

FTTH Equipment Vendor Ratings: Tier 1 and Tier 3 Service Provider Perspectives

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TOP TAKEAWAYS

In June and July 2010, Infonetics Research interviewed PON and Ethernet ONT equipment decision-makers at 18 operators around the globe, representing 28% of worldwide telecom capex, regarding their perceptions of various PON and Ethernet FTTH ONT manufacturers.

- **Occam** and **Calix** are perceived as one of the top three FTTH ONT vendors by 50% and 44% of respondents, respectively.
- 82% of tier 3 respondents list **Occam** among the top three vendors; **Calix** is in the top three for 73%, and **Adtran** for 45%.

INTRODUCTION

Annual worldwide spending on FTTH optical network terminals (ONTs) across all major technologies (Ethernet FTTH, BPON, EPON, GPON, and WDM-PON) is expected to grow from \$825 million in 2009 to \$3.3 billion by 2014 as operators continue their long-term transition to FTTH and FTTB (fiber to the home and fiber to the building). FTTH won't be limited to service providers as cable operators begin early deployments of FTTH, relying primarily on EPON and 10G EPON to help smooth the transition away from HFC (hybrid fiber-coax). Additionally, municipalities are becoming more active in deploying their own FTTH networks, usually built on the principles of open access whereby the city or county owns and manages the infrastructure, but application service providers deliver Internet connectivity, voice, video, and other services.

There is an ever-expanding array of ONTs, ranging from SFP (small form-factor pluggable) transceivers to enclosed single family unit devices, all the way to devices designed to support hundreds of MTU/MDU subscribers via VDSL2, Ethernet, or HFC using MoCA (multimedia over coax). ONT manufacturers have myriad technology choices for inclusion in ONTs, and dozens of service provider customers' design requirements to consider, and they must judiciously manage their supply chains, including contract manufacturers and component suppliers.

This survey captures service providers' impressions of various FTTH ONT manufacturers. It also provides insights into the strengths and shortcomings of various ONT manufacturers' individual product offerings.

METHODOLOGY AND DEMOGRAPHICS

In June and July 2010 using online, telephone and in-person survey methods, we interviewed PON and Ethernet ONT decision-makers at 18 operators around the globe. To qualify, respondent organizations must have PON or Ethernet FTTH currently deployed for broadband access.

83% of Respondents Have Significant Purchase Influence

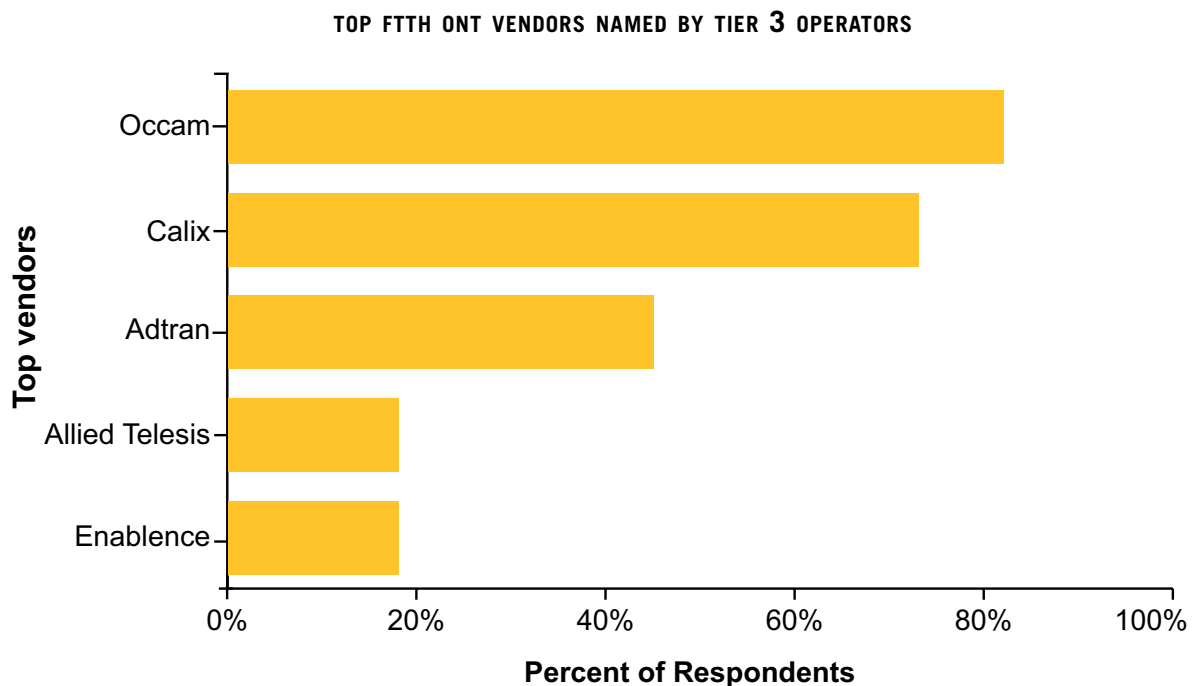
Respondents must have detailed knowledge of their companies' FTTH networks and have at least some influence in the purchase decisions for PON and/or Ethernet FTTH equipment. The vast majority of respondents (83%) are the primary decision-maker or have a lot of influence in the decision. This is a key part of the screening process; it ensures that we're talking to knowledgeable decision-makers.

