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Healthcare Wi-Fi selector report

Healthcare report

Alcatel-Lucent OmniAccess Stellar WLAN Solution

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Alcatel-Lucent OmniAccess Stellar WLAN Solution



Thank you for downloading this report on hardworking Wi-Fi. It is your personal guide to the solutions within the Alcatel-Lucent OmniAccess® Stellar WLAN product line. These solutions help transform healthcare services to meet today's challenges.

Digital services deliver fantastic new possibilities for securing positive patient outcomes. At the same time, it tests the limits of your existing network. That's why you need superior Wi-Fi performance to help deliver the best of today's clinical practices, meet modern expectations and ultimately improve patient care pathways and outcomes.

- **82% of surveyed hospitals consider their Wi-Fi network business critical¹**
- **70% of healthcare providers use mobile devices to access EMR²**
- **7.1 million home health monitoring devices in use³**
- **Healthcare cyberattacks doubled between 2010 and 2015⁴**
- **75% of patients expect to use digital services in the future⁵**

What's important for you and your patients?

Digital mobility is becoming the way that healthcare organizations can decisively improve patient care pathways, meet patient and visitor expectations, safeguard security, and keep services simple and cost effective. Achieving these objectives will define the experience that your organization delivers for healthcare professionals and patients alike.

Better care

Mobility allows your clinicians to achieve higher standards of care, for example, by securely accessing electronic health/medical (EHR/EMR) records, 4K imaging and test results at the bedside, instead of having to leave a patient and log into a desktop some distance away.

Similarly, innovations such as monitoring devices embedded in wristbands make it possible for more patients to recover while at home, as doctors and care givers can track their progress remotely using real-time data. This reduces hospital costs and frees up beds for more urgent cases.

Achieving these advantages will never happen without the foundation of a Wi-Fi solution equipped with the strength and intelligence to support the demands of digitization and the Internet of Things (IoT).

This report includes details of the Alcatel-Lucent OmniAccess Stellar WLAN product line, along with the OmniVista 2500 (on-premises) and OmniVista Cirrus (cloud) network management platforms, which provide a single, unified interface for your WLAN and LAN infrastructure.

¹ Cloud.spok.com: 2016 Mobility Strategies in Healthcare survey

² <http://mspmentor.net/msp-mentor/msp-opportunity-healthcare-and-mobile-device-management>

³ <https://iotbusinessnews.com/2017/02/08/82058-berg-insight-says-7-1-million-patients-worldwide-remotely-monitored/>

⁴ Data from AON report: Cyber Risk for Entertainment-Hospitality Sector (March 2016)

⁵ <http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/healthcares-digital-future>



Higher expectations

Patients (not to mention their visitors and your own clinicians) represent a cross section of modern society. That means they expect instant, trouble-free access to everything online – no matter where they are or what they're doing.

A hospital, clinic, an assisted living facility, or other healthcare environment is no exception and people will want to: Watch online TV, videos, with the ability to chat, instant message, interact with social media and perhaps even work using their smartphones, tablets and other mobile devices.

Satisfying such expectations obliges you to provide ultra, high-speed connections, new levels of bandwidth and improved coverage.

More robust security

The May 2017 WannaCry ransomware attack was a global phenomenon, paralyzing the IT infrastructure of many healthcare organizations including most of the UK's National Health Service.

It was a timely reminder of the cybersecurity threat faced by healthcare organizations in a digital world where data breaches can lead to legal actions and large regulatory fines, as well as severely damaging an organization's reputation.

Now more than ever, it makes sense to safeguard digital workflows and patient data across the LAN/WLAN network.

The most efficient way to do this? Building security into the architecture of the Wi-Fi network itself, rather than relying solely on the legacy approach of defense at the perimeter.

Lower complexity and cost

Healthcare organizations can't afford to ignore the commercial imperatives of simplicity and cost efficiency. With that in mind, they should look for Wi-Fi products that are affordable, with a low TCO, and a proven capability for automatic onboarding of smart and IoT (Internet of Things) devices to support connected healthcare services.

