

## Case Study:

# wi-tribe Deploys DragonWave's Horizon Compact Solution for WiMAX Backhaul in Pakistan



### Background

The result of a joint venture between Qatar Telecom (Qtel) and the A.A. Turki Group of Companies, wi-tribe was formed in 2007 with a mission to provide broadband wireless access in emerging markets across the Middle East, Asia and Africa.

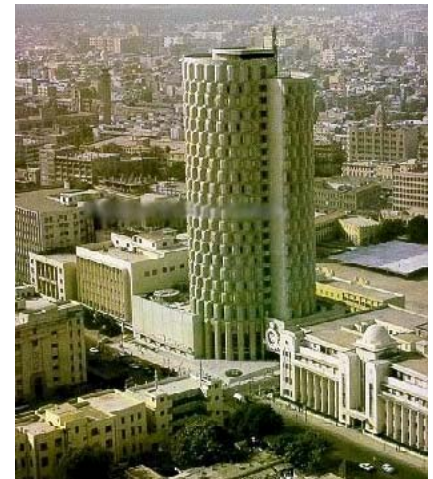
Having just come off a successful launch in Jordan, wi-tribe was looking to expand into Pakistan, offering business and consumer WiMAX-based connectivity at speeds ranging from 256Kbps to 1Mbps.

### The Business Challenge

Despite strong economic growth over the last decade, Pakistan continues to have one of the lowest broadband penetration rates in the world, remaining well under 0.5% in 2008 according to the International Telecommunications Union (ITU).

The reasons for this significant lag in broadband adoption are not immediately obvious; Pakistan has a young population (over 50% falling in the 15-24 age range), high education levels, significant PC adoption and impressive mobile uptake of over 50%.<sup>1</sup> Upon closer examination, one of the primary challenges comes to light – Pakistan's copper access infrastructure only reaches 4% of the population. In addition, only about 10 to 15% of these copper pairs are suitable for broadband services.

Recognizing the huge opportunity for broadband wireless services, wi-tribe moved to establish a presence in Pakistan, with initial deployments in the key markets of Karachi, Islamabad, Lahore and Rawalpindi.



*"We strongly believe in improving the lifestyle of our customers by understanding their needs and offering them the best personalized customer experience. We want to provide solutions that are simple, easy and valued by individuals, businesses and the government."*

- Sami Hinedi, CEO of wi-tribe Group

<sup>1</sup> <http://www.ispak.com.pk>

When it came to evaluating backhaul network options, it was apparent that the incumbent infrastructure was either lacking or would not provide the high capacity required for wi-tribe's WiMAX base stations. Building out fiber would have meant long delays and exorbitant costs. wi-tribe was looking for a cost effective solution that met several key requirements including:

- Rapid deployment
- High capacity to handle the bandwidth needs of very densely populated regions
- Simple and remote scalability
- A native IP architecture
- The ability to cover long link spans
- A low power, zero footprint solution

After evaluating several different offers, DragonWave's Horizon Compact packet microwave solution was the clear winner.

## The Solution

wi-tribe deployed the Horizon Compact in a high availability ring and mesh architecture spanning over 200 links and operating in the 15, 23 and 26 GHz bands. The use of Automatic Transmit Power Control (ATPC) and Automatic Adaptive Modulation (AAM) ensured maximum spectral efficiency.

The DragonWave Horizon Compact delivered several important benefits to wi-tribe:

- **Flexible, Cost Effective Capacity** – Horizon Compact's Flex bandwidth is a pay-as-you-grow feature that allows wi-tribe to scale any part of their WiMAX backhaul network quickly and remotely with capacity ranging from 10 to 400 Mbps per link.
- **Extended Reach** – AAM provides maximum link reach while minimizing antenna size requirement
- **Self-Healing Architecture** – Hybrid ring/mesh architecture, with DragonWave's RLS (Rapid Link Shutdown) capability to enable 50 ms restoration
- **Spectrally Efficient** – Minimized spectrum usage with 256QAM in 14 and 28 MHz channels, and channel reuse through ATPC



*“DragonWave's microwave solution has enabled quick deployment of the backhaul network for wi-tribe Pakistan. DragonWave's advantages include high speed data links, true IP architecture, minimum power consumption, and zero heat footprint.”*

- Mohammad Sadiq, CEO, wi-tribe Pakistan

## The Success Story

Despite significant challenges, wi-tribe was able to quickly turn-up its WiMAX services for its initial market in Pakistan; deploying 270 links in only 3 months. Bringing broadband to a grossly underserved region has not only been a rewarding experience but also a profitable one – wi-tribe's rapid service adoption has served to underscore the thirst for bandwidth in many parts of the world.

With plans to become one of the top 20 service providers in the world, wi-tribe looks to DragonWave to continue to provide future-proof WiMAX backhaul solutions as they continue their expansion in Pakistan, Jordan, the Philippines and beyond.

### About wi-tribe

wi-tribe is ushering in a new era of communications across the Middle East, Asia and Africa aimed squarely at enhancing online access in emerging markets both for business and personal users. Formed in April 2007, wi-tribe is the product of a joint venture between Qatar Telecom (Qtel) and A.A. Turki Corporate Trading and Contracting (ATCO), together with a proactive partnership with Clearwire. To find out more about wi-tribe, visit [www.wi-tribe.com](http://www.wi-tribe.com)

### About DragonWave

DragonWave(TM) is a leading provider of high-capacity wireless Ethernet equipment used in emerging IP networks. DragonWave designs, develops, and markets carrier-grade microwave radio frequency networking equipment that transmits broadband voice, video and data. DragonWave's products, which are based on a native Ethernet platform, function as a wireless extension to an existing fibre-optic core telecommunications network. The principal application for DragonWave's products is the backhaul function in a wireless communications network. Additional applications for DragonWave's products include point-to-point transport in private networks, including municipal and enterprise networks. DragonWave's corporate headquarters is located in Ottawa, Ontario, with sales locations in Europe, Middle East and North America.

### Head Office:

600-411 Legget Drive  
Kanata, Ontario  
K2K 3C9  
Canada  
Tel: 613-599-9991  
Fax: 613-599-4225

### Dubai Office:

DragonWave Inc. FZ-LCC  
Suite# 302 EIB – Building No. 5  
PO Box 500805  
Dubai Internet City  
Dubai, UAE  
Tel: +971-436-33458  
Fax: +971-44-234950

### UK Office:

Unit 3, Ground Floor  
Brooklands  
Redditch  
Worcestershire  
B98 9DW, UK  
Tel: +44-1527-583-120  
Fax: +44-1527-583-132

### France Office:

11 rue Jacques Carter  
78280 Guyancourt France  
Tel: +33 (0)6-30-75-08-57  
Fax: +33 (0)1-61-37-00-99