March 2011 Issue: Commercial Market

MarketWatch: E-band Backhaul

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From: Vol. 54 | No. 3 | March 2011 | Page 57

Millimeter-wave links at E-band frequencies can be deployed with minimal interference, allowing more efficient spectrum re-use, reducing coordination requirements, and allowing regulators to adopt a "light licensing" scheme at a fraction of the cost of "traditional" licenses, which has a number of backhaul equipment manufacturers touting its usage.

Millimeter-wave technology is still in its infancy compared to the much larger, well established microwave equipment market-projected to reach $6.5 B by 2014, according to research firm Infonetics Research. Still, Infonetics predicts the 70/80 GHz and 90 GHz equipment will grow to over $450 M by 2014. They predict nearly 3/4 of all millimeter-wave equipment purchased for mobile backhaul will be used in metro areas with high cell density and 4G networks where HSPA+, WiMAX and LTE base stations and aggregation points require Gbps speeds.

Visant Strategies forecasts that revenue from 60 GHz and 70/80 GHz PTP radios will reach over $500 M in 2016, with a five fold growth driven by mobile backhaul. The unlicensed 60 GHz radio shipments will also grow at the same rate, but driven by private enterprise and government networks, particularly public safety wireless networks. In 2010, growth in deployments of 70/80 GHz links in the US soared 700 percent above their 2009 levels. Based on registration data available by the FCC, BridgeWave achieved a market leading 64 percent of all 2010 registrations with more than 10,000 gigabit wireless systems in over 50 countries. Other Gbps wireless gear in the E-band is available from Alvarion, Ceragon, DragonWave, E-Band Communications, Gigabeam, Loea, Proxim's GigaLink and Exalt, among others.

At MWC in February, E-Band Communications introduced the E-Link 1000Q radio with next generation spectral efficiency and channel tuning capability for 80 GHz backhaul solutions for 4G/LTE networks. The company claims the radio, which utilizes QPSK modulation for spectrum efficiency, has the industry's highest output power thanks to a quarter-watt output amplifier, driven by proprietary GaAs MMICs and offers the lowest latency in the industry, at less than five microseconds. Meanwhile, Siklu (Israel) claims to offer gigabit-per-second wireless connectivity at the lowest price point in the entire industry-1Gb capacity millimeter radios based on their proprietary CMOS RFIC and

direct to antenna interconnect technology going for less than $3000.