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Nov-Dec 2018

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- Huawei Unveils Industry's Highest-Performance ARM-based CPU for Hi-end Servers
- Huawei captured 28% share of the telecom equipment market, Dell'Oro Group

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Daniel Dierickx CEO & co-Founder at e2mos Acting Chief Editor



Over 3 decades Chips & Embedded Systems Global Market Expertise

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## Security A Critical Success Factor for 5G



## **5G Americas Report Details the Innovative Evolution** of Security in **5G**

BELLEVUE, Wash. – October 31, 2018 – 5G is not just about faster, bigger or better. It's about enabling a diverse new set of services and use cases affecting nearly every aspect of our lives. But to live up to their potential, those 5G-enabled applications must be delivered securely. 5G Americas, the industry trade association and voice of 5G and LTE for the Americas, today announced the publication of <u>The Evolution of Security in 5G</u> which details a 5G world that is defined by the core tenets of network security architecture – an evolution of best common practices for people, processes and tools.

5G will enable Massive Internet of Things (MIoT) applications such as the traffic sensors and vehicle-to-infrastructure (V2I) services that are the foundation for smart cities. It's critical that hackers can't access that data, hijack IoT devices or disrupt the services with Distributed Denial of Service (DDoS) attacks. Fortunately, security has been a top architectural priority for global standards organization 3GPP and is very strong with LTE which is the foundation for 5G.

Chris Pearson, President, 5G Americas, said, "The mobile wireless industry has long focused on security which has been a strong differentiator against many other wireless technologies where network architectures have been more vulnerable for corruption. Mobile's use of licensed spectrum offers a commanding layer of protection against eavesdropping on data, voice and video traffic. With the current focus on 5G, the mobile industry takes security measures to a higher level with a wide variety of new, advanced safeguards."

The report describes 5G safeguards in depth, as well as the vulnerabilities and attack vectors that they're designed to mitigate. It also explores how 5G differs from 4G and 3G in terms of radio and core network architectures, and how those differences affect the security mechanisms available to mobile operators, their business partners and their customers. For example, 5G is the first mobile architecture designed to support multiple, specific use cases, each with their own unique cybersecurity requirements. In the enterprise IT world, network segmentation is a common, proven way to mitigate security risks. 5G introduces the concept of network slicing, which provides mobile operators with segmentation capabilities that weren't possible with previous generations.

Key functions and frameworks specific to previous generations (3G, 4G) will continue to work within the overall 5G umbrella. 5G allows for a proliferation of access technologies of all types with data speeds from Gbps to Kbps, licensed and unlicensed, that are based on wide swaths of spectrum bands and include technologies specified by standards bodies other than 3GPP.

<u>The Evolution of Security in 5G</u> report delves into details encompassing security topics such as cybersecurity considerations and responses, 5G use cases, security functions for 5G-DDoS, various types of threats that are imperative to combat in the connected world of 5G, mitigated controls for 5G networks, and IoT threat mitigation and detection.

"In addition to new opportunities and capabilities, 5G creates new cybersecurity considerations and attack vectors through its use of the cloud and edge computing, and convergence of mobile and traditional IT networks," remarked Mike Geller, Principal Systems Engineer, Cisco and co-leader of the report. "5G security is manageable by applying techniques such as automation, orchestration, distributed network build, policy, analytics and much more. Security is, and always has been, critical to the mobile networks we build and operate and will remain so into the future."

<u>The Evolution of Security in 5G</u> was written by members of 5G Americas and is available for free download on the 5G Americas website. Sankar Ray from AT&T and Mike Geller from Cisco led the white paper working group with support from 5G Americas' Board of Governors who participated in the development of this white paper.

### About 5G Americas: The Voice of 5G and LTE for the Americas

5G Americas is an industry trade organization composed of leading telecommunications service providers and manufacturers. The organization's mission is to advocate for and foster the advancement and full capabilities of LTE wireless technologies and their evolution to 5G, throughout the ecosystem's networks, services, applications and wirelessly connected devices in the Americas. 5G Americas is invested in developing a connected wireless community while leading 5G development for all the Americas. 5G Americas is headquartered in Bellevue, Washington. More information is available at <a href="https://www.5gamericas.org">www.5gamericas.org</a> or Twitter @5GAmericas.

5G Americas' Board of Governors members include: AT&T, Cable & Wireless, Cisco, CommScope, Ericsson, Intel, Kathrein, Mavenir, Nokia, Qualcomm Incorporated, Samsung, Shaw Communications Inc., Sprint, T-Mobile US, Inc., Telefónica and WOM.

## A Smart and Efficient SD-WAN Solution

Powered by ADLINK CSA-7400 Carrier-Grade Network Appliance



## ADLINK's CSA-7400 Carrier-Grade Network Appliance Helps AppEx Networks Build Next-Generation Cloud Based SD-WAN Solutions



Designed to deliver high performance, high density and high scalability, ADLINK's CSA-7400 carrier-grade platform lets customers build solutions meeting the demands of high-end application scenarios such as core networks for operations, cloud computing, large enterprises, and data centers.

#### San Jose | 13-Nov-2018

ADLINK Technology, Inc., a global provider of advanced Edge Computing products, announces availability of a nextgeneration cloud based Software-Defined Wide Area Network (SD-WAN) solution based on ADLINK's high performance CSA-7400 platform. Developed by AppEx Networks, a leading provider of SD-WAN solutions and services with its global headquarters in Beijing and R&D centers in Silicon Valley, CloudWAN is a cloud based SD-WAN solution that provides users worldwide with highly effective and reliable network and transmission optimization services. An application story jointly published by ADLINK and AppEx is <u>now available</u> to provide additional details on the solution.

Bringing the advantages of improved connectivity, reliability, flexibility and rapid delivery, SD-WAN is emerging as an alternative to traditional enterprise WAN that provides an enhanced service based on the application of SDN technology in WAN scenarios. Such services are used for connecting corporate networks, data centers, Internet applications and cloud services over a wide geographic region.

Against a backdrop of cloud computing, mobile applications and enterprise globalization, an increasing number of real-time applications (distributed collaboration, teleconferencing, remote desktops, payment systems, telemedicine) must now communicate between multiple nodes. Any problems such as disconnections and slow browsing will amplify user dissatisfaction and lead to lost transactions. SD-WAN not only solves the problems of network instability and the high cost of dedicated links, but can also satisfies the real-time performance requirements of these applications. By integrating the functionality of routers, firewalls, deep packet inspection (DPI) and WAN acceleration, SD-WAN allows businesses to manage and monitor applications in a more efficient meaningful manner than with traditional enterprise WANs.

