

CDMA TT&C Transmitter

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed CDMA TT&C Transmitter to carry out telemetry functions of co-located satellites using CDMA technique. It co-locates multiple satellites in the same orbital slot with single TTC frequency but each having a different Pseudo Random codes.



CDMA TTC Transmitter

Salient Features

- ✦ Overcomes the frequency interference issues encountered due to overcrowding in the coveted Geostationary Orbit.
- ✦ Enables a tenfold increase in the number of collocated satellites without any adjacent channel interference using CDMA technology.
- ✦ Re-configurability and flexibility as number of users can be increased by assigning new codes whereas in other multiple access techniques this kind of flexibility is not possible.

Major Specifications

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|---------------------|---|
| ✦ Data Rate | : 2 kbps |
| ✦ Chip Rate | : 4 Mcps |
| ✦ CDMA Scheme | : Direct Sequence Spread Systems (DSSS) |
| ✦ Modulation Scheme | : BPSK |
| ✦ Output Power | : ≥ 36 dBm |
| ✦ Size | : 220 x 250 x 108 mm ³ |
| ✦ Mass | : 3.0 kg |
| ✦ Power | : 30.0 W (on 70V raw Bus) |

Technology Transfer

URSC/ISRO offers to transfer this technology of CDMA TT&C Transmitter 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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