

MAN-PACK HF SOFTWARE DEFINED RADIO (SDR)

1. **Proj Brief.** Manpack HF Software Defined Radio is proposed as a backward compatible Software Defined Radio which can be interoperable with future SDRs and other form factor SDRs with ability to add, remove or modify the output of the systems through reconfigurable and platform independent waveform leading to multi-mode, multi- frequency and multi platform operations in a single hardware configuration. The proposed system with power output of 20/100w would have the ability to establish communication both in fixed frequency and frequency hopping mode in both Clear and Secure Mobile Adhoc Networks (MANET) operable in the frequency range of 1.5-29.999999 MHz to have communication range of 30 Km or greater (with Ground antenna) and 300 Km or greater (with Dipole antenna). The system should be able to transmit voice, data and message in both Clear and Secure mode in Fixed Frequency and Frequency Hopping mode. The proposed system to have following capabilities:-

- (a) Hop rate of 10 Hops or more per second.
- (b) GPS tracking.