Wi-Fi systems must keep mobile clinicians connected, ensure that smart systems stay online, and eliminate the need for investment in the maintenance of old technology.

As you'll see over the course of this report, the OmniAccess Stellar WLAN product line has been designed with these healthcare needs in mind. However, the report itself is only an initial guide.

We hope you find this report relevant and valuable. Once you've read it, please get in touch with us at:
www.al-enterprise.com/contact-us

Hardworking Wi-Fi for Healthcare



Alcatel-Lucent OmniAccess Stellar WLAN

Modern healthcare organizations need superior Wi-Fi performance to help them meet today's clinical practices.

Already some 70% of healthcare providers use mobile devices to access EMRs.¹ Plus, there are 7.1 million home health monitoring devices in use.² For clinicians, mobile technology allows them to be more effective. 73% of clinicians say mobile enables faster, more flexible workflows,³ and 75% of patients expect to use digital services in the future.⁴

Mobile technology is becoming the way healthcare organizations:

- **Deliver anywhere, anytime, anyway, healthcare** – from secure access to electronic health/medical (EHR/EMR) records and test results at the bedside to wristband monitoring devices for real-time tracking of patient progress.
- **Meet patient and visitor expectations** – with high-speed Wi-Fi, improved coverage and access using preferred devices, while ensuring there's no impact on essential services or confidential data.
- **Safeguard healthcare organizations** – with security built-in to protect digital workflows and patient data against costly, disruptive data breaches and cyberattacks.
- **Lower complexity and cost** – enable simplified workflows that provide tangible benefits with a lower TCO.

Wi-Fi for next generation Healthcare

With our global reach and local focus, we have the solution for today's healthcare challenges. The Alcatel-Lucent OmniAccess Stellar WLAN product line delivers affordable, enterprise-grade features with operational simplicity.

- **Easy connectivity** – provides a better user experience for patients, staff and visitors
- **A unified network (wired and wireless LAN)** – allows clinicians to work anywhere and everywhere
- **The distributed virtual controller architecture** – enables better performance, high availability and scalability, across the hospital WLAN, while reducing complexity and lowering TCO
- **Unique IoT containment technology** – allows secure, automatic connection of authorized devices
- **Quality of service** – is better with high speed Wi-Fi, expanded radio coverage anywhere in the hospital or clinic and a simple, scalable cloud-based management solution
- **Your investment is protected** – through a future-proof solution, designed for healthcare, that's built on the latest technologies and services

¹ <http://msspmentor.net/mssp-mentor/mssp-opportunity-healthcare-and-mobile-device-management>

² <https://iotbusinessnews.com/2017/02/08/82058-berg-insight-says-7-1-million-patients-worldwide-remotely-monitored>

³ <http://www.mcsa.co.uk/wp-content/uploads/2015/05/Aruba-Overview-1.pdf>

⁴ <http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/healthcares-digital-future>

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Alcatel-Lucent OmniAccess Stellar WLAN Solution



Flexible solutions for better health outcomes

Our hardworking Wi-Fi suits any healthcare environment.

