

# The Sonus mobilEdge™ 4010 Access Node

BRINGING YOU TO THE EDGE

mobileEdge™



A SONUS NETWORKS PRODUCT



## **Seamless mobility. Centralized IP services. Broadband Mobile Convergence. It all happens at the mobilEdge.**

The Sonus mobilEdge4010 Access Node expands your wireless world by leveraging femtocell and picocell technology. The result is a seamless mobility experience that brings powerful wireless coverage indoors and enables new applications like Broadband Mobile Convergence.

Stationed at the edge of the wireless core network, the mobilEdge4010 acts as an anchor node between the femtocell/picocell access network, the IP core network and the macro wireless network. By addressing mobility-related procedures at the edge of the IP core, the Sonus mobilEdge solution allows IP core and access networks to evolve independently. The mobilEdge4010 is based on the field-proven Sonus GSX4000™ Open Services Switch and delivers the same reliability, performance and scalability that are hallmarks of the GSX family.

Sonus mobilEdge4010 Access Nodes employ an open and standards-based architecture that supports a wide range of network protocols, including 2G (GSM) and 3G (UMTS) femtocell/picocell access points. By using standard SIP signaling, the mobilEdge4010 enables network operators to leverage centralized IP-based services that support seamless mobility for both wireless and wireline subscribers, including roaming and call hand-off using their existing mobile handsets.

### **Key Benefits**

**BROADBAND MOBILE SERVICE CONVERGENCE /** The Sonus mobilEdge4010 Access Node bridges femtocell/picocell access networks, IP-based core networks and legacy macro wireless networks, allowing network operators to exploit the revenue potential and subscriber retention benefits of quad-play bundles and other converged services. Standard Session Initiation Protocol (SIP) signaling makes services and applications centralized in the IP core available to wireless and wireline subscribers alike. Mobility management, roaming, call hand-off and Supplementary Services let active voice calls move seamlessly between femtocells/picocells and wireless macro cells without requiring expensive dual-mode handsets.

**A carrier-class wireless access node enabling Broadband Mobile Convergence, seamless mobility and centralized IP-based services across femtocell, picocell, broadband wireless and wireline networks.**

**EXPANDED WIRELESS COVERAGE** / With the Sonus mobilEdge4010 Access Node, network operators can improve their wireless coverage without expensive upgrades to their macro networks. The Sonus mobilEdge4010 supports 2G GSM and 3G UMTS femtocell and picocell access points, providing improved in-building coverage and outdoor network in-fill for both residential and enterprise environments. The Sonus mobilEdge4010 supports Mobile-Originated (MO) and Mobile-Terminated (MT) calls, as well as SMS delivery and termination between mobile users and industry-standard Short Message Service Centers (SMSC).

**PROTOCOL AGILITY** / Support for a wide range of wireless and wireline protocols allows the Sonus mobilEdge4010 to provide the following capabilities:

- > Mobility between macro and femtocell/picocell radio networks
- > Roaming and service continuity as users move from macro to femtocell/picocell access
- > Deployment and evolution of access technologies decoupled from evolution in the core network
- > Signaling interworking between traditional macro and IP core networks
- > Media transcoding and support for transcoder free operation
- > Anchoring of both circuit and packet sessions with integration of Mobile Switching Center (MSC) and Serving GPRS Support Node (SGSN) functions

**STANDARDS-BASED INTEGRATION WITH EXISTING NETWORKS** / The Sonus mobilEdge4010 Access Node integrates easily with existing macro wireless networks, reducing the time and cost to roll out new converged services. Interconnection between the Sonus mobilEdge4010 and legacy wireless network components—MSCs, home location registers (HLRs), Gateway GPRS Support Nodes (GGSNs) and others—relies strictly on industry-standard interfaces. The Sonus mobilEdge4010 can perform media transcoding at the network edge for uniform, optimized media encoding in the network core that aligns with operator preferences.

**SMOOTH EVOLUTION TO NEXT-GENERATION NETWORKS** / By using standard interfaces and handling mobility-related procedures at the edge of the IP core network, the Sonus mobilEdge4010 Access Node promotes an all-IP architecture that allows core and access networks to evolve independently. As an anchor node between legacy wireless networks and packet-based network cores, the Sonus mobilEdge4010 enables network operators to cap their investment in legacy TDM/ATM technology and facilitates a smooth migration towards Evolved Packet Core (EPC) network architecture—also known as the System Architecture Evolution (SAE) Core.

## The Sonus mobilEdge4010

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**CARRIER-GRADE PERFORMANCE AND RELIABILITY** / For carrier-grade performance and reliability, the Sonus mobilEdge4010 Access Node is built on the same hardware platform as the field-proven Sonus GSX4000 Open Services Switch. Deployed worldwide, Sonus GSX networks carry over 35 billion IP-voice minutes-per-month (as of December 2007). Augmented with widely deployed ip-MSC technology from Zynetix, a Sonus Networks company, this highly scalable, highly available platform provides complete redundancy and preserves all active calls in the case of a failover. In addition, a Live Software Upgrade feature lets operators apply software upgrades without service interruption.

### Features

- > Support for both 2G and 3G femtocell and picocell access points enables Broadband Mobile Convergence without requiring special dual-mode mobile handsets
- > Mobility management and call control functions allow seamless roaming between femtocells/picocells and the macro network
- > Offloading traffic from the macro network to IP networks frees wireless bandwidth for revenue enhancing voice, data and video services
- > Standard SIP signaling makes centralized IP-based enhanced services available to both wireless and wireline handsets
- > Transcoding of AMR and EFR-encoded media to align with operator preferences optimizes core network operation
- > Carrier-grade platform with full redundancy ensures 99.999% availability
- > Intelligent edge architecture aids migration from legacy network technologies to next-generation, all-IP architecture

**To learn more about our mobilEdge products, call your Sonus sales representative or visit us online at [www.sonusnetworks.com](http://www.sonusnetworks.com).**



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