

## VoiceMAX – Airspan’s Carrier-Class VoIP Solution

VoIP media streams require a constant, uninterrupted data flow. Each UDP packet carries between 10 and 30 (depending on the codec and packetization) milliseconds of voice data. In an ideal world packets would never arrive out of sequence or suffer from delays or packet lost.

However, a shared medium such as wireless access is far from ideal for delivering VoIP packets with constant delay and jitter because the amount of traffic may fluctuate from one moment to the next.

Airspan has deployed in-house expertise in both wireless and voice technology in order to bring a unique, SIP based solution to Voice over Wireless IP (VoWIP), we call VoiceMAX.

Airspan has developed a standalone VoiceMAX which takes advantage of the special QoS features of the IEEE 802.16 standard and advanced admission control mechanisms.

VoiceMAX is deployed in the CSN and becomes part of an IMS implementation. Using SIP, VoiceMAX communicates with the WiMAX base stations and with the Softswitch in order to dynamically allocate the WiMAX network resources with minimum waste of pre-assigned bandwidth, at the same time ensuring the desired voice quality.

The standalone VoiceMAX server performs the following functions:

- Auto discovery of SIP user agents (UA) - VoiceMAX that acts as a standard SIP proxy intercepting all SIP messages. The registration packet triggers the “Auto Discovery” mechanism, which at the end of the process gives the VoiceMAX the ability to determine, to which BS a specific SIP UA belongs.
- Admission control – VoiceMAX prevents over subscription of network resources in accordance with the policies of the operator. Enable the operator to prioritize emergency numbers.
- Dynamic UGS - VoiceMAX provides the ability to dynamically create and tear down UGS sessions. This mechanism, it enables guaranteed bandwidth utilization in accordance with the negotiated codec selection.

VoiceMAX can be managed either from the local console or remotely over the Internet by using a Web browser.

## The VoIP QoS and Admission Control Solution

### Main Features

- VoiceMAX functions
  - Auto discovery of SIP User Agents
  - Admission Control
  - Emergency calls prioritisation
  - Dynamic UGS management
- VoiceMAX architecture
  - SIP based software product deployed on a standalone server
  - Rack mountable
- VoiceMAX management
  - Local console
  - Over the Internet using Web browser
  - Linux based



# Technical Data Sheet - VoiceMAX

<b>Networking</b>	Two integrated 10/100/1000 NICs
<b>Dimensions (HxWxD)</b>	4.32 x 42.62 x 67.62 cm (1.70 x 16.78 x 26.62 in)
<b>Weight</b>	15.87 kg (35 lb)
<b>Unit Height</b>	1U
<b>Mounting options</b>	1. Positioned horizontally on desktop
<b>2. Mounted horizontally in a rack (ETSI or 19")</b>	2. Mounted horizontally in a rack (ETSI or 19")
<b>Power Supply</b>	Power supply - 100V/240V; 50Hz/60Hz Max 600W Single Power Supply
<b>Power Consumption</b>	Typically < 200W
<b>Standards Compliance</b>	
<b>Safety</b>	IEC 60950:1999 EN 60950:2000
<b>EMC</b>	CISPR 22:1993 +A1+A2 EN 55022:1994 +A1+A2 EN 55024:1998 +A1+A2 IEC 61000-3-2:2000 EN 61000-3-2:2000 IEC 61000-3-3:1994 +A1:2001 EN 61000-3-3:1995 +A1:2001



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