

S1 EP35 - 2023 MWC Barcelona Wrap Up

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Catch up with Peter Carson, Senior Director of Solutions Marketing and podcast host Chris Banuelos wrapping up MWC Barcelona 2023. Hear about the what's new from Marvell, the latest trends from the show floor, and the key takeaways from the show. Be sure to also check out Marvell's blogs, press releases and videos: http://bit.ly/3FDNdx Speakers Peter Carson Senior Director of Solutions Marketing

Host Christopher Banuelos Senior Manager of Global Social Media Marketing

C Christopher Banuelos 00:04

Welcome to the Marvell Essential Technology Podcast. I'm your host, Chris Banuelos. On today's episode catch up with Peter Carson, Senior Director of Solutions Marketing. Wrapping up MWC Barcelona 2023. Hear about what's new from Marvell, the latest trends from the show floor, and key takeaways from the show. Be sure to also check out Marvell's blogs, press releases and videos from MWC Barcelona 2023 by clicking the link in the description of this episode. To stay up to date on future episodes, please be sure to subscribe to the Marvell Essential Technology Podcast. Hey, Peter, it's great to have you back on the podcast. I'm really looking forward to our discussion today. Got a lot to talk about. First thought we could start off with what were some of your general impressions from mobile world Barcelona 2023?

Peter Carson 01:01

Hey, Chris, thanks. Great to be back in the hot seat here with you. Yeah, after four years away from the show, it's great to be back in the jam packed halls of the FIRA with about 88,000 attendees strong 18 hour days long taxi queues and all. I should point out that these long days are usually capped off with dinner meetings at wonderful Tapas restaurants in Barcelona. I guess that's what keeps you going for the whole four to five day MWC marathon. But putting aside all the work that goes into the glitzy demos and driving new content, the news cycle and all that this year was really all about being back in person and the hundreds of face to face interactions we had with booth visitors and in scheduled customer partner and operator meetings.

C Christopher Banuelos 01:44

I'm very curious to know and I'm sure some of our listeners are as well. What's new from Marvell?

Peter Carson 01:49

Well at our booth, we showcased Marvel's 5G infrastructure silicon portfolio, which spans from the edge of the network to the core. And today MWC was actually Marvel's broadest exhibition of 5g solutions spanning processor optical switch and our security business units. This included our recently announced Octeon 10 Fusion processor families, the industry's first 5nm baseband platform, as well as other OCTEON 10 products they're used for accelerating L2 L3 processing and critical core network functions like the new 5G user plain gold, otherwise known as ups. On the transport side we showcase optical DSPS and the Prestera switch solution which is optimized for fronthaul mid Hall and backhaul and and we had a new demo of our new Liquid Security 2 (LS2) adapter, which is also built on Marvell Technology as trusted by the world's largest hyperscale clouds. And we demonstrated five key use cases for 5G security from literally at the edge IoT devices in terms of e sim and sim security all the way to the 5G core network. So with the virtualization of 5G networks, cloud optimized hardware security modules are really becoming mission critical for a wide range of applications.

Christopher Banuelos 03:06

And what about for Marvell partners? What's new?

P Peter Carson 03:10

Well, partner activities at MWC really a highlight for us at the show partner products that we displayed in our booth wind up garnering more visitor engagement than anything else we exhibited. Two examples are Nokia's cloud RAN server and Accelerator card, the ladder powered by the jointly designed reef shark chip based on a customized version of our Octeon fusion processor. And we also had a joint reference design that we did with Analog Devices, which featured a massive MIMO radio unit powered by the new Marvell OCTEON 10 Fusion processor. And that really highlighted best in class energy for very advanced, massive MIMO radios that support up to 32 or more transmit and receive antennas. And we also had about 10 customers and partners exhibiting RAN products and designs based on our Octeon fusion baseband processor throughout the show floor. I was told they were actually more than 10 but I personally counted Nokia, Samsung two at Dell, Vodafone, Arm, Wind River, VMware Arraycom and of course ADI also had a mirror image of what we display, but they had a live demo along with it as well. And I would like to also point out that these partner displays included not just the radio unit, but the lien share of them were distributed units and actually included both traditional and cloud native type systems. Another area that we got a lot of attention on was open fronthaul products that are powered by our pristera Switch silicon which were showcased in four different customer partner booths around MWC in addition to showing off some of that at our booth as well, but open RAN is actually helping to diversify fronthaul vendors with new interoperable high performance sellside gateways from the likes of Pegatron and other vendors. And our fronthaul switching products covered not only the mainstream, but emerging 5G industrial IoT applications as well. These were all on display as well at this year's MWC.

C Christopher Banuelos 05:11

Peter, this question isn't exactly technical, but what was hot from the show floor?

