



## Anywhere, Anytime and Every Time.

PMN have successfully deployed 4G LTE, 3G UMTS and 2G GSM networks worldwide providing compact, rapidly deployable cellular communications based in the COW (Cell on Wheels) or NIB (Network in a Box) concept.

From a single AP (access point) to multiple APs and in many instances upgrading existing PMN 2G GSM infrastructures with 3G UMTS and 4G LTE capability. This allows handover between the 2G GSM, 3G UMTS and 4G LTE RANs with Circuit Switch Fall Back (CSFB) to either 3G UMTS or 2G GSM for voice.

Solutions can be built to suit the individual requirements of the client in areas such as Border Security, First Responder, Tactical and capable of covering Multi Media services (Voice/Video/Data). This can vary from a Back Pack type solution to a full blown camp based Private Cellular Network covering large numbers of users and a wide geographic area.

Speed is of the essence and under these circumstances the solution can be deployed and made available for live communication at the touch of a button. Built within a military standard rugged hard-shell case are all of the components required to facilitate a private 2G GSM / 3G UMTS / 4G LTE network. The COW/NIB has the means to transmit and receive calls by utilising an integrated 2G GSM Base Transceiver Station (BTS) / 3G UMTS Access Point (AP) / 4G eNode B. This works in conjunction with the Private Mobile eXchange (PMX) software platform that contains the individual software components that would normally make up a macro mobile voice/SMS network – a Base Station Controller (BSC) / Home Node B Gate Way (HNB-GW) / Evolved Packet Core (EPC/MME/PGW/SGW) and Mobile Switching Centre (MSC), and incorporates an SMS switching centre and 2G / 3G / 4G data.

Coverage is equally important and systems can be enhanced through careful selection of Antenna and Power Amplifiers to increase cellular coverage from a few 100's of metres to distances of up to 20Km using quick deployable masts and in all popular bands for 2G GSM/3G UMTS and 4G LTE.

As a transport layer the PMN 4G LTE/3G UMTS and 2G GSM core software and RAN (Radio Access Network) allows the users application such as Video Streaming and activation of Motion Sensors to be in complete control within the PMN bubble. For example with 4G LTE PMN can create Downlink speeds of up to 150Mb and Uplink speeds of up to 50Mb. Add satellite backhaul you can then connect to the rest of the world and all within a set up time of between five and ten minutes. The PMN software not only allows Voice/SMS and DATA services in the coverage area but also allows the user to connect via SIP to any IP PBX (i.e. Asterisk) to make calls to desk phones, softphones and the outside world via PSTN.

PMN can also provide Call recording applications which record all Voice and SMS whilst on the Private Network which allows users to Audit any instructions given and covers comprehensive post-operative analysis.

**If you would like to learn more about PMN solutions please contact:**

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# Border Security with PMN

- DATA
- Video
- Video, DATA, Voice

Motion Detection



NIB

4G LTE Coverage area  
Up to 15Km

eNodeB



Video streaming 4G LTE tablet



Video streaming 4G LTE smartphone



Video streaming 4G LTE smartphone



IP Camera



Video Streaming server



PMN  
PRIVATE MOBILE NETWORKS  
4G LTE EPC



Private 4G LTE Network  
Network In a Box (NIB)  
(2G GSM, 3G UMTS, 4G LTE)

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PRIVATE MOBILE NETWORKS