"AppEx CloudWAN is a next-generation enterprise network service platform based on SDN and WAN optimization technology. It provides users with optimization services for enterprise group networks, cloud connections and SaaS access. More than 300 points-of-presence (POP) nodes have now been deployed globally. Smart dispatching of network-wide resources through the central controller provides business with a high-speed network that spans the globe," said Mr. Young-Tung Wang, CEO of AppEx. "Media optimization gateway equipment based on ADLINK's CSA-7400 hardware is one of the core components of the CloudWAN service platform. It significantly improves the transmission efficiency and stability of users' video conferencing traffic. The service is particularly popular among customers because it ensures smooth video conferencing. The CSA-7400 platform is reliable, modular and supports hot-swapping so it greatly reduces our operation & maintenance workload. It has also won us the trust of our customers."

By leveraging more than 20 years of expertise in developing highly reliable and available embedded computing systems, ADLINK is a premier supplier of COTS/ODM solutions to worldwide tier-one TEMs and network solution integrators. ADLINK offers design services in every major geographic region, benefiting customers with increased responsiveness, short delivery lead-time and ease of doing business. In addition, ADLINK ensures best practices in product obsolescence and lifecycle management by leveraging its long-standing strategic partnerships with major processor and software vendors.

"ADLINK CSA-7400 is a carrier grade COTS network appliance built on the Open Compute Carrier-grade Edge Reference Architecture (OCCERA) by ADLINK, integrating network interfaces, switches, and overall computing capacity. Featuring open hardware architecture, high throughput capacity and I/O density, parallel computing and computing density, and support for standardized API management, the CSA-7400 platform meets all of AppEX's stringent system requirements for high performance, high availability and high reliability," said Julian Ye, ADLINK director for networking and communications."The CSA-7400's flexibility, configurability and scalability enables crossbusiness product deployment and easy integration to other high-end network applications, such as next-generation firewalls, telecommunications, and multi-access edge computing. In addition to hardware features, the API library provided by ADLINK allows network solution providers to focus on their core competence, enhance business migration, increase product efficiency, and shorten product launch and delivery cycles."



concerns for video developers

## **BITMOVIN - 2018 Video Developer Report**

456 developers worldwide shared insights on video technologies they routinely use, changes they anticipate in the next 12 months, and the biggest challenges they face in video streaming.

The 2018 survey reveals that latency and device reach top the list of technology concerns, reported by 55 percent and 50 percent of respondents, respectively.

AV1 has gained significant momentum, with nearly a third of respondents planning on using the codec in the next year, up from 14 percent in 2017.

Apple narrowly leads in multi-device distribution, with 62 percent of respondents developing for iOS vs 60 percent for Android.

## To compare these and other figures, <u>download</u> the full report.



## **DCIM for Dummies** The most powerful tool for every data center professional

Once your data center reaches a certain size, it is nearly impossible to accurately manage your data center infrastructure manually.

Spreadsheets and Visio diagrams can't cut it when it comes to tracking assets, power, space, cooling and network capacity.

Leading data center professionals turn to software solutions referred to as **Data Center Infrastructure Management** (DCIM) to take control of their data center operations.

So, what exactly is DCIM and what does it do?

Get this easy to read, complimentary DCIM For Dummies eBook and that covers the basics, including:

- DCIM 101
- The Key Components of DCIM
- Organizing the Data Center
- Deriving Value from DCIM
- Ten Steps to a Successful DCIM Implementation

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https://resources.nlyte.com/dcim-ebooks/dcim-for-dummies



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# radically simple video search

## axle ai, Inc., an AI-driven Video Search Company, Launches SeedInvest Funding Campaign

30-Oct-2018 | Boston-based company provides video search and management tools to broadcast, corporate, sports and education markets and is raising funds on SeedInvest to address demand from the ongoing video content explosion.

axle ai, Inc., a pioneering leader in video search and management software, today announced it is launching a funding round on SeedInvest, the leading crowdfunding platform. The site is live today at http://www.seedinvest.com/axle.ai/seed.

As a result of the passage of the JOBS (Jumpstart Our Business Startups) Act in 2012, both accredited and nonaccredited investors are able to invest in private companies. SeedInvest makes this possible in practice and axle ai is excited to welcome outside investments through the platform.

axle ai has sold its intelligent video search and management software solutions to over 500 companies worldwide, from media conglomerates such as Turner, CBS and Paramount, to multinational corporations like REI, Reebok, Coca-Cola and Price Waterhouse Coopers. The software, leveraging the latest advancements in artificial intelligence and machine learning, allows customers to tag, search, manage and collaborate with their media in ways that were previously too complex or cost-prohibitive. As video based content continues its global reach as an essential communications medium, axle ai's software solutions provides content creators with a cost-effective and easy-to-use toolset to help manage their video creation process.

"axle ai has seen strong growth since our founding due to the continuing worldwide adoption of our radically simple software solutions for searching and managing video content," said Sam Bogoch, axle ai's CEO. "We've found SeedInvest to be an ideal funding partner and are excited to welcome investors to be a part of our growing company."

## About axle ai, Inc.

axle ai is the pioneer in developing radically simple video search and management software that takes full advantage of ongoing developments in artificial intelligence and machine learning. As social media drives massive growth in video capture and postproduction, axle ai uniquely addresses a burgeoning need and has caught on rapidly among video professionals in post-production, education, broadcast, corporate, sports, house of worship, non-profit, advertising-marketing, and government organizations worldwide. At its introduction, axle software was recognized with the IBC 2012 Best of Show award and at NAB 2013 with the prestigious DV Magazine Black Diamond and Post Picks awards. axle ai is a privately held company, based in Boston; its founders have extensive industry experience in media software for creative applications. Learn more at <a href="http://www.axle.ai">http://www.axle.ai</a>.

## **About Seedinvest**

SeedInvest is a leading equity crowdfunding platform that provides individual investors with access to pre-vetted startup investment opportunities. SeedInvest has funded over 150 startups and boasts a rapidly growing network of over 200,000 investors. SeedInvest has had over 25,000 startups apply to raise capital since inception and has only accepted 1% of those companies to feature on the platform. For more information, visit <a href="http://www.seedinvest.com">http://www.seedinvest.com</a>.

## OTT Requires a Fresh Approach to Monitoring



#### Viewers expect the same level of service, no matter how they access content

Erik Otto is the CEO of Mediaproxy | Oct 30, 2018

That broadcasting has become more complex with the advent of OTT services is an understatement. Playout is no longer the final point of quality control. Going further down the content delivery chain, CDN edge points, targeted ad-insertion, multi-language support, and event-based channels require the expert scrutiny of broadcast engineers. The need to manage a more complex ecosystem with an ever-growing list of logging and compliance requirements has become a priority for content owners and regulators alike.

