Ku-Band Single Chain Payload Downconverter up to 18GHz

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed Ku-Band Single Chain Payload Downconverter up to 18GHz.It receives Ku-Band Payload Downlink signal from the spacecraft, down converts the signal from Ku-Band to the 720 MHz IF with a bandwidth of 250MHz.This IF output is fed as input to High Speed data Reception System (HSDRS) which is used to acquire the payload data.

Salient Features

- It has wide dynamic range and wide IF bandwidth.
- Unit is realized using connectorized modules fabricated in a 3U chassis.
- It enables In-house productionization.

Major Specifications

Parameter	Specifications
RF input Frequency	10825 MHz
IF output Frequency	720 MHz
LO Frequency (Internal)	10755 MHz
IF Bandwidth	250MHz
External LO	+10dBm (±1 dB)
Conversion gain	13 dB
Input dynamic range	-23 dBm to -63 dBm
Noise Figure	9.5 dB
Isolation (Typical)	>60 dB (Between all Ports, LO, IF, RF)
Phase Noise	-85 dBc/Hz @ 1KHz offset
Spurious & Harmonics	≤ -50 dBc
Impedance	50 ohms

Technology Transfer

URSC/ISRO offers to transfer this technology of Ku-Band Single Chain Payload Down converter up to 18GHz developed by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

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