TOP FTTH ONT VENDORS

In an open-ended question, we asked respondents who they consider to be the top three FTTH ONT manufacturers. The chart below shows the percentage of the 11 tier 3 service provider respondents naming each vendor.

In the full-sample responses, **Occam** and **Calix** fared the best, perceived as one of the top three FTTH ONT vendors by 50% and 44% of our respondents, respectively. Both vendors have had tremendous success selling into the North American tier 2 and tier 3 markets.

Occam has quickly made headway in supplying GPON ONTs after acquiring Terawave back in 2007 and transforming the intellectual property it acquired into a wide range of GPON ONTs. Occam has a longer history of selling Ethernet FTTH equipment, and it has a much wider customer base for those products at this time.



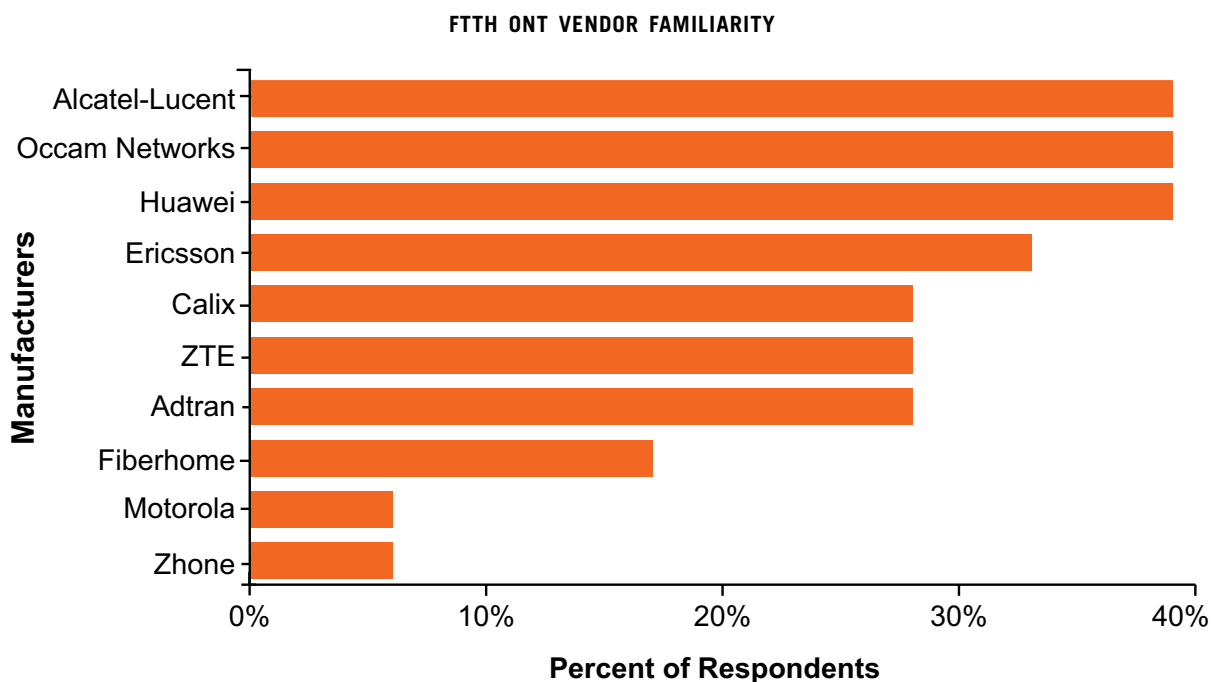
Source: Infonetics Research, *FTTH Equipment Vendor Ratings — Tier 1 and Tier 3 Perspectives: Global Service Provider Survey*, August 2010