Yet the sheer scale of the problem defeats most customers. This is compounded by the fact that there is almost no point in trying to monitor those streams back in the facility.

It's a challenge that requires a fresh approach to monitoring.

#### OUTMODED MODEL

While traditional detection methods such as time and date searches and predefined metadata remain valid and are used widely, newer and more sophisticated software-based techniques such as digital watermarking and fingerprinting, combined with the increasing use of computer-based automation have to be considered viable alternatives.

When it comes to monitoring live channels over multiple OTT streams and ABR profiles, it is no longer practical for display panels to mirror all the possible video outlets. There is a wide choice of devices and delivery outlets that need to be supported and viewers expect the same level of service, no matter how they are accessing content. The days of tracking one channel in one format and resolution are long gone. Today, each mezzanine file could be processed into HLS, MPEG-DASH and SmoothStreaming protocols, each carrying various bitrates and resolutions. Humans will struggle to visually monitor so many different profiles simultaneously.

This is exacerbated by an outmoded model in which monitoring is done on signals leaving the central broadcast center or facility from equipment housed in local servers and storage. This remains the norm for many operations but there is an increasing shift towards off-premises, cloud-based working, with storage and data management overseen by a third-party provider.

Some are using tablets and phones in MCR, thinking they are monitoring their CDN originating streams, where they are actually so far down the chain that it's more an exercise of monitoring the in-house internet connection. Sarcasm aside, the number of hops between the origin and where they are monitoring assumes a perfect connection and no disruption anywhere in the path. This does of course not reflect the truth of the situation and one has to look at another, better, approach.



Mediaproxy's Monwall interactive multiviewer software

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## **OTT Requires a Fresh Approach to Monitoring**

#### MONITORING THE RIGHT CONTENT

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Considering the CDN provider operates at packet level only and does not alter the image payload, pictures will be the same once reaching edge locations and on to the final viewing device. Though content may be correctly streaming from the playout encoder, an edge location may experience its own issues, which could be local or originating from within the CDN. Issues such as local blackouts, bandwidth discrepancies and re-buffering may not be immediately apparent to OTT streams downstream of the CDN.

Also, what happens if national and regional feeds deviate? Or when the wrong program, or an incorrect version, is played out? What happens if the wrong graphics or tickers are mistakenly overlaid on a live broadcast? These issues are becoming increasingly critical for comparing traditional linear services with OTT representations and are very difficult to pinpoint by only looking at OTT playout.

The key is to monitor the right content in the right place at the right time.

As a new approach, a software-based solution is placed nearest to the CDN, in the cloud or data center, where ingress is free, fast and reliable and only a short hop from the origin. The software performs packet level analysis and real-time monitoring, then sends the detected events back to the MCR or the facility via a very low bandwidth path for operators to visualize the status of all streams in great detail.

It means ABR streams are monitored and logged not only from playout, but also from various edge locations. It means on-premises monitoring of outgoing playout streams is linked to cloud-based instances monitoring and analyzing CDN edge streams for unified visibility of all activity.

Engineers are provided with analysis data for all streams without having to backhaul streams from the remote sites. Operators can reconcile and compare originating transcoder outputs to CDN edge points using both traditional broadcast and data-centric panels. Customers greatly reduce bandwidth consumption and therefore costs, by not having to send payloads back to master control.

By having cloud and on-premises facilities working in tandem, the monitoring and detection of stored media assets and live broadcasts can both improve the efficiency of modern broadcast workflows and reduce operating costs. In short, this model rethinks OTT workflows, makes it more meaningful whilst enabling reliable, large scale and real-time monitoring at low cost.

Keeping up with so many OTT streams can be daunting, which is why having a unified system for monitoring compliance and identifying issues across all traditional and OTT playouts is critical. To address the complexity, Mediaproxy LogServer enables operators to log and monitor outgoing ABR streams as well as Transport Stream and OTT stream metadata including event triggers, closed captions, and audio information, all from one place.

It is the key to surviving the multiformat game of the future.

#### **About Mediaproxy**

Since 2001, hundreds of engineers around the globe rely daily on Mediaproxy's unified software solutions for 24/7 monitoring, analysis, multiviewing and capture of live video from broadcast and OTT sources. With support for the latest formats and standards including 4K, HEVC, SMPTE 2022-6, HLS, MPEG-DASH, RTMP, ATSC 3.0, and DVB-2, Mediaproxy consolidates analysis of on-air incidents, content search and ad verification via easy to use web browser and mobile interfaces. Compliant with current broadcast and IP streaming regulations, Mediaproxy supports all current industry standards for closed captioning, DVB Subtitling, SCTE-35/104 and loudness. Whether on the ground or in the cloud, complex tasks can be performed from one place.

**Mediaproxy is an affiliate of the XENON Technology Group (XTG)**, a leader in high-performance hardware platforms and customised software solutions for broadcasters and digital content creators. XENON Systems Pty Ltd -- XDT Pty Ltd



Software-based broadcast & IP

Monitoring, Analysis & Compliance

All in one place.

About mediaproxy | <u>https://www.mediaproxy.com/Contact/AboutUs</u> Integrators | <u>https://www.mediaproxy.com/Contact/Integrators</u>





## ADLINK Technology Partners with Lenovo to Extend IoT and OEM Business Reach

Partnership provides ADLINK with expanded access to IoT opportunities while providing Lenovo customers with new options for innovative edge computing solutions

09-May-2018 -- ADLINK Technology, a global leader in Edge Computing, is teaming with Lenovo to expand ADLINK's reach into the IoT marketplace while enhancing Lenovo's integrated hardware/software solution offerings. Through this new partnership, Lenovo's OEM Solutions business will expand its portfolio of products with ADLINK-provided embedded PC solutions and services.

## Introducing the Digital Transformation Kit from Lenovo OEM Solutions and ADLINK



## Open this box and unleash innovation

- Bring certainly to proposed IoT computing solutions
- Build and test IoT applications
- Develop mobile IoT applications
- Use the included project blueprints and software activation instructions
- Find it all packaged in a sleek protective case

ADLINK offers a variety of technology building blocks and market-specific IoT platforms to serve various industry use cases. Lenovo, through its OEM Solutions business, offers a full portfolio of hardware products and allows OEM customers to leverage custom solutions and worldwide services from development to deployment. By collaborating, the two companies have bundled offerings that solve critical IoT issues by utilizing the best-in-breed solutions from two industry leaders. These integrated systems will provide customers with a more seamless integration of consumer and industrial building blocks and make it easier for OEM companies to design and innovate new products.