Small WLAN	Medium-sized WLAN	Large WLAN	Multi-site WLAN
<p>For compact, self-contained sites, such as a medical practice or clinic.</p> <p>Entry level AP AP1101</p> <p>For linking several smaller sites or parts of a complex, such as a medical center.</p> <p>Mid-level APs AP1201 - EN 60601-1-1 and -2 certified AP1201H - integrated telephony connectivity AP1221 - built-in antenna AP1222 - external antenna connectors</p> <p>Outdoor AP AP1251</p> <p>Standalone deployment Wi-Fi Express</p>	<p>Reliable, efficient coverage for general hospitals to larger medical practices.</p> <p>Mid-level APs AP1201 - EN 60601-1-1 and -2 certified AP1201H - integrated telephony connectivity AP1221 - built-in antenna AP1222 - external antenna connectors</p> <p>Outdoor AP AP1251</p> <p>Managed deployment Wi-Fi Enterprise using OmniVista 2500 OmniVista Cirrus</p> <p>Distributed Intelligent Architecture</p> <p>Location-based services Alcatel-Lucent OmniAccess Stellar Indoor Location-Based System</p>	<p>Fast, cost-effective coverage for major hospitals, clinics and healthcare sites.</p> <p>Mid-level APs AP1201 - EN 60601-1-1 and -2 certified AP1201H - integrated telephony connectivity AP1221 - built-in antenna AP1222 - external antenna connectors</p> <p>High-end APs AP1231 - built-in antenna AP1232 - external antenna connectors</p> <p>Outdoor AP AP1251</p> <p>Managed deployment Wi-Fi Enterprise using OmniVista 2500 OmniVista Cirrus</p> <p>Distributed Intelligent Architecture</p> <p>Location-based services OmniAccess Stellar Indoor Location-Based System</p>	<p>Connecting several sites into a single WLAN, such as hospitals within a group.</p> <p>Mid-level APs AP1201 - EN 60601-1-1 and -2 certified AP1201H - integrated telephony connectivity AP1221 - built-in antenna AP1222 - external antenna connectors</p> <p>High-end APs AP1231 - built-in antenna AP1232 - external antenna connectors</p> <p>Outdoor AP AP1251</p> <p>Managed deployment Wi-Fi Enterprise using OmniVista 2500 OmniVista Cirrus</p> <p>Distributed Intelligent Architecture</p> <p>Location-based services OmniAccess Stellar Indoor Location-Based System</p>



Built for healthy performance

The OmniAccess Stellar WLAN product line provides a simple, efficient enterprise-grade solution to provide the best user experience for patients, staff and visitors across your healthcare site.



Entry level AP

AP1101

At 3x the speed of previous industry standard access points, the AP1101 is designed specifically for use in smaller clinics and medical practices.

- The 802.11ac Wave 1 access points are plug-and-play with up to 1.2 Gb/s throughput
- Fine-tuned for specific applications such as voice or video
- Especially cost effective for smaller wireless networks
- Simple to use for user account creation and management with no IT skills needed
- Scale up to **32 APs** (AP1101 **only** cluster)



Mid-level APs

AP1201 – built-in antenna

This access point supports the latest Wi-Fi standard, 802.11ac Wave 2 and dual radios (2.4GHz and 5GHz).

- High-speed Wi-Fi with up to 1.2 Gb/s throughput
- Supports medical standards EN 60601-1-1 and -2
- Built-in Bluetooth low energy (BLE) beacon/receiver radio makes location services possible (Zigbee capable)
- DPI built-in
- Scale up to 64 APs in a cluster



AP1201H – built-in antenna

This access point supports the latest Wi-Fi standard, 802.11ac Wave 2 and dual radios

- High-speed Wi-Fi with up to 1.2 Gb/s throughput
- Designed for special use cases where in room Wi-Fi/ telephony (IP or RJ-45 passthrough) integration are required
- BLE enabled via USB port
- Scale up to 64 APs in a cluster



AP1221 – built-in antenna

AP1222 – external antenna connectors

These access points support the latest Wi-Fi standard, 802.11ac Wave 2.

- High-speed Wi-Fi with up to 2.2+ Gb/s throughput
- Better user experience through a higher density of devices with no performance drop
- Optional Bluetooth low energy beacon radio makes location services possible
- Scale up to **64 APs** in a cluster



High-end APs

AP1231 – built-in antenna

AP1232 – external antenna connectors

These access points have a rapid 4.2+ Gb/s throughput.

- Best radio coverage high-speed Wi-Fi is simple to deploy and scale
- Supports a higher density of devices with no drop-off in performance for a better user experience
- Easy monitoring of locations and tracking of people and medical assets using embedded Bluetooth low energy beacon radio
- Scale up to **64 APs** in a cluster



Outdoor AP

AP1251 – built-in antenna

Designed to work well in any weather conditions.

