**X Band Quad T/R Module (X-QTRM)**

Electronics and Radar Development Establishment (LRDE), a premier lab under DRDO has developed state-of-art Radar systems and associated Technologies. LRDE is seeking Expression of Interest (EoI) from prospective bidders/recipient for Transfer of Technology in the area of Radars. Presently, LRDE is ready for ToT of the **“X Band Quad T/R Module (X-QTRM)”.**

1. **Description of Technology:**

The X-Band Quad TR Module designed and developed by LRDE is the basic building block of the Active Array Antenna Units.

In Transmit (Tx) mode, the T/R Modules receive the RF signal, amplify it and transmit the amplified signal through antenna radiating elements. In receive (Rx) mode, each T/R Module receives a signal from antenna element and provides Low Noise Amplification of the signal. Four numbers of T/R Modules are housed in a single package called the Quad T/R Module or QTRM. The QTRM in X-Band is called X-QTRM and is integrated with 1:4 way RF power combiners. Each T/R module of X-QTRM is channelled inside with metallic walls between RF blocks in order to minimize coupling effects between adjacent T/R Module paths. The X-QTRM is controlled by QTRM Controller (FPGA based controller).

**Fully Populated X-QTRM**

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X-Band QTRMs were developed by LRDE and produced in BTP mode to cater to the requirements of Active phased arrays for projects.

**Application Areas:**

The X-QTRMs can be used in the area of X-band Active Phased Array Antennas for Communication, meteorological and telemetry tracking radar applications.

***Interested Industries may submit their company profile, financial &technical Capabilities etc. as per the EOI terms (Refer Appendix-D in ‘DRDO Policy and Procedures for Transfer of Technology’ available at web link*** <https://drdo.gov.in/transfer-technologies>***) to Director, LRDE, Bengaluru and copy to Director DI2TM on the following addresses within 45 days of this advertisement.***

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| **Director, LRDE**  DRDO, Min. of Defence,  C V Raman Nagar  Bengaluru-560093  Contact No : 080 - 25025415  080 - 25025518 (ToT cell)  Fax : 080 - 25242916 | **Director, DIITM**  Room No 446 DRDO Bhawan  DRDO HQrs Ministry of Defence  Rajaji Marg New Delhi – 110011  Contact No : (011) 23016216 / 23007446  Fax : (011) 23793008 |