"We are excited to partner with ADLINK and unify these two solutions that will allow customers to benefit from an easy-to-use, all-in-one hardware and software package," said Paul Burke, Director of Lenovo OEM Sales.

With the Lenovo partnership, ADLINK continues to add to its eco-system of industry leading technology partners. The companies are currently focused on the Americas and China markets, with plans to roll-out the pre-integrated hardware/software solutions in additional regions by the end of the year.

"The relationship between Lenovo and ADLINK is mutually beneficial and complements the strengths of each organization," said Elizabeth Campbell, General Manager for ADLINK, Americas. "Lenovo is well known for their reliable workstations and PCs, while ADLINK solutions add rugged performance and software-enabled features to help Lenovo extend its reach into new industries and applications."

#### **About Lenovo**

Businesses around the world trust Lenovo, a global, public company with revenues of over \$45B, for their Information Technology needs. Lenovo is among the top three manufacturers of IT products from mobile to desktop to data center and is acclaimed for innovation, quality, reliability, supply chain, and customer satisfaction. With years of experience serving OEMs, Lenovo understands what's important to you. Choose Lenovo OEM Solutions and stake your reputation on our award-winning portfolio, our global presence, and our record as an industry leader.

#### Contact ADLINK: <u>CLICK HERE</u> to access the global list of offices



## **Ofinno Technologies Receives Moxie Award for Boldness in Technology**

Ofinno Technologies announced this week that they have received a Moxie Award at the 2018 Annual Moxie Award Event in Virginia.

Herndon, VA – 08 Nov 2018 - Ofinno Technologies, a leading innovator of wireless and network technologies, announced this week that they have received a Moxie Award for Boldness in Business in the Technology category. This year's Moxie Awards were presented at a reception on October 11, 2018 at the Ritz Carlton in Tysons Corner, Virginia.

The Moxie Award program celebrates the accomplishments and achievements of growing businesses, nonprofits, and associations in the DC Metro Area community. Awards are given to recognize organizations that have demonstrated boldness and innovation as an integral part of their growth strategy.

The Moxie Awards accepts applications from DC area organizations that feel they have shown innovation and boldness in their approach to growing their business. The judging panel is comprised of some of the area's best and boldest business leaders. Judging is focused on innovation, growth, industry leadership, community service, and local achievements. Potential finalists must meet with members of the finalist committee for an in-person interview.



More than 400 companies applied for the prestigious Moxie Award. Fifteen DC area companies were honored at this year's Annual Moxie Awards for their innovation and boldness in the workplace. Ofinno was the 2018 winner for Boldness in Technology.

"We are honored to be acknowledged by the Moxie Awards for our boldness and innovation in technology," said Esmael Dinan, Founder and CEO of Ofinno Technologies. "We feel this award highlights our commitment to innovation and growth."

Ofinno Technologies is no stranger to awards. The company received a 2018 CEO Report Corporate Culture Award earlier this year. The Corporate Culture Award is given to organizations that foster a creative and collaborative workplace culture to enhance performance and sustain a competitive edge.

## **About Ofinno Technologies**

Ofinno Technologies develops wireless technologies to address a number of technological issues faced in modern life today. Ofinno's innovators are responsible for the creation of several new technologies designed to make carriers more successful and end users more satisfied with their devices.

The company's research focuses on fundamental issues such as the improvement and advancement of LTE- Advanced, 5G New Radio, 5G Core Networks, Heterogeneous Network Architecture, Inter-Band Carrier Aggregation, and Beam Forming Technologies. Ofinno's technologies have an impressive 67% utilization rate.

For more information about Ofinno Technologies, please visit the company's website at: <u>https://ofinno.com</u>

## **Broadcom Extends Server Storage in Collaboration with Hewlett Packard Enterprise (HPE)**

#### Broadcom showcased SFF-TA-1001 (U.3) ecosystem demo with Toshiba Memory America at <u>HPE Discover</u>; Broadcom 24-port RAID controller now featured on the HPE ProLiant Gen10 server family

HPE Discover -- Broadcom Inc. (NASDAQ:AVGO) is extending its collaboration with Hewlett Packard Enterprise (HPE) in server storage offerings.Broadcomis highlighting the benefits of the SFF-TA-1001 specification commonly known as the U.3 reference platform with a U.3 universal drive cage demonstration featuring Toshiba U.3-enabled NVMe<sup>™</sup>, SAS, and SATA drives. This development further expands Broadcom's collaboration with HPE, which now includes the addition of a Broadcom 24-port RAID controller to the HPE ProLiant Gen10 server family.

"Broadcom is growing its investment in HPE server storage solutions, which continues to drive our mission to enable the storage ecosystem with flexibility, performance and simplification," said Jas Tremblay, vice president and general manager, Data Center Solutions Group, Broadcom. "The addition of our high-port RAID controller to the HPE ProLiant family further extends the footprint of Broadcom Data Center server storage products offered to HPE customers, continuing our heritage of delivering robust data protection and application uptime to the market."

"Standardizing how IT infrastructure is managed is at the core of HPE's commitment to simplify hybrid IT for our customers," said Tom Lattin, vice president and general manager, Mass Market Platforms, Options and Software at HPE. "By collaborating with partners like Broadcom on industry standards such as U.3 Universal Drive Bay, HPE helps global businesses deploy more versatile and streamlined server infrastructure. Universal backplanes that incorporate emerging NVMe drives with SAS and SATA will give customers the flexibility to choose the most optimized drive configurations for their workloads."

U.3 allows SAS and SATA HDDs and SAS, SATA, and NVMe SSDs to operate in a single bay without the complexity of wiring for multiple protocols. More information on U.3 can be obtained from: <u>http://www.snia.org/sff/specifications</u>. The collaboration between Broadcom and HPE is enabling data center customers and drive partners like Toshiba with the right mix of product, technical expertise, and support.

"The development of the U.3 standard was critical for the advancement of flexible, lower-cost storage systems that utilize a mix of SAS, SATA and NVMe devices," said Steve Fingerhut, Senior Vice President, General Manager, SSD and Cloud Software Business Units at Toshiba Memory America, Inc. "We are pleased to enable the collaborative demonstration at HPE Discover with a range of our U.3-enabled SSDs. This is an excellent forum to showcase the benefits of Toshiba technology to system OEM and data center customers, which include lowering costs and simplifying complexity."

