

Mimomax Backhaul and Linking Solutions

Ability to support multiple channels

with more than 25 P25 Channels and 30 DMR channels in 50 KHz

Ultra-low latency

of typically only 8ms in 25KHz channels

Super reliable communications

with low jitter of 50 ns & achievable Bit Error Rate (BER) of 1×10^{-10}

Long range paths

via the ability to use lower orders of modulation to provide fade-resistant paths greater than 100km

Remote diagnostics

to minimize need for on-site technician visits

Sophisticated compression & quality of service (QoS)

to maintain criticality of voice communications.

TESTIMONIAL

“We needed a radio vendor who could provide links that could cover long hops where there are no available intermediate sites. As the Mimomax radios are dual-polarization, the design of the radio lends itself to these long-haul links – we now have links running successfully up to 50 kilometers.”

IAN MCNALTY | SNR SECONDARY SYSTEMS
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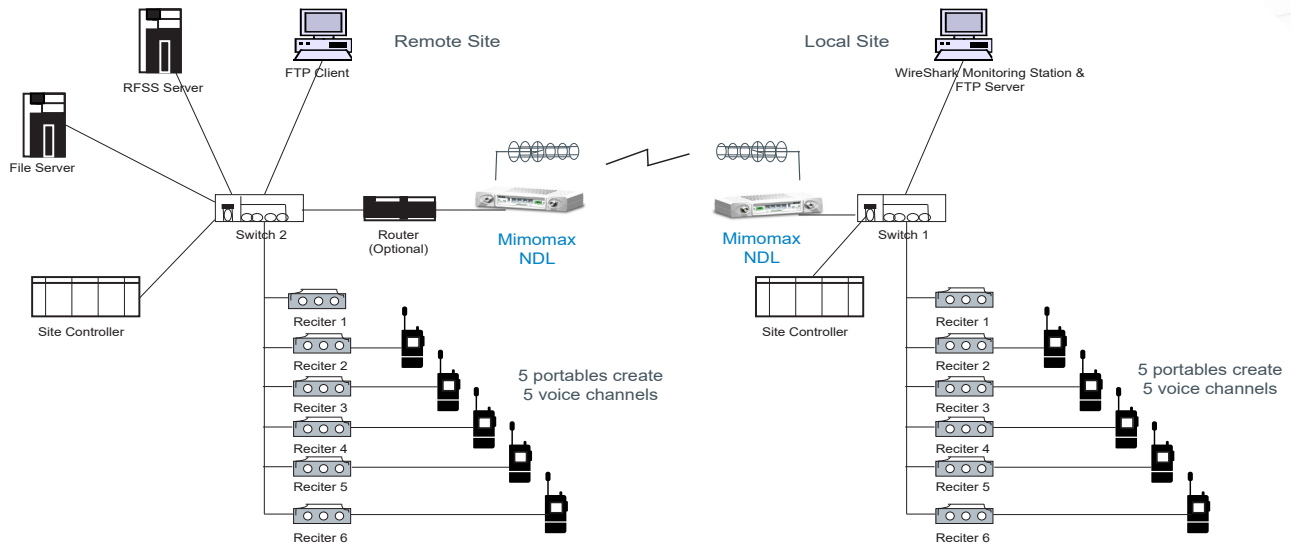


Figure 1 : Mimomax NDL Linking in a 5+1 Channel P25 Trunking System

Bandwidth	Modulation	P25		DMR		Analog*
		Number of Trunked Channels	Residual Ethernet BW	Number of Trunked Channels	Residual Ethernet BW	Number of Trunked Channels
50 kHz	QAM256	25 Channels	211 kbps	30 Channels	236 kbps	6 Channels
	QAM64	18 Channels	158 kbps	25 Channels	152 kbps	6 Channels
	QAM16	12 Channels	95 kbps	15 Channels	112 kbps	6 Channels
	QPSK	5 Channels	43 kbps	8 Channels	45 kbps	3 Channels
25 kHz	QAM256	10 Channels	123 kbps	13 Channels	135 kbps	6 Channels
	QAM64	8 Channels	79 kbps	11 Channels	88 kbps	5 Channels
	QAM16	5 Channels	47 kbps	7 Channels	58 kbps	3 Channels
	QPSK	2 Channels	13 kbps	3 Channels	27 kbps	1 Channel (with E&M), 2 Channels (no E&M)
12.5 kHz	QAM256	5 Channels	46 kbps	7 Channels	62 kbps	3 Channels
	QAM64	4 Channels	24 kbps	5 Channels	47 kbps	2 Channels
	QAM16	2 Channels	13 kbps	3 Channels	32 kbps	1 Channel (with E&M), 2 Channels (no E&M)
	QPSK	N/A	N/A	1 Channel	17 kbps	1 Channel (no E&M)

Figure 2: Number of trunked of conventional voice channels supported, by modulation rate

*Analog options are available by using Mimomax's Four Wire Audio Interface, an external full-duplex audio solution that communicates directly to the Mimomax Radio Unit. To learn more, visit mimomax.com/four-wire-audio-interface/

ADAPTIVE MODULATION – when running at QAM256, the Tornado radio uses a software feature enabler called M-CAM to boost performance. By scanning the RF channel conditions, M-CAM enables the radio unit to transverse between QPSK and the maximum modulation available to optimize data throughput.

RESIDUAL BANDWIDTH – as noted in the table, in addition to supporting multiple voice channels, the residual bandwidth can be used for other applications such as the transfer of data from sites or assets.

ANALOG TO DIGITAL – via a modified ADPCM vocoder, Mimomax has the ability to simultaneously link multiple tones transparent, analog voice channels and provide IP for linking digital radio channels. When digital base stations are used in analog mode, two or more concurrent G711 voice streams can be transported while also providing IP connectivity.