Hardware Sizing Guide
OV3600 6.3

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Part Number: 0510620-01

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Overview

This document provides guidelines for purchasing new hardware to host the OmniVista 3600 Air Manager (OV3600). Your hardware should incorporate margin for WLAN expansion as well as future OV3600 features and modules. These specifications are formulated to keep OV3600 running on the same hardware platform for two years.

Properly Sizing Processing and Memory for your OV3600 Server

Here are some factors that influence the processing requirements for your OV3600 server:

- How many devices will the server manage?
- How often will OV3600 poll these devices?
- How many wireless clients will the server monitor?
- Will this server detect rogue devices?
- Will this server run VisualRF?

Intel Processor Matrix, see the AMD Processor Matrix below

Managed Devices	CPU Class	Clock Speed (GHz)	FSB (MHz)	CPUs	Total Cores	OV3600 Memory	RAPIDs Memory	VisualRF Memory
Pilot 1-25 APs	Intel® Core 2 Duo® **E6305**	1.86	1066	1	2	2	-	-
100	Quad Core Intel® Xeon **L5310**	1.6	1066	1	4	3 GB	.5 GB	.5 GB
200	Quad Core Intel® Xeon **L5310**	1.6	1066	1	4	4 GB	1 GB	1 GB
500	Quad Core Intel® Xeon **E5420**	2.5	1333	1	4	5 GB	1.5 GB	1.5 GB
1,000	Quad Core Intel® Xeon **X5460**	3.16	1333	1	4	8 GB	2 GB	2 GB
2,500	Quad Core Intel® Xeon® **X5460**	3.16	1333	2	8	10 GB	3 GB	3 GB

These recommendations are based on the following assumptions:

OV3600	Value
Average density of client devices per access point	5
User data polling period (minutes)	10
Thin AP discovery period (minutes)	15
Device-to-device link polling period (minutes)	20
Device bandwidth polling period (minutes)	10
802.11 counters polling period (minutes)	15
Rogue AP and device location data polling period	30
CDP neighbor polling period (minutes)	30

Wire Line RAPIDS	Value
Number of AP to switch/router used for wireline rogue discovery	25
Polling period for each switch or router (hours)	12
Bridge forwarding table (hours)	12

VisualRF	Value
Average floor plan size (feet)	62,500
Number of access points per floor plan	20
Number of clients per floor plan	100
Number of attenuation grid cells per floor plan	2,500
Number Rogue devices per floor plan	20
OV3600 Synchronization timer (minutes)	15
Rogue location timer (minutes)	30

Operating System Notes

- To ensure hardware capability your server hardware should support Red Hat Enterprise Linux.
- OV3600 includes an operating system based on CentOS and is installed by default. You may choose to use Red Hat Enterprise Linux.
- Only 32-bit Red Hat Enterprise Linux installations are supported. 64-bit operating system installations are not supported.

Properly Sizing Disk Storage for your OV3600 Server

OV3600 stores most statistical data in RRD (Round Robin Database) files. This serves two purposes. First, it improves speed, because writing to an RRD file is much faster than writing to a relational database. Secondly, it provides for a known, fixed amount of storage per managed device.

Here are some factors that influence storage requirements for your OV3600 server.

- How many devices will the server manage?
- How much historical data will the server retain?
- How many wireless clients will the server monitor?
- Will this Server run VisualRF and RAPIDS?

OV3600 uses 75 megabytes per managed device (AP) with minimal data retention and without VisualRF and Rogue detection. OV3600 uses a maximum of 150 megabytes per managed device (AP) with maximum data retention and VisualRF and Rogue detection. This is total disk space including OS, log files, database, and code.

Disk Storage Requirements

Devices	Min. OV3600	Max. OV3600 Storage	Storage System
100	7.5 GB	15 GB	(1) Drive 15K RPM
200	15 GB	30 GB	(1) Drive 15K RPM
500	38 GB	75 GB	* Multiple 15K RPM RAID Drives
1,000	75 GB	150 GB	* Multiple 15K RPM RAID Drives
2,500	187 GB	375 GB	* Multiple 15K RPM RAID Drives

* RAID configurations require 4 plus SAS/SCSI disks in a RAID-5 configuration supplied via a hardware controller with at least 256 MB of cache. All disk drives must have 15K RPM spindle speeds. **Do not** use software raid systems or SATA disk drives.

OV3600 spends much more time writing to the disk subsystem than reading from it. OV3600 100 and 200 models perform well on a single, fast (spindle speed) disk.

Disk Partitioning

OV3600 automatically partitions the disk subsystem upon installation. You can override these values. The table below lists the default partitioning and provides guidance for more advanced scenarios.

OV3600 Default Disk Partitions

Default Partitions	Size
boot	100 MB
swap	Twice size of RAM
/	Rest of disk space

Advanced Partitioning Recommendations

Default Partitions	Purpose	Recommended Size
Boot	Boot partition	100 MB
swap	Swap partition	Twice size of RAM
/	OV3600	25% of total disk space
/alternative	Database backup location	10% of total disk space
/var/log	All log from all services	5% of total disk space
/var/lib/pgsql	PostgreSQL database files	25% of total disk space
/var/Alcatel-Lucent/rrd	Round Robin database files	25% of total disk space
/var/Alcatel-Lucent-backup	Nightly backup location	10% of total disk space

Note: There could be upgrade or installation issues when manually partitioning your disk subsystem.

OV3600 Appliances

Alcatel-Lucent now provides the option of purchasing a specially designed hardware appliance. There are two models listed below. OV3600-HW-PRO is designed for deployments with up to 1,500 devices. OV3600-HW-ENT is designed for deployments between 1,500 and 2,500 devices.

Appliance Specifications

SKU	CPU Class	Clock Speed (GHz)	CPUs	Total Cores	Memory	Disk Subsystem
OV3600-HW-PRO	Quad Core Intel® Xeon® **X5460**	3.16	1	4	12 GB	(3) 73GB, 15K RPM Raid V
OV3600-HW-ENT	Quad Core Intel® Xeon® **X5460**	3.16	2	8	16 GB	(4) 73GB, 15K RPM Raid V

AMD Processor Matrix

Managed Devices	CPU Class	Clock Speed (GHz)	FSB (MHz)	CPUs	Total Cores	OV3600 Memory	RAPIDs Memory	VisualRF Memory
500	Quad Core AMD Opteron™ **2376**	2.3	1000	1	2	4 GB	1 GB	1 GB
1,000	Quad Core AMD Opteron™ **2360SE**	2.5	1000	1	4	8 GB	2 GB	2 GB
2,000	Quad Core AMD Opteron™ **2360SE**	2.5	1000	2	8	10 GB	3 GB	3 GB

Note: Alcatel-Lucent does not actively conduct scalability testing for the AMD processor product line. These numbers are based on published performance data versus the Intel product line.