In addition to now providing customers with more flexibility, simplification, and choices, Broadcom and HPE have joined forces to build a better solution to scale on demand with the addition of the Broadcom 24-port RAID controller to HPE ProLiant Gen10 servers. The HPE Smart Array P824i-p MR SAS controller delivers highly flexible, expander-less storage solutions ideal for servers with a high drive count such as the HPE ProLiant DL380 Gen10.

Learn more about this collaboration at the HPE Discover session, "U.3 Universal Drive Bays for NVMe/SAS/SATA Drives" (ID 5217). In addition, visit the HPE and Toshiba booths to learn more about how Broadcom, HPE, and Toshiba Memory America are now delivering the storage and server ecosystem with the U.3 reference platform.

Broadcom Inc. is the trusted market leader in connectivity and continues to invest and innovate in the industry's broadest product portfolio. These include PCIe® & NVMe switches, NVMe/SAS/SATA controllers featuring Tri-Mode technology, and SAS/SATA expanders, HBAs, RAID adapters, Fibre Channel silicon, software and adapters, HDD/SSD SoCs, and HDD preamps. With a 25-year history delivering high quality silicon, advanced firmware, innovative board design, and extensive HDD/SSD validation processes, Broadcom is the leading supplier of choice for server and external storage OEMs, system builders, and hyperscale customers.

#### **About Broadcom**

Broadcom Inc. (NASDAQ:AVGO) is a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions. Broadcom Inc.'s extensive product portfolio serves four primary end markets: wired infrastructure, wireless communications, enterprise storage and industrial & other. Applications for our products in these end markets include: data center networking, home connectivity, set-top box, broadband access, telecommunications equipment, smartphones and base stations, data center servers and storage, factory automation, power generation and alternative energy systems, and electronic displays. For more information, go to <u>www.broadcom.com</u>.

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## **Ribbon Communications**

20 years Milestones in review



## Sonus and GENBAND Merged in 2017 to form Ribbon Communications, a Global Leader in Real-time Communications and Security Solutions

Ribbon Communications is a global technology software company with more than two decades of leadership in realtime communications. Built on world-class technology and intellectual property, Ribbon delivers secure, engaging realtime communications for today's world. The company transforms fixed, mobile, cable/Multiple System Operator (MSO) and enterprise communications networks from legacy environments to next generation core, cloud and edge architectures, enabling highly productive communications for businesses and consumers.

With locations in more than 25 countries and on six continents, Ribbon's innovative, market-leading portfolio empowers service providers and enterprises with carrier-grade real-time communications solutions, along with a new level of security that runs in their network infrastructure, data centers and private cloud, or in the public cloud.

## **Products & Markets**

Ribbon helps the world's leading communications service providers and enterprises embrace the next generation of communications technologies including , cloud-based communications ("Cloud"), Internet Protocol ("IP"), Session Initiation Protocol ("SIP"), Voice over LTE Long Term Evolution ("VoLTE"), Voice over Internet Protocol ("VoIP"), Unified Communications ("UC"), Web-based Real Time Communications ("WebRTC"), Edge Computing, Software-Defined WAN ("SD-WAN"), Analytics, Communications Platform as a Service ("CPaaS"), Applications Programming Interfaces ("APIs") and Embedded Communications. With more than a thousand customers around the globe and 20 years of experience transforming and securing networks, Ribbon enables service providers and enterprises to transform their communications networks, quickly deploy new communications services, and capture and retain customers and generate significant related return on investment.

MORE: <u>https://ribboncommunications.com/</u>

## **Major Milestones**

- 2018 Ribbon Acquires **Edgewater Networks**
- 2017 **Sonus** and **GENBAND** Merge to form **Ribbon Communications**, a Global Leader in Real-time Communications and Security Solutions
- 2016 Sonus Acquires **Taqua**
- 2016 GENBAND Application Server Receives Department of Defense JITC Certification
- 2016 Kandy Introduces Kandy Wrappers
- 2015 GENBAND listed as CNBC Disruptor50 (based on Kandy)
- 2015 Sonus Completely Virtualizes Product Portfolio
- 2014 GENBAND Launches Kandy Platform-as-a-Service
- 2014 Sonus Acquires Performance Technologies (moves into diameter market)
- 2013 GENBAND Acquires fring (OTT)
- 2013 Sonus Launches SBC SWe; Named a Leader in Gartner's "Magic Quadrant for SBCs" for 2nd Consecutive Year
- 2012 GENBAND Ranked No.1 on The Wall Street Journal List of Top 50 Venture Backed Companies
- 2012 GENBAND Acquires Aztek Networks (IP Switching)
- 2012 Sonus Acquires Network Equipment Technologies
- 2011 Infonetics Report: Sonus the Fastest Growing SBC Solution on the Market
- 2011 GENBAND Acquires Cedar Point Communications (IP Switching for Cable Market)
- 2010 GENBAND Named #1 Supplier in the Global Service Provider VoIP Market (Softswitches, Media Gateways,
- Session Border Controllers, Media Servers and Applications)
- 2010 GENBAND Acquires Nortel Carrier Voice and Applications Solutions
- 2009 GENBAND Acquires Nokia Siemens Networks Product Units (Trunking Media Gateways)
- 2008 GENBAND Acquires NextPoint Networks (SBC/Security)
- 2007 GENBAND Acquires **TEKELEC Switching Solutions Group** (IP Switching)
- 2007 Sonus Surpasses One Trillion VoIP Minutes; Named "Outstanding Vendor" by AT&T
- 2006 Sonus Announces First Session Border Controller, SBC 9000; Named a Leader in **Gartner**'s "Magic Quadrant for Softswitch Architecture"
- 2006 General Bandwidth becomes GENBAND
- 2006 GENBAND Acquires Siemens DCO Business (IP Switching)
- 2004 Sonus Surpasses 500 billion VoIP minutes
- 1999 General Bandwidth founded
- 1998 Sonus Unveils World's First Carrier-Class IP Telephony Switch, GSX 9000
- 1997 Sonus Networks founded

**Note about ATCA (Advanced Telecom Computing Architecture):** nearly all companies listed above are users of ATCA and/or MicroTCA

(e.g; http://www.atcaworld.com/ATCA%20IMAGES/ATCA%20PDF/AW\_2015-Nr502\_Book\_wL.pdf, see page 4)

## Gartner's Magic Quadrant for WAN Edge Infrastructure

Published 18 October 2018 - ID G00351467 - 61 min read

By Analysts Joe Skorupa, Andrew Lerner, Christian Canales, Mike Toussaint

#### **Explore the Interactive Version**

WAN edge infrastructure is changing rapidly as I&O leaders responsible for networking face dynamic business requirements, including new application architectures and on-premises and cloud-based deployment models. I&O leaders can use this research to identify vendors that best fit their requirements.