Occam Networks and Calix lead the list of tier 3 service providers' top FTTH ONT vendors. Both have had tremendous success selling into the North American tier 2 and tier 3 markets.

FTTH ONT VENDORS MOST FAMILIAR TO SERVICE PROVIDERS

We asked all 18 service provider respondents to rate their familiarity with each of a list of vendors on a scale of 1 to 7, where 1 is *not familiar*, 4 is *somewhat familiar*, and 7 is *definitely familiar*. Vendors need service providers to be aware of their offerings in terms of infrastructure, services, partnerships, and expertise to be able to evaluate them as potential suppliers. Without some degree of familiarity, vendors don't even get invited to the table.

The most familiar ONT vendors among respondents, each with 39%, are **Alcatel-Lucent**, **Huawei**, and **Occam Networks**. ALU and Huawei have global accounts and recognition, and Occam is a market leader among tier 3 operators in the US. Following these three is **Ericsson** at 33%, then **Calix**, **ZTE**, and **Adtran**, each with 28%.



Source: Infonetics Research, *FTTH Equipment Vendor Ratings — Tier 1 and Tier 3 Perspectives: Global Service Provider Survey*, August 2010

BOTTOM LINE

The FTTH ONT vendor ratings provide a look at worldwide tier 1 and tier 3 operators' drivers in selecting ONTs. Tier 1 and tier 3 operators differ markedly in their requirements for FTTH equipment. Though they agree on certain features, capabilities, and future needs, the difference in scale between these two groups of operators leads to each focusing on a different set of priorities. This is also true of operators on a regional basis. For example, operators in some countries are allowed to provide integrated ONTs and residential gateways, and others are limited to providing ONTs, as those are defined as their demarcation points. Some operators are deploying analog TV over their FTTH networks, and others are deploying full IPTV. Additionally, many vendors have made tier 3 operators their primary market focus, while other vendors focus more on tier 1 operators.

In the case of ONTs, which are increasingly manufactured by third-party OEM/ODM manufacturers the initial design and ongoing quality control of these products is absolutely critical. Every operator has a different set of requirements, and with the planned deployment of combined ONTs and residential gateways, it will be essential to ensure that the ONT contains all the right hardware components and a hardware abstraction layer to make feature customization easier.

Vendors who can effectively balance supply chain issues with wide ranging feature requests from operators will have a leg up on the competition to secure new business and follow-on contracts.

Plenty of growth opportunities remain for ONT vendors internationally, particularly in EMEA, where FTTH deployments are still in their early stages, despite very public commitments by incumbent operators in Western Europe. Vendors focused on the North American market would be wise to expand their international presence quickly to take advantage of this next wave of spending. ■

ABOUT INFONETICS RESEARCH

Infonetics Research is an international market research and consulting firm serving the communications industry since 1990. A leader in defining and tracking emerging and established technologies in all world regions, Infonetics helps clients plan, strategize, and compete more effectively.

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