

WiMAX Forum® Industry Research Report

Review of January, 2010

About

The WiMAX Forum® Industry Research Report is a monthly summary of primary and secondary research and news, provided by WiMAX Forum to the industry. It includes the latest updates on WiMAX Forum-tracked statistics, product certification, regulatory information, technology standards and more. This report will be published and made available on the WiMAX Forum website the first week of every month. If you have any questions or comments regarding the research contained herein, please contact Jonathan Singer, the WiMAX Forum's Market Research Manager at Jonathan.Singer@wimaxforum.org.

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Executive Summary

- The Monthly Report now has a new data section! Check out the Quarterly WiMAX Equipment Market Update, data provided courtesy of [Skylight Research!](#)
- WiMAX Forum currently tracks 555 WiMAX Deployments in 147 Countries.
- WiMAX Forum certified 10 new products in January.
- WiMAX Forum is busy preparing an updated POPs coverage estimate. Look forward to an updated figure in February 2010!

Global Deployment Update

This section describes the current state of WiMAX deployments across the world. The data for this tool is delivered to us courtesy of [Informa Telecoms & Media](#), and can be viewed online in more detail at www.wimaxmaps.org. Please note that the numbers below do not necessarily represent total WiMAX networks in existence, but rather the total deployments that we currently track. Every month we find more data on new or existing deployments and add them to the database. If you are an operator, please check WiMAX Maps to make sure that your organization's information is accurate. If it is either not there or is inaccurate, please email deploymentdata@wimaxforum.org, and we will update our information immediately.

TOTAL DEPLOYMENTS*

**Note: "Deployments" in this case refers to WiMAX networks that are either in service or planned/in deployment (i.e. base stations are being deployed, but there are few/no subscribers yet).*

Total Deployments Tracked	555
<i>Total Deployments Tracked Last Month</i>	523
Total Countries** with WiMAX Deployments	147
<i>Last Month</i>	147

***Note: "Countries" in this case is representative of distinct telecommunications markets, and therefore this number may equal more than the total number of sovereign nations recognized by the UN. For example, Hong Kong and China have different regulatory structures, and are therefore treated as different markets.*

DEPLOYMENTS BY REGION

Africa	114
CALA	109
Asia-Pacific	100
Eastern Europe	84
Western Europe	69
North America (USA/Canada)	51
Middle East	28

DEPLOYMENTS BY FREQUENCY

2.3 GHz Deployments***	46
2.5 GHz Deployments***	89
3.3 GHz Deployments***	9
3.5 GHz Deployments***	268
5+ GHz Deployments***	20

***Note: In above table total deployment by Frequency may not add up to total deployments tracked. The missing deployments' statuses are unknown, and will be confirmed and updated.



For more information please visit www.wimaxmaps.org

Quarterly WiMAX Equipment Update

This section provides a cumulative look at the total WiMAX equipment shipped since 2006. The data is provided courtesy of Skylight Research. For more detailed data on WiMAX equipment numbers, please contact Emmy Johnson at Emmy@skylightresearch.com.

1Q 2006 – 3Q 2009 Cumulative WiMAX Equipment Sales	
Frequency	Total Shipped
2.3 GHz	\$243M
2.5 GHz	\$679M
3.x GHz	\$1.5B
5.x GHz (includes 4.9)	\$84M
Other	\$12M
TOTAL	\$2.5B

POPs Coverage

In February, 2009, WiMAX Forum announced that WiMAX service providers cover at least **430 Million** people. Below is a regional breakout of the estimate:

Region	POPs Covered
Africa	52,000,000
Asia-Pacific	205,000,000
CALA	49,500,000
Eastern Europe	45,300,000
Middle East	20,000,000
North America	28,000,000
Western Europe	34,600,000
TOTAL	434,400,000

These numbers represent an estimate conducted by WiMAX Forum via primary and secondary research of operator POPs coverage on an operator-by-operator basis. Where the operator could not or would not respond to direct inquiry, estimates were made based on public operator statements, number of base stations, government-mandated buildout requirements, and other available information. Proprietary networks (pre-WiMAX/non-WiMAX) were **not included, and geographic overlap of operator coverage areas **was** taken into account.*

Since this research was conducted, many operators have announced changes in POPs coverage. Below are some highlights:

- Philippine mobile operator Globe Telecom announced that it plans to deploy a further 2000 sites for 3G and WiMAX base stations this year.
- Taiwanese mobile operator FarEasTone launched its 4G WiMAX network in the city of Taichung.
- Taiwanese operator Global Mobile launched its WiMAX network in Hsinchu City, Taiwan.
- Saudi Arabian mobile operator Mobily announced that it has expanded its own WiMAX network, and plans to continue network expansion to offer complete coverage of the country's major cities.
- Yota continues its international expansion with the win of 30 MHz of 2.5GHz spectrum in Peru, for which it plans to deploy WiMAX.
- Wind Telecom plans to provide WiMAX services to the cities of Santo Domingo and Santiago in the Dominican Republic beginning in 3Q 2010.
- Tanzanian operator Sasatel launched a WiMAX network in the capital city of Dar es Salaam.
- Delta Telecom Company launched its WiMAX service in Azerbaijan, with plans to expand the network throughout 2010.