## **Strategic Planning Assumption**

By year-end 2023, more than 90% of WAN edge infrastructure refresh initiatives will be based on virtualized customer premises equipment (vCPE) platforms or software-defined WAN (SD-WAN) software/appliances versus traditional routers (up from less than 40% today).

## Get the Full Report 30+ Pages

## CommScope to Acquire ARRIS: Approximately \$7.4 Billion Transaction Accelerates CommScope Vision to Shape Communications Networks of the Future

November 8, 2018 HICKORY, NC, and SUWANEE, GA

Source: CommScope <a href="https://www.commscope.com/NewsCenter/PressReleases/CommScope-to-Acquire-ARRIS/">https://www.commscope.com/NewsCenter/PressReleases/CommScope-to-Acquire-ARRIS/</a>

## *Transaction More Than Doubles Expected Product Addressable Market to Greater Than \$60 Billion*

## *Expected to Generate Approximately \$1 Billion in Cash Flow from Operations1 and Be More Than 30 Percent Accretive to Adjusted EPS in First Full Year after Closing*

## Expect More than \$150 Million in Annual Cost Synergies Within Three Years

## The Carlyle Group Reestablishes Ownership Position in CommScope with \$1 Billion Minority Investment

CommScope (NASDAQ: COMM), a global leader in infrastructure solutions for communications networks, has agreed to acquire ARRIS International plc (NASDAQ: ARRS), a global leader in entertainment and communications solutions, in an all-cash transaction for \$31.75 per share, or a total purchase price of approximately \$7.4 billion, including the repayment of debt.

In addition, The Carlyle Group, a global alternative asset manager, has reestablished an ownership position in CommScope through a \$1 billion minority equity investment as part of CommScope's financing of the transaction.

The combination of CommScope and ARRIS, on a pro forma basis, would create a company with approximately \$11.3 billion in revenue and adjusted EBITDA (earnings before interest, taxes, depreciation and amortization) of approximately \$1.8 billion, based on results for the two companies for the 12 months ended September 30, 2018.

The combined company is expected to drive profitable growth in new markets, shape the future of wired and wireless communications, and position the new company to benefit from key industry trends, including network convergence, fiber and mobility everywhere, 5G, Internet of Things and rapidly changing network and technology architectures.

ARRIS, an innovator in broadband, video and wireless technology, combines hardware, software and services to enable advanced video experiences and constant connectivity across a variety of environments – for service providers, commercial verticals, small enterprises and the people they serve. ARRIS has strong leadership positions in the three segments in which it operates:

Customer Premises Equipment (CPE), featuring access devices such as broadband modems, gateways and routers and video set-tops and gateways;

Network & Cloud (N&C), combining broadband and video infrastructure with cloud-based software solutions; and Enterprise Networks, incorporating the recently acquired Ruckus Wireless® and ICX Switch® businesses, and focusing on wireless and wired connectivity, including Citizens Broadband Radio Service solutions.

For the 12 months ended September 30, 2018, ARRIS generated revenues of approximately \$6.7 billion, consisting of \$3.9 billion from CPE, \$2.2 billion from N&C and \$568 million from Enterprise Networks (reflecting only a partial year of Ruckus since its acquisition in December 2017).

"After a comprehensive evaluation of our business and the evolving industry we operate in, we are confident that combining with ARRIS is the best path forward for CommScope to grow and provide the greatest returns for shareholders," said Eddie Edwards, president and chief executive officer, CommScope. "CommScope and ARRIS will bring together a unique set of complementary assets and capabilities that enable end-to-end wired and wireless communications infrastructure solutions that neither company could otherwise achieve on its own. With ARRIS, we will access new and growing markets, and have greater technology, solutions and employee talent that will provide additional value and benefit to our customers and partners.

"CommScope and ARRIS share a customer-first culture that emphasizes innovation, made possible by incredibly talented and experienced teams of people. As we have with numerous transactions in the past, we expect to work together with Bruce McClelland and the ARRIS team to create a best-in-class management team and achieve a seamless integration. Together, CommScope and ARRIS will be well positioned to serve a more diverse set of customers and generate substantial value for our shareholders."

CommScope to Acquire ARRIS ... from previous page

ARRIS Chief Executive Officer Bruce McClelland said, "CommScope is an ideal partner for ARRIS. In addition to providing immediate and substantial cash value to our shareholders, we are excited for what this combination will deliver for our customers, partners and employees around the world. Today's agreement is a testament to the strength of ARRIS: our leading technology, talented employees and established competitive position. With CommScope, we expect to further advance ARRIS' strategy to drive innovation across our iconic brands and pioneer the standards and pathways for tomorrow's personalized, connected always-on consumer experience. ARRIS will become part of an even stronger, more global industry leader, and I look forward to working with the CommScope team to achieve great results for the combined company."

#### Transaction is a critical step in fueling growth, shareholder value and customer benefits:

• Positioned to Capitalize on Positive Industry Trends: The combined company will be well positioned to benefit from key industry trends by combining best-in-class capabilities in network access technology and infrastructure and creating end-to-end and comprehensive solutions. We believe trends such as network convergence, fiber and mobility everywhere, the advent of 5G and fixed wireless access, Internet of Things and rapidly changing network and technology architectures will provide compelling long-term opportunities for the combined company and its unique end-to-end communications infrastructure capabilities.

Unlocks Significant, High-Growth Segments and Increases Product Addressable Market: The company expects to more than double its total product addressable market to more than \$60 billion, with a unique set of complementary assets and capabilities that enable end-to-end communications infrastructure solutions such as:•

- Converged small cell solutions for licensed and unlicensed wireless spectrum;
- Complementary wired and wireless communications infrastructure;
- Integrated broadband access;
- Private network solutions for industrial, enterprises and public venues; and
- Comprehensive connected and smart home solutions.

Expanded Product Offerings and R&D Capabilities to Meet Diversified Customer Base: CommScope and ARRIS will share strong technical expertise with approximately 15,000 patents and approximately \$800 million in average annual research and development investments. With a stronger global footprint, the combined company is expected to serve customers across more than 150 countries.

