



Quarter 2

2014

MiMOMax Quarterly

Warm Greetings!

Welcome to the second issue of the MiMOMax Quarterly for 2014! I would like to welcome our new subscribers and thank you for your interest in MiMOMax. If you ever have any questions about our Products and Services please do not hesitate to contact us

Tradeshows and Training

It has been a busy few months for MiMOMax with 3 Tradeshows and several customer training sessions. MiMOMax had the pleasure of exhibiting and speaking at UTC in Phoenix and RFUANZ in Wellington, New Zealand. We experienced a lot of traffic at our exhibition booths and received a lot of positive feedback about Paul's presentations.



On show with us at UTC and RFUANZ was the new MiMOMax Tornado radio which has been very well received and is already creating a lot of interest through the industry. After significant customer interest and successful trials of the standard Tornado package the MiMOMax development team has introduced two new members of the Tornado product family

Featured Article



Power Over Ethernet

MiMOMax Wireless has Developed a Pole Mounted Power Over Ethernet Solution for the MiMOMax Tornado Family.

In conjunction with the MiMOMax Low Profile, high-gain, 450MHz Panel Antenna, the PoE solution Tornado may be installed very quickly and simply by a single rigger losses. By housing all of the radio and network electronics in one outdoor weather proof enclosure, the only connection required for

The **Tornado NDL** is a spectrally efficient long-range remote radio for **point-to-point applications**. It offers a full-duplex aggregate raw data rate of 640 kbps (320 kbps up and 320 kbps down simultaneously) in its highest modulation mode (QAM256). This compact, software flexible solution provides reliable high-performance linking for Mission Critical Applications across difficult terrain and long paths.



The multiple input multiple output (MIMO) space time diversity system uses dual-antennas, receivers and transmitters to increase radio channel throughput and improve received signal quality. Other features include isolated power supply with low power consumption, built-in true band pass duplexers, Ethernet and RS232 interfaces.

Tornado DMR Link

Using the MiMOMax Tornado family of spectrally efficient IP based radios with Power Over Ethernet (PoE) implementation (for full information see "Featured Article") it is possible to quickly and economically implement a low latency, high performance linked DMR radio solution. This mounting method not only eliminates many of the traditional installation costs associated with RF and power cables, but also improves system performance by minimising antenna coaxial cable RF losses.

The **Tornado DMR** linking solution utilizes high orders of modulation, advanced DMR traffic management schemes and narrowband MiMO technologies to provide low latency, ultra-high spectrally efficient linking of up to 13+1 Trunked channels of DMR (or other Digital PMR) while still having significant uncommitted Ethernet bandwidth available for other applications.

To view the Specifications of the Tornado Family please click [here](#)

MiMOMax Power On Demand

'By replacing a diverse Microwave link design with a MiMOMax system we were able to improve the resilience of the link whilst taking advantage of the M-PoD lower power transmission. The net result was improved reliability and a reduction in OPEX costs.'

- Stuart Colsell, Tait Systems Engineer

M-PoD (MiMOMax Power On Demand) is a unique power saving feature, that enables MiMOMax Link Radio Units (LRU's) to go into a temporary sleep mode, thereby reducing stand-by power consumption by approximately 90%. Upon the receipt of radio traffic (voice or data) from either over the air or from one of the radios local inputs, the LRU promptly wakes up both ends of the radio link and quickly retrains to resume normal operation. The link establishment time is typically 80ms with traffic buffering so no traffic is lost.

an Ethernet Tornado linking solution is one 50VDC PoE Ethernet cable.

By utilising the integrated MiMOMax Tornado Micro Duplexers and the PoE Tornado capability, most of the cabling and installation costs associated with RF and Power cabling can be eliminated. This enables a much faster, tidier, lower cost and more reliable installation with the added benefit of lower RF losses giving better overall system and path performance.

Benefits Include:

- Simple, Fast, Reliable Low Cost Installation by One Rigger
- Reduced Cost of Cables, Clamps, Connectors & Clips.
- Improves Reliability by Minimising Potential for Water Ingress
- Minimises Potential for Cable Damage from Bending or Birds
- Reduces RF Path Loss and Improves System Gains

Customers using the PoD option for P25 Digital linking have been very impressed, as this usually means that even the first speech syllable is clearly heard, with no discernable lost audio or data. When cascaded or daisy chained links have been implemented, the subsequent Radio Units are pre-wakened to enable them to wake up inside 20ms.

M-PoD also provides for a programmable "tail time" period of between 1 and 255 seconds so the link does not drop between overs. During this time, the M-PoD confirms that all data is processed before automatically deactivating the transmitter. The stand-by power consumption in the sleep mode is typically 8W for the radio alone and typically less than 10w when used with a 4 wire analogue interface (MiMOMax 4WA NIB).

For all of the latest stories and photos please visit our [Website](#)

Or

View our profile on [LinkedIn](#)

Click below to view the MiMOMax product catalogue & a selection of spec sheets:

[MiMOMax Product Catalogue](#)

[MiMOMax Product Overview](#)

[PMR Linking Solutions](#)

Upcoming Events:

Paul has been selected to speak at [Comms Connect Sydney](#) on the [19th June](#) and hopes to see you there!

"Is there still room for linking narrowband PMR sites in this digital world?"

Thursday 19th 11.30



**COMMS
CONNECT**



Quick Links

- If you haven't already done so, how about visiting the blog of our sister company; Tait Communications for the latest articles and news? Be included in the loop at blog.taitradio.com

Best Regards
Kevin Smith

Reading someone else's copy?

Think your friend/colleague would like this?

[Forward email](#)

Application of the NDL Series to Link Mission-Critical PMR Networks

MiMOMax Network Digital Link (NDL) is a point-to-point customized solution for linking

critical PMR sites. NDL supports a large number of MPT 1327, DMR, P25 and Tetra channels in 25 kHz and 12.5 kHz channel bandwidths.

[For a full specification sheet, please click here>>](#)

.....
Have any feedback for MiMOMax?
Have any industry news to share with our readers?

Then please
[CONTACT US](#)

Best Regards
MiMOMax Team