- Reliable Wi-Fi performance supporting 802.11ac Wave 2 with a data rate of 1.2 Gb/s
- Fast, dual-radio operation with best-in-class RF management
- Flexible deployment with two gigabit link ports, one for the network and one for a device, such as a surveillance camera
- IP67 standard for harsh outdoor environments
- Scale up to **64 APs** in a cluster



| Access point management



Standalone deployment for smaller premises: Wi-Fi Express

This lets you manage any of the OmniAccess Stellar WLAN access points direct from your web browser. Access points are automatically added and it's simple to set up who can have wireless access – when, where and for how long – through a management portal. Supports up to 64 Stellar access points (32 access points if it's an AP1101-only cluster).

Enterprise deployment for larger premises: Wi-Fi Enterprise

This lets you manage any of the OmniAccess Stellar WLAN access points from OmniVista 2500 on-premise network management system (NMS) or OmniVista Cirrus cloud NMS. Access points are automatically added and it's simple to set up who can have wireless access – when, where and for how long. Currently supports up to 4000 Stellar access points with plans to increase this limit in the near future.

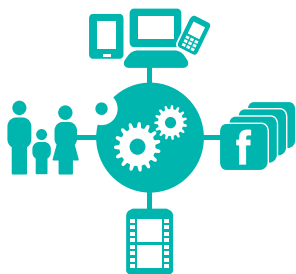


Managed deployment: OmniVista 2500 and OmniVista Cirrus

Save time and money and provide a seamless user experience with unified management of both your LAN and WLAN, through a single dashboard:

- **Secure mobility** – with best quality of service across the whole organization
- **Smart analytics on network activity** – so you can maximize available bandwidth limiting some applications, such as essential services' traffic and prioritizing related applications for clinicians
- **Access management for clinicians and staff** – using rule-based policies to set access criteria and automatically on-board devices
- **Quick and easy scalability** – up to 4,000 plus access points*
- On premises NMS (OV2500) or in the cloud (OV Cirrus)

* OmniVista 2500 or OmniVista Cirrus required for more than 64 APs



Distributed Intelligent Architecture

Uniquely, OmniAccess Stellar WLAN distributes intelligent control to each access point. This allows:

- **Better radio coverage** – with automatic choice of the best frequency and channel to avoid interference
- **Maximum bandwidth allocation** – so devices can support more clients
- **Superior user experience for each client device** – automatically connects devices to the highest capacity access points
- **Fastest speeds** – even for older devices through airtime fair access
- **More reliable network coverage** – through a self-healing network
- **Best quality of service** – with automated services not impacting the user experience



Secure, separate healthcare networks

ALE's single network infrastructure, wired and wireless*, with IoT containment, simplifies deployment and configuration – making it easy to create function-specific networks.

You could create a clinician **network**, exclusively for devices used by doctors and nurses, a **security network**, for security cameras, access control and intrusion detection, a **facilities network** and an **administration network**. Although they use the same network infrastructure, they are securely separated from each other.

* When used with Alcatel-Lucent LAN Solution



Tailored connections

User and device profiles enable better allocation of network resources.

- **Clinician** has guaranteed bandwidth for preferential access to digital images and other patient data
- **Visitors** can log into a guest network
- **IoT medical devices** like a wireless wristband blood pressure monitor can be securely and automatically connected to the network



Location-based services

OmniAccess Stellar Indoor Location-Based Services can provide self-guided, turn-by-turn directions in a hospital, as well as track people and medical assets using Bluetooth low energy beacons and scanners. These allow a hospital, clinic, or assisted living facility, to provide new services such as:

- **Way finding** – indoor map-based navigation within clinics, wards or offices, on-site shops or parking lots
- **Messaging to returning visitors** – such as outpatients, providing information tailored to their visit
- **Locating doctors/nurses** – by locating doctors and/or nurses when needed in case of emergency
- **Locating medical assets** - tools to quickly find medical equipment, beds and wheel chairs, etc. so medical staff don't have to

For a more detailed consultation and assessment, please contact us today and one of our healthcare specialists will be happy to advise you.

www.al-enterprise.com/contact-us

Connected Healthcare

We help you connect your patients, staff and healthcare ecosystem. Delivering technology that works, across and beyond your facilities. With global reach and local focus, we deliver specialized networking and communications for healthcare providers, to optimize the care pathway and enhance patient outcomes.



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