 25, 30, 35, 40, 45 (%)Modulation TypesQPSK,8APSK,16APSK,32APSK,64APSK,128APSK,256APSKFEC Block SizesShort: 16k, Normal: 64k (Bits)Fast ACM and Adaptive ModcodsSeamless ACM/Adaptive Data RateInterleaver0-200msMochanical & Environment0-200msCoolingForced AirSize BUC and Modem integrated6.25*X7.5*X3.75' (160X190x95mm)Size BUC and Modem integrated6.25*X7.5*X3.75' (160X190x120mm)Weight BUC module only8lbs (3.62kg)Weight BUC and Modem Integrated0.20°C +60°C / Up to 100% condensingTROPOSCATTER-BAND PLL LNB4.4 - 5.0Frequency GHz)950 - 1550I Frequency (GHz)1 M Carbon FiberReflector1 M C		
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Antenna / Pedestal / Feed Weight 40 lbs (18.2 kg)		
Packed in Case Weight 79 lbs (35.9 kg)		
	Packed in Case Weight	79 lbs (35.9 kg)

Specifications are subject to change without notice

ADISAM TELECOM

☆ STARC4SYS

1 Dimitrie Cantemir Blvd Sitraco Center, Bucharest Romania, 040231

Blvd +40 21 316 6950 arest sales@adisam.com www.adisam.com

9 Ion Cretescu Street, Bucharest Romania, 060139 +40 31 425 0973 executiv@starc4sys.ro www.starc4sys.ro

70 Dr. lacob Felix Street, Bucharest Romania, 011041

a LEONARDO and THALES company

+40 21 319 6804 rartel@rartel.ro www.rartel.ro