A Portable Downlink for LRIT/HRIT Reception In The Field

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ABSTRACT

This system, which includes a 1m diameter parabolic dish, is designed to directly receive L-Band LRIT and HRIT services at 1691.0 and 1694.1 MHz, respectively. By changing the feedhorn and receiver, the system is also able to receive KU-band EUMETCast service on 11262.5 MHz. The 1m antenna is assembled by one operator in under 15 minutes without the need of tools. The XRIT ingest application software allows the reception, processing and storage of imagery from GOES-E, GOES-W, GOES-R/S/T/U, COMS, MSG and EUMETCAST.

HARDWARE DESCRIPTION

DEPLOYABLE ANTENNA

Durable, reliable, with ease-of-use, the deployable antenna profile is engineered to fit in such a compact size. The parabolic reflector is made of 12 precision-machined aluminum segments, with captive hardware. The operator-ready made reflector assembly is held together with a three-ranking foot and built-in level bubble to establish accurate positioning on uneven terrain. Three feedarms are designed to work with both L and KU-band feeds supplied by Global LG.

ULTRA-RUGGED COMPUTER

Getac X500 Ultra Rugged Notebook combines a high-performance, high-grade, lightweight, 15.6-inch HD sunlight-readable display. The X500 runs Windows 10 and contains moisture-sealed doors for its many ports including USB, eSATA, ethernet, etc. Built from high-quality magnesium alloy, its X500 is specifically engineered to protect the computer against drops, shocks, rain, vibration, dust and moisture. The X500 has been independently tested and certified to MIL-STD 810G, MIL-STD 461F and ANSI/ISA 12.12.01 standards.

LAND KU-BAND FEEDS

With options for L or KU-band, fixed and downconverters are integrated in a highly cable, high-gain, low-noise emulation, low-power consumption assembly. The high-performance solid state feeds supply excellent performance for geostationary satellites, the Single Output Universal LNB making it ideal for reception in weak-signal areas. Both LNBs are supplied in a hermetic canister, compatible with the antennas feedarms.

L-BAND RECEIVER

Integrated in a sleek, compact, durable robust willingness, the Dartcom L-Band receiver is a high-quality, low-cost receiver for direct broadcast LRIT transmissions from GOES-E, GOES-W, GOES-R/S/T/U, COMS, MSG and EUMETCAST. It supports one input, fast, reliable data transfer. It features a 20 MHz receiver signal input, display for easy dish alignment and operational digital monitoring and an adjustable RF attenuator to accommodate LNB signal inputs between –15dBm and –75dBm.

OPTIONAL DVBS2 RECEIVER

DVBS2 receiver card fits into the host computer's PCI-e slot, providing reception of KU-band EUMETCast transpic fill service to commercial communication satellites, allowing the receiver MITECAST 2nd Generation (KU) Imagery covering EuropeMiddle East North Africa regions.

CONCLUSIONS

Mike is supplying text for this area. 1m diameter parabolic dish, is designed to directly receive L-Band LRIT and HRIT services at 1691.0 and 1694.1 MHz, respectively. By changing the feedhorn and receiver, the system is also able to receive KU-band EUMETCast-Europe service on 11262.5 MHz. The 1m antenna is assembled by one operator in under 15 minutes without the need of tools. The XRIT ingest application software allows the reception, processing and storage of imagery from GOES-E, GOES-W, GOES-R/S/T/U, COMS, MSG and EUMETCAST. by one operator in under 15 minutes without the need of tools. The XRIT ingest application software allows the reception, processing and storage of imagery from GOES-E, GOES-W, GOES-R/S/T/U, COMS, MSG and EUMETCAST.