

## Summary

# Executive summary

Mobile broadband based on HSPA/LTE and other mobile communication standards has taken off as an important technology for connecting mobile PCs and tablets to the Internet. The evolution is led by Europe where HSPA now accounts for 20.6 percent of the total number of broadband connections, compared to 13.2 percent in North America. The concept that was first launched as an exclusive business service is now a mass-market consumer product sold on an intensively competitive market. Consumers are utilizing their mobile broadband connections extensively, pushing the networks to their capacity limits. In Europe the majority of data traffic on mobile networks is generated by notebook PC users that surf the Internet. Fair use policies must be implemented to ensure network availability and pricing must be predictable. International roaming is still largely hindered by prohibitive pricing, making services utterly unattractive to use abroad.

Mobile broadband terminals are available in different forms and shapes. Four main types have emerged to satisfy different needs – PC-cards, USB modems, embedded modules and gateways. Berg Insight estimates the total global number of shipped external mobile broadband devices in 2010 to 92.7 million, with Europe and North America accounting for 27.4 million units and 8.5 million units respectively. In addition, shipments of embedded modules reached an estimated 9.5 million units. Expectations on embedded solutions for mobile PCs have been high during the past years, but the attach rate is still relatively low at 4.7 percent in 2010. The European market for external mobile broadband modems grew by 13 percent in 2010. Growth is forecasted to continue with shipments reaching 60 million units in 2016, fuelled by strong demand for mobility in notebook PCs. Also the North American device market will experience a rapid growth to reach 25 million shipments in 2016. The device ASP in Europe has fallen steeply over the past years and reached € 31 in 2010. The North American device market is characterized by a larger mix of mid-range and high-end products, whereby the ASP remained as high as US\$ 87 in 2010. Berg Insight predicts that the ASP decline rate will slow down significantly in Europe during the next few years, whereas in North America the ASP will even increase in 2011. This is primarily due to a growing share

of HSPA+ and LTE modems and mobile hotspots in the product mix. The EU 23+2 external device market generated an estimated € 856 million in 2010 while the North American market generated estimated revenues of € 522 million.

The European mobile broadband market continues to grow rapidly, with demand fuelled by declining prices, improved user experience, massive marketing campaigns and new device categories. Berg Insight estimates that the total number of mobile broadband subscribers in EU 23+2 grew by 33 percent to reach 33.9 million in 2010, while the estimated operator revenues reached € 5.9 billion. The European mobile broadband market is expected to grow at a compound annual growth rate (CAGR) of 12.4 percent to reach € 11.9 billion in 2016. This revenue growth is driven by strong year-on-year net additions to the subscriber base, which is projected to reach 96 million by 2016. Today, a majority of the users subscribe to data bundles for 12 or 24 months, but as the market matures a majority of new subscribers will only be occasional users generating lower network ARPU.

Berg Insight estimates that the number of mobile broadband subscribers in North America reached 14.6 million by the end of 2010. The subscriber base is forecasted to grow at a CAGR of 25.8 percent to reach 58 million subscribers in 2016. The estimated service revenues were about US\$ 8.3 billion in 2010 and are expected to grow at a CAGR rate of 12.4 percent to reach US\$ 16.6 billion by 2016. The growth in North America is currently accelerating primarily due to the increasing uptake of tablet data plans and the introduction of LTE.

Huawei has established itself as the world's largest supplier of mobile broadband terminals holding a market share of 49 percent and has a particularly strong foothold in Europe. ZTE is the second largest vendor with clear margins capturing a market share of 31 percent. In North America, the local vendors Sierra Wireless and Novatel Wireless still hold strong positions. A vast majority of the external modems shipped are USB modems, but mobile hotspots are gaining in popularity. Two of the largest telecom vendors – Ericsson and Qualcomm – entered the market for embedded solutions in 2008 and have managed to sign contracts with many of the major notebook vendors. The two companies captured a market share of 83 percent together on this market in 2010.