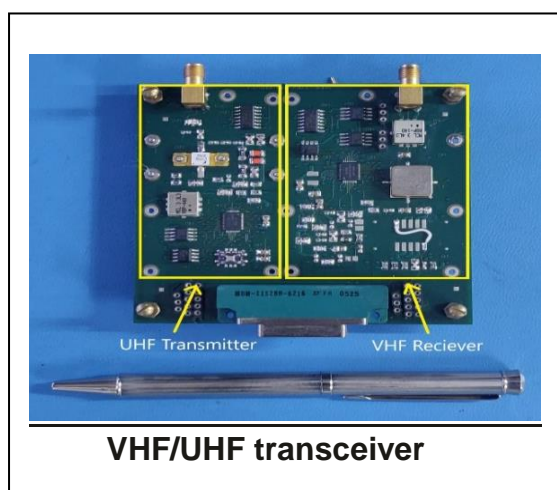


VHF-UHF TRANSCEIVER

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed a miniaturized VHF/UHF transceiver using System on Chip (SoC) for application in nanosatellites. This scheme provides the functionality of both transmission and reception of data.



Salient Features

- ❖ Both transmission and reception of data in a single standard PC-104 card.
- ❖ Low mass (~120 grams).
- ❖ Applicable to Nanosatellites.

Major Specifications

Sl. No.	VHF Receiver Specifications	
1	Frequency	148-150 MHz
2	Frequency resolution	1 KHz
3	Modulation	FSK
4	Doppler	± 4 KHz
5	Data Rate	1.2 Kbps
6	Sensitivity @ 1.2 Kbps	Better than -110 dBm for BER of 10^{-5}
7	Dynamic Range @ 1.2 Kbps	-110 dBm to -80 dBm or wider
8	Noise Figure	5dB max.
9	DC Power	<100 mW
10	Voltage	+3.3 V \pm 5% 10mA

Sl. No.	UHF Transmitter Specifications	
1	Frequency	435-438 MHz
2	Frequency Resolution	1 KHz
3	Modulation	FSK
4	Data Rate	1.2 Kbps
5	RF output Power	10dBm.
6	Frequency stability	±3 ppm
7	Spurious	< -50 dBc
8	Harmonics	<-30 dBc
9	DC Power	<100mW.
10	Voltages	+3.3 V

Technology Transfer

URSC-ISRO offers to transfer this technology of VHF-UHF Transceiver 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.

Technology Transfer & Industry Coordination Division (TTID),
Programme Planning and Evaluation Group (PPEG),

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🌐 <https://www.ursc.gov.in/industry/index.jsp>