P Peter Carson 05:17

Well, this may sound like a fairly biased view as a key partner. But we weren't the only one with this view is cited by many influencers and analysts as one of the highlights of the show but Nokia's rebrand, you know, was was literally an instantaneous transformation overnight. I say overnight, I mean Sunday, the eve of the show, to a much more modern and colorful image representing the you know, the company's core values that really distinguish them among infrastructure vendors and really make us proud to be one of their key partners. And if Nokia's rebrand itself didn't steal the show that the next morning they, they announced their any RAN ecosystem, which included the top three hyperscale cloud providers and the top three data center server vendors, and that really put them over the top and actually helped plan Pekka Lundmark, their CEO at the top of GSMA's list of the show's biggest influencers, which is an amazing feat considering all the other industry luminaries that were there like Martin Cooper, who wound up number two on the list. He's the father of the cell phone celebrating the upcoming 50th anniversary of the industry's first call, which is kind of the industry's big bang moment. And so why do I call this out? It really is because you know cloud service providers presence this year at the show was felt much more than any previous year, and Nokia's any RAN ecosystem, which Marvell

is part of really highlights two of Nokia's real unique leadership points in his commitment to drive the best in class ran solutions for all architectures not just cloud RAN, not just traditional RAN but also the recognition of the value that their strategic partners bring to the table, especially from the cloud ecosystem. And this is not just for Nokia, but also for Marvell, we did a lot of integration work with the top cloud software management companies like Wind River, Red Hat and VMware and featured a lot of this at show as well. And you know, these these latter points are really particularly important in the presence of marketing disruptions that are happening right now in 5G Cloud convergence.

Christopher Banuelos 07:26

Peter, can we talk, just for a quick second about key industry takeaways? What was marvellous perspective?

P Peter Carson 07:32

Well, since our focus as a company is data infrastructure, I'll take it from that angle. Cloud RAN clearly, you know, captured a lot of attention. And this is really an industry catchword for combination of technical concepts that include open ran and virt ualized RAN or vRAN. But in the context of cloud RAN, we saw a bit of a paradox. While cloud RAN hype was alive and well behind the scenes, we're seeing more and more carriers. Having done trials sitting on the side recognizing and discussing kind of the mountain of things that need to happen before you can actually scale these kinds of systems. And a very strong and growing recognition that general purpose processors, which really the predecessors, for the early systems really don't quite cut it in terms of delivering the kind of performance that carriers expect today, which is equivalent to the established leading edge networks of the world in 5G. And so this give an added momentum to a new crop of open standards based vRAN accelerator cards, led by our customers using OCTEON 10 Fusion, including Nokia, Samsung, Dell, Fujitsu and others. That MWC our customers showed up in full force, they're shining a spotlight on really what made this industry so successful in first place, driving best in class connectivity experience that we all take for granted, regardless of what G are we're on, or what the underlying architecture is. And how they're doing that is by using the same baseband silicon in there open vRAN solutions that are already deployed at scale in the most advanced 5G networks around the world. And that is driven by OCTEON fusion technology. And this is really starting to resonate with carriers.

C Christopher Banuelos 09:19

And what were some of the other key takeaways?

Peter Carson 09:21

Well, one of the things we saw across the board was sustainability has become more than just a buzzword. Energy efficiency is now on the front line in the competitive battle for ran leadership. And that's wholly consistent with recent GSMA research that cited energy efficiency is the number one consideration in carrier 5G network transformation. Nowhere is this really more evident than in the RAN, which constitutes based on the same research 73% of an operator's energy footprint. And most of this is in the very edge of the network. In the radio. We're increasing massive MIMO complexity is really driving demands on processor, complexity and power consumption. And so we produced a video that showed the practical downstream energy savings benefits for our customers with our optimized silicon and advanced power management techniques and process node leadership. And partners like ADI, which had the live demo of our joint massive MIMO radio unit reference design, had hands on displays to show how the 40% power reduction enables not only lower total cost of ownership and energy efficiency, but also leads to much smaller lower cost units that can be mounted virtually anywhere. And that's a critical consideration in the expansion of 5G coverage. Quantum computing was another interesting topic that grabbed a lot of attention from passers by at our booth primarily because the words quantum computing happened to be used in one of our security demos in one of the slides. And I drew a lot of people in the booth, wondering what we're doing in that area. So it seemed to be top of mind for a lot of visitors. The context in our case was really the importance of rethinking network security and 5G in a post quantum computing world where the most sophisticated encryption algorithms can be broken with the world's most

powerful computers that exist today. And this comes in what is already a heightened mobile security risk environment, and literally from the edge to the core. And so the crypto agility and performance of our Liquid security 2 hardware security modules, really enables a firmware update to support post quantum crypto algorithms when they become standardized. And that will be happening over the next year or two. And you know, this was only one of five security use cases that we highlighted for HSMs in the 5G world, but the probably more important for the longer term future.



Christopher Banuelos 11:51

Peter, really appreciate our conversation today. One of the thanks for being on this episode, and we'll catch you next time.

P Peter Carson 11:57

Thank you, Chris. Look forward to the next one.



C Christopher Banuelos 12:00

Thank you for listening to the Marvell Essential Technology Podcast. As always, please feel free to visit our website to learn more, and we'll see you on the next episode.



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