***If you are a WiMAX operator and wish to be mentioned here, please contact Jonathan Singer, the WiMAX Forum's Market Research Manager at Jonathan.Singer@wimaxforum.org.*

WiMAX Forum Certified™ Products

In January of 2010, WiMAX Forum certified 10 new devices.

Total WiMAX Forum Certified Products	188
<i>Base Stations</i>	59
<i>Subscriber/Mobile Stations</i>	129

Recent Certified Devices

Below is a list of the WiMAX devices certified in January, 2010:

Company	Product Name	Product Type	Frequency
NEC	Paso Wings BS	Base Station	2.5 GHz
Samsung	Samsung Mobile WiMAX	Mobile Station	2.5 GHz
Lenovo	ThinkPad Edge 13	Mobile Station	2.5 GHz
Lenovo	ThinkPad T-Series	Mobile Station	2.5 GHz
Lenovo	ThinkPad W-Series	Mobile Station	2.5 GHz
Fujitsu	FMV-BIBLO LOOX M/ G30	Mobile Station	2.5 GHz
Samsung	M-WiMAX SPI-2410	Base Station	2.5 GHz
Huawei	Echolife BM622	Subscriber Station	2.5 GHz
Panasonic	Let'snote F9	Mobile Station	2.5 GHz
Panasonic	Let'snote CF-N/S	Mobile Station	2.5 GHz

WiMAX Forum Certified Product Vendors

WiMAX Vendors with WF Certified Products	Total
Base Station Vendors	25
Subscriber/Mobile Station Vendors	45

- Base Station Vendors
 - Airspan Networks, Alcatel-Lucent, Alvarion, Axxcelera, Cisco Systems, E.T. Industries, Harris Stratex, Huawei Technologies, Motorola, NEC, Nokia Siemens Networks, Nortel, PointRed Telecom Pvt Ltd, POSDATA, Proxim Wireless Corporation, Redline Communications, Runcom Technologies Ltd., Samsung, Selex Communications, SEQUANS Communications, Soma Networks, SR Telecom, WiNetworks, ZTE Corporation
- Subscriber/Mobile Station Vendors
 - Acer Incorporated, Airspan Networks, Alcatel-Lucent, Alvarion, Axxcelera Broadband Wireless, Beceem, Cisco Systems, C-motech Co. Ltd., D-Link, E.T. Industries, Fujitsu, GCT Semiconductor, Inc., Gigaset Communications, Harris Stratex, Huawei Technologies, Intel Corporation, Interbro, Japan Radio, Kyocera, Lenovo, Micro-Star Int'l co.,LTD, MITSUMI ELECTRIC CO.,LTD., MODACOM Co., Ltd., Motorola, NEC, Oki Electric Industry Co., Ltd., Onkyo, Panasonic, PointRed Telecom, POSDATA, Redline Communications, Runcom Technologies Ltd., Samsung, Selex Communications, SEOWON INTECH Co., Ltd., SEQUANS Communications, Siemens AG, Sony, SR Telecom, Toshiba, Ubee Interactive, Wavesat Inc., ZTE Corporation, ZyXEL Communications Inc.

Regulatory Update

In partnership with WiMAX Forum Regulatory Working Group, AT4 Wireless maintains a detailed [Spectrum & Regulatory database](#). The database provides regular monthly updates detailing global regulatory proceedings. Below is a free, extracted highlight from this month's report:

- Peru: YOTA del Peru S.A.C awarded with a licence in the 2.5 GHz band- On January 20, 2010, a concession agreement was awarded to YOTA del Perú S.A.C. allowing it to provide telecommunication services in the 2668-2692 MHz band in the regions of Provincia de Lima, Provincia Constitucional del Callao, Provincia de Trujillo and the Departamento de Lambayeque and, in the 2668-2690 MHz band in the rest of the country. PROINVERSION is confident that the efficient use of this spectrum will allow more Peruvians to access the Internet. PROINVERSION also is confident that major competition will generate more benefits for the population (regarding to service coverage and prices). The Concession Agreement was signed between the State of the Republic of Peru, represented by the Ministry of Transport and Communications, and the

company YOTA del Peru SAC, constituted by the consortium of Metsanco Limited and Broadband Wireless Development Corporation (BWDC).