Strong Financial Profile with Cost Savings Opportunities: For the 12 months ended September 30, 2018, on a pro forma basis, the combined company would have generated revenues of approximately \$11.3 billion with adjusted EBITDA of approximately \$1.8 billion. As a result of the combined company's increased scale, CommScope expects to achieve annual run-rate cost savings of at least \$150 million within three years post-close, with synergies of more than \$60 million expected to be realized in the first full year after closing and more than \$125 million expected to be realized after the second year post-close, driven from natural synergies primarily in direct procurement and SG&A. Significantly Accretive to CommScope's Earnings: The transaction is expected to be more than 30 percent accretive to CommScope's adjusted earnings per share by the end of the first full year after closing, excluding purchase accounting charges, transition costs and other special items.

Maintains CommScope's Strong Balance Sheet, Credit Position and Financial Flexibility: With a unique set of complementary assets and capabilities that enable end-to-end communications infrastructure solutions, the combined company is expected to generate approximately \$1 billion in cash flow from operations1 in the first full year after closing. Upon completion of the transaction, CommScope's net leverage (debt less cash) ratio based on pro forma adjusted EBITDA1 for the 12 months ended September 30, 2018 is expected to be 5.1x, including full run-rate synergies of \$150 million. Given the increased scale and cash flow generation, as well as both companies' track records of successful integration, CommScope expects to rapidly de-lever, targeting a net leverage ratio of approximately 4.0x in the second full year after closing. Long term, the company is targeting a net leverage ratio of 2.0x to 3.0x.

#### Leadership and Headquarters

Following completion of the combination, Eddie Edwards will continue in his role as president and chief executive officer of CommScope, with Bruce McClelland and other members of the ARRIS leadership team joining the combined company.

CommScope will remain headquartered in Hickory, NC, and the combined company will maintain a significant presence in Suwanee, GA. Upon completion of the transaction, CommScope will continue to be led by an experienced board of directors and management team that leverage the strengths of both companies.

### Approvals

The transaction is expected to close in the first half of 2019

## CommScope to Acquire ARRIS ... from previous page

## About CommScope

CommScope (NASDAQ: COMM) helps design, build and manage wired and wireless networks around the world. As a communications infrastructure leader, we shape the always-on networks of tomorrow. For more than 40 years, our global team of greater than 20,000 employees, innovators and technologists have empowered customers in all regions of the world to anticipate what's next and push the boundaries of what's possible. Discover more at <a href="http://www.commscope.com/">http://www.commscope.com/</a>

## About ARRIS

ARRIS International plc (NASDAQ: ARRS) is powering a smart, connected world. The company's leading hardware, software and services transform the way that people and businesses stay informed, entertained and connected. For more information, visit www.arris.com.

For the latest ARRIS news: Check out our blog: ARRIS EVERYWHERE

## A little bit of History « 4 companies together in 4 years »



#### # As of January 6, 2014, Aurora Networks, Inc. was acquired by Pace plc.

Aurora Networks, Inc. designs, develops, manufactures, and markets optical transport and access systems for broadband networks that support the convergence of video, data, and voice applications. It offers headend and hub products, including chassis and powering products, transmitters, receivers and amplifiers, digital transport, combiners and optical switches, data services equipment, element management, optical passives, and universal services multiplexers. The company also provides optical node platforms; Virtual Hub that eliminates the need to construct controlled facilities; optical passives; advanced service modules for optical nodes; utility modules for optical nodes; utility modules for PWR blazer optical nodes; and customer premises equipment devices to support RFoG and RFPON architectures. In addition, it offers digital HFC architecture solutions; segmented HFC solutions; fiber deep drives; RFoG solution that delivers the same video, data, and voice services; RFPON, a solution that operates in parallel with traditional cable TV services; PON architecture solution, which enables users to meet subscriber demand for implementing all-fiber solutions; fiber on demand solution; and cell tower backhaul, a fiber-efficient solution that enables users to deploy over existing HFC networks. It serves the broadband industry and cable operators in the United States, Canada, and internationally. The company was founded in 1999 and is headquartered in San Jose, California.

Aurora Networks provides engineering and field services to the cable communications industry, including companies such as Charter Communications, Comcast, Cox Communications, Liberty Global, Time Warner Cable, and Videotron.

2010 Rank: #2200 • 2009 Revenue: \$130 M • 3-Year Growth: 117% • Founded: 1999 • Employees: 200

AdvancedTCA substantial Design-win: Aurora Networks has designed several Video Multiplexer Systems for Cable & Fiber using ATCA boards, e2mos had several meetings wih Aurora and two complementary ATCA vendors (Cavium CPU & 40G Switch) as Business Discovery Services (Daniel Dierickx, Principal Consultant at e2mos www.e2mos.com)

#### **# ARRIS Completes Pace Acquisition**

Combined companies to transform video and broadband delivery through broadened portfolio, global footprint, and customer base

SUWANEE, Ga., Jan. 4, 2016 /PRNewswire/ -- ARRIS International plc (NASDAQ: ARRS), the new parent company of ARRIS Group, Inc., today completed its \$2.1B (£1.4B) acquisition of Pace plc – combining the two companies' strengths in entertainment and communications delivery.

The transaction combines the strengths of both companies on a global scale—broadening ARRIS's worldwide CPE leadership with a competitive stake in satellite communications; leveraging new synergies in telco TV; expanding its cloud, network, home, and services portfolio; and increasing its collaboration with the world's leading service providers. In addition to CPE, the combination further establishes ARRIS as a global leader in HFC/Optics, complementing its established CMTS leadership position.

Bob Stanzione will lead the combined organization as Chairman and CEO. Source and more: https://www.prnewswire.com/news-releases/arris-completes-pace-acquisition-300198914.html

#### # 08-Nov-2018 -- CommScope to Acquire ARRIS for \$7.4 Billion see page 14 and 15

# HYPE VS TIME



Lost Energy and Lost Time is like a bullet, it never comes back

How can we minimize it?

Please send your best suggestions to <u>mgt@e2mos.com</u>

Thank you very much Daniel Dierickx, CEO at e2mos\_

## Huawei Unveils Industry's Highest-Performance ARM-based CPU



## Bringing Global Computing Power to Next Level

Jan 07, 2019

Shenzhen, China, January 7, 2019] Today, Huawei announced the industry's highest-performance Advanced RISC Machine (ARM)-based CPU. Called Kunpeng 920, the new CPU is designed to boost the development of computing in big data, distributed storage, and ARM-native application scenarios. Huawei will join with industry players to advance the ARM industry and foster an open, collaborative, and win-win ecosystem, taking computing performance to new heights.



William Xu, Director of the Board and Chief Strategy Marketing Officer of Huawei, unveils industry's highest-performance ARM-based CPU called Kunpeng 920.

