Press Release
Uurmi Systems Private Ltd.

Uurmi Systems, a Hyderabad based Communications MSME, is pleased to announce the launch of the first completely indigenous Software Defined Radio (SDR) for the India Armed Forces.

The Uurmi SDR being launched at AeroIndia 2015 is completely designed and manufactured in India keeping in mind the call of Prime Minister Modi of indigenisation and "Make in India". All the waveforms, Software architecture framework and hardware design has been done from scratch, completely indigenously with an inherent desire to serve the Indian Defence Forces.

If a perusal is done of the military doctrines of the major advanced powers, one aspect that has a common theme across the board is information dominance. Network centricity is the backbone providing holistic battlefield transparency and decisive information advantage over the adversary. The ultimate aim of communication is to provide improved situational awareness and to enhance command and control, radios are critical to this concept. A very important component in this whole picture would be the Software Defined Radio (SDR), which will form the core of a true ad hoc network, tactical in nature and robust on the front lines.

Tactical networks serve the trinity of voice, data and video communications and need to be versatile and reliable. Legacy and Internet Protocol (IP) based systems need to talk to each other and to eliminate 'disconnects'. The modern communication equipment that is required at the tactical level are the High Frequency (HF) radio (2-30MHz) for beyond-line-of-sight applications, Very HF radio (30-300MHz) and Ultra HF radio (300-3000MHz). SDR combines all these in a single hardware. It allows a single radio to operate in multiple waveforms for a wide range of capabilities and networks.

A key benefit of SDR is interoperability between legacy and modern systems. It is an expensive proposition replacing the entire radio inventory in an armed force, so it is important that new and old systems can work compatibly side by side. The ability for the Army, Navy and Air Force to communicate easily is of course desirable and SDR offers this possibility. SDRs adapt to a range of protocols so that different models and networks can communicate. Getting radios to interoperate is important not only within a military and its allies, but also with civilian agencies such as the police too. Another big advantage of the SDR is its potential to embed itself into all other modernisation programmes such as BMS, TCS, FICV and F-INSAS while providing the connectivity of the tactical communications to the Strategic networks and the C4I systems.

Keeping the need of the hour in mind, Uurmi Systems aimed to create a family of SDR with the flexibility of having a number of variants which could be platform mounted (aerial, ship based or vehicle mounted), man pack or hand held. The objective was to develop a family of fully indigenous Software Defined Radio Communication systems and help to reduce costs in providing the armed forces

with access to ubiquitous wireless communications – enabling them to communicate with whomever they need, whenever they need to and in whatever manner is appropriate.

We hope that this endeavour of Uurmi systems to go ahead and create a word class technology in the critical communications domain goes a long way in encouraging other MSME's to pool in their tremendous technology resources to fulfil the dream of making our country a defence & aerospace leader.