"Huawei has continuously innovated in the computing domain in order to create customer value. We believe that, with the advent of the intelligent society, the computing market will see continuous growth in the future. Currently, the diversity of applications and data is driving heterogeneous computing requirements. Huawei has long partnered with Intel to make great achievements. Together we have contributed to the development of the ICT industry. Huawei and Intel will continue our long-term strategic partnerships and continue to innovate together," said William Xu, Director of the Board and Chief Strategy Marketing Officer of Huawei.

"At the same time, the ARM industry is seeing a new development opportunity. The Kunpeng 920 CPU and TaiShan servers newly released by Huawei are primarily used in big data, distributed storage, and ARM-native applications. We will work with global partners in the spirit of openness, collaboration, and shared success to drive the development of the ARM ecosystem and expand the computing space, and embrace a diversified computing era."

### The industry's highest-performance ARM-based CPU

Kunpeng 920 is the industry's highest-performance ARM-based server CPU. Using the cutting-edge 7nm process, the CPU was independently designed by Huawei based on ARMv8 architecture license. It significantly improves processor performance by optimizing branch prediction algorithms, increasing the number of OP units, and improving the memory subsystem architecture. At typical frequency, the Kunpeng 920 CPU scores over 930 in the SPECint Benchmarks test, which is 25% higher than the industry benchmark. At the same time, power efficiency is 30% better than that offered by industry counterparts. Kunpeng 920 provides much higher computing performance for data centers while slashing power consumption.

## Huawei Unveils Industry's Highest-Performance ARM-based CPU

## ... from previous page

Kunpeng 920 integrates 64 cores at a frequency of 2.6 GHz. This chipset integrates 8-channel DDR4, and memory bandwidth exceeds incumbent offerings by 46%. System integration is also increased significantly through the two 100G RoCE ports. Kunpeng 920 supports PCIe 4.0 and CCIX interfaces, and provides 640 Gbps total bandwidth. In addition, the single-slot speed is twice that of the incumbent offering, effectively improving the performance of storage and various accelerators.

High performance	930+, 25%1 SPECint score		7		
High throughput	Memory bandwidth: <b>45% </b> Total I/O bandwidth: <b>66% </b> Network bandwidth: <b>4</b> x		7nm, 64-core		
High integration	4 chips in 1	8-channel DDR4	PCle 4.0 & CCIX	100G RoCE	
 High power efficienc	y 30%	Memory I/O 6 channels 8 Gbps → 3 channels 16 Gbps	Network 25 Gbps → 100 Gbps		

## Huawei TaiShan, ARM-based server with the industry's best performance

Huawei today also released its TaiShan series servers powered by Kunpeng 920, including three models: one with a focus on storage, another on high density, and a third focused on balancing both requirements. The TaiShan servers are built for big data, distributed storage, and ARM-native application scenarios. The ARM architecture is best suited for these scenarios with advantages in many-core and performance per watt.

TaiShan will enable computing platforms with high performance and low power consumption for enterprises. For example, in big data scenarios, the TaiShan servers are tuned for optimal many-core high concurrency and resource scheduling to deliver a 20% computing performance boost. Based on the TaiShan servers, Huawei Cloud also provides elastic cloud services, bare metal services, and cloud phone services.

### Building an open and collaborative ARM ecosystem founded on shared success

Huawei continuously promotes industry cooperation in terms of hardware, basic software, and applications. Huawei has been working with industry organizations such as Green Computing Consortium (GCC), Linaro, and Open Edge and HPC Initiative (OEHI) to build an open, collaborative industry ecosystem, alongside partners such as Hortonworks, Microsoft, Oracle, SAP, SUSE, Ubuntu, and China Standard Software.

On the hardware side, Huawei is a core member of Linaro. On the basic software side, Huawei is a Platinum member of the OpenStack Foundation and a founding member of Cloud Native Computing Foundation (CNCF). With regard to applications, Huawei has joined the GCC. GCC has released the Green Computing Consortium Server Technical Standards Report, along with other efforts to build a green open source computing community. Huawei is also a member of the OEHI.

Huawei believes that an intelligent society with all things connected, sensing, and intelligent is underway, and this trend is picking up speeds. The development and convergence of ARM-based applications on smart terminals are accelerating, along with cloud-device collaboration. In addition, new applications in cloud computing are driving data diversity. For example, big data applications, distributed storage, and some edge computing scenarios have specific energy efficiency requirements for many-core high-performance computing. In such a context, ARM systems stand out with unique advantages in performance and power consumption.

Therefore, in view of the industry trends and application requirements, a new era of diversified computing is unfolding. Multiple data types and scenarios are driving computing architecture optimization. Combining multiple computing architectures for optimal performance becomes a must.

"With Kirin 980, Huawei has taken smartphones to a new level of intelligence. With products and services (e.g., Huawei Cloud) designed based on Ascend 310, Huawei enables inclusive AI for industries," William Xu noted. "Today, with Kunpeng 920, we are entering an era of diversified computing embodied by multiple cores and heterogeneity. Huawei has invested patiently and intensively in computing innovation to continuously make breakthroughs. We will work with our customers and partners to build a fully connected, intelligent world."

## Huawei Unveils Industry's Highest-Performance ARM-based CPU

... from previous page

TaiShan New Servers Range using the highest-performance ARM-based CPU called Kunpeng 920 and equiped with up to 10,240 cores per rack from Huawei



TaiShan 2280 Balanced Server	TaiShan 5280/5290 Storage Server	TaiShan X6000 High-Density Server
For diversified workloads	10 PB per rack	10240 cores per rack
2U rack server	4U rack server	4U rack server
2-sockets	2-sockets	2-sockets
32*DDR4-2933 MHz	32*DDR4-2933 MHz	32*DDR4-2933 MHz
16*3.5" HDDs or 28*2.5" NVMe SSDs	40/72*3.5" HDDs	40/72*3.5" HDDs
CCIX, 8*PCIe 4.0	CCIX, 8*PCIe 4.0	CCIX, 8*PCIe 4.0
10GE / 25GE / 100GE	10GE / 25GE / 100GE	10GE / 25GE / 100GE

## Huawei captured 28% share of the telecom equipment market

**The Dell'Oro Group** just issued a report, noting that "Huawei captured 28% share of the telecom equipment market, increasing its market share by 4 percentage points since 2015."

As Dell'Oro Group noted, Huawei's telecom equipment revenue is now "nearly as large as Nokia and Ericsson combined." Furthermore, "Huawei's revenue share gains over the past four years have been most pronounced in the Core, Router, and Optical Transport Markets."

https://www.delloro.com/

