Technology Brief...

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Research, Analysis, Strategy, Insight

INSIDE THIS ISSUE

Samsung goes for Enterprise Smartphone Mid-market

The Smartphone market seems to be fixated on high end "halo" devices that sport a plethora of high end features, from super screens, to impressive cameras that rival stand alone SLR capabilities, and superfast processors with massive memory. But for many business users, such high end systems often costing $1000 or more can be finically unattractive, especially when deployed to mid-tier workers. Indeed, $1K phones may be OK for BYOD and execs that have the ability to specify what devices they want, but there is a large class of users for which high end phones are overkill, and offer an unattractive ROI in terms of business operations. As a result, many organizations have only deployed smartphones to select groups of employees, rather than the majority of its user base. Samsung wants to do something to change that, announcing several new Galaxy A series business-friendly devices. The new devices, part of Samsung's highest volume smartphone family sold world-wide, may be Samsung's most important enterprise announcement in some time.

"….The new Galaxy A series devices are not meant to appeal to the high end users who demand the best quality smartphones with superior features and functions... It is mid-tier enterprise-class workers that these devices will appeal to, and will expand the market for Samsung. Those companies hesitant to deploy company-wide mobile devices due to the cost and ability to achieve an ROI with $1K+ priced devices would do well to examine these new devices...."

As smartphones become standard computing equipment in most organizations, some organizations have struggled with determining if deploying devices to all users has a business value that outweighs the costs. Widespread deployments usually do not include high end devices for everyone. We can take a lesson about enterprise purchasing preferences of computing devices from the PC market. The mainstream, enterprise devices are not the $1200-$1500 high end notebooks. They're the $700-$900 workhorses specifically developed for mass enterprise adoption. That's the market the A Series will appeal to – the mainstream "do a few things well" mission-critical apps class of users. Samsung does have the X Cover Pro for really rugged needs, but that's not for everyone and the A Series provides yet another attractive option.

Some of the new A series devices won't be very appealing to business users. The A02 ($109), and the A12 ($179) are very low priced entry level devices, but only support LTE in a business marketplace where 5G is increasingly important. In order to keep the price down on these lower end models, Samsung only included a 4G modem. They also provided a mix of processors, with some devices running lower-end Qualcomm processors and some with MediaTek processors. But the A32 ($279), A42 ($399), A52 ($499) devices do support 5G, although the A42 is the only device to support mmWave – a key component of the fastest 5G networks, and at launch will be available only on the Verizon network. For enterprise deployments, we would not recommend any devices that do not support 5G.

How does Samsung go after the mid market effectively? The key here is that Samsung has provided full Knox capability in these devices (A12-A52devices). That means both enterprise class security, as well as full management capability (with Knox Suite of capabilities as well as support from nearly every EMM/UEM application provider that functions with Knox). This goes well beyond the base level Android capability that leaves much to be desired in securing enterprise mobile devices. In fact, Knox is a very attractive addition to base level Android and is a major reason why many enterprises have standardized on Samsung devices, even over available Android Enterprise capability.

Bottom Line: The new Galaxy A series devices are not meant to appeal to the high end users who demand the best quality smartphones with superior features and functions. But there are many enterprises that require an affordable "workhorse" to power their users while still demanding a secure and manageable platform. It is this mid-tier of enterprise-class workers that these devices will appeal to, and will expand the market for Samsung in many business markets. Those companies that were hesitant to deploy company-wide mobile devices due to the cost and ability to achieve an ROI with $1K+ priced devices would do well to examine these new devices that include many enhanced security and manageability features at an attractive price.

Nvidia Wants to be your Mainstream Processor Supplier

Recently Nvidia held its GTC 2021 user conference were it made a large number of announcements. The conference announcements and direction underscored the fact that Nvidia no longer wants to be seen as a niche player in select markets. It is no longer just offering GPUs and by extension early AI systems. Rather it wants to be a full service provider of computing platforms for a variety of enterprise datacenter and cloud workloads. It sees itself as being relevant to virtually every organization's computing needs.

"…Nvidia sees an opening against Intel and wants to be a full service provider for data center and cloud systems, particularly as it can leverage its GPU/DPU and AI strengths. But it won't have an easy time replacing Intel (and AMD) x86 based systems, as a huge amount of code running in enterprise data centers and in the cloud is optimized for x86 (and not ARM)… Still, there certainly are some niches where Nvidia could very well compete, and with its combined assets could prevail.…"

Some of the announcements it made included:

- An upgraded Omniverse software stack to be able to model the world in 3D, including providing a platform for the important Digital Twins paradigm
- The ability to provide an ARM based CPU coupled with their Mellanox high bandwidth networks, and high end GPU/parallel processor, setting a new standard for high end compute
- Nvidia's DPU and Bluefield chipset, bringing a more natural coupling of various process accelerators into a single platform, including high speed networking, parallel processing and memory accelerators.
- A push into specialty markets like quantum modeling (CuQuantum), autonomous driving and 5G VRAN/ORAN, Massive MIMO and edge computing
- And a heavy emphasis on its software assets and expertise, required to make real world workloads run on its platforms

A key aspect of this wider computing platform strategy is a partnership with VMware to offer nearly all of the Nvidia product family in a virtualized environment. Since 70% of enterprises now run some form of VMware virtualization, this will increase the attractiveness of the Nvidia products, as well as their availability in the public cloud (e.g., AWS). This cloud capability is critical. When companies no longer need to acquire their own hardware, the ability to move to the "best platform for the job" is much easier and this is a benefit to Nvidia. But Nvidia still faces a challenge of making generations of software created and optimized for x86 work as well on their non-x86 devices.

But perhaps the most important announcement was around the ARM-based Grace platform (named after Grace Hopper, a pioneer of computing) that encompasses a full HPC stack. This direction exposes their longer term vision and why they believe acquiring ARM is critical to their future. Ultimately they believe with Grace they can directly challenge Intel, who also is targeting the new workloads that Nvidia sees as critical, and that exhibit the potential for high growth and need for intense compute power (e.g., AI, ML, digital twins, 3D modeling, autonomous vehicles, natural language processing, etc.). Of course, Intel is not

sitting still either, and has made a number of recent moves to thwart these moves (e.g., its own GPU technology, high bandwidth acquisitions, MobileEye for autonomous vehicles and Habana AI technology to name a few).

In the past, other ARM licensees have tried to impact/penetrate the high end server market, including for cloud servers, and have had limited results. Indeed, AMD and Qualcomm both tried this approach and exited fairly quickly, although ARM itself continues to create server targeted IP (Neoverse) and other licensees (e.g., Ampere, AWS Graviton) are pursuing their own ARM-based solutions. But so far ARM-based servers have been a very niche marketplace with no real big winners.

Nvidia does see Grace as being its way of becoming a full service provider. And Grace is based on ARM IP, so Nvidia hopes that by buying ARM it gets to control its own destiny, and can influence ARM designs going forward. But Nvidia could probably achieve the same outcome by just taking a deep license of ARM IP (as Qualcomm, Samsung and others do). Acquiring ARM does offer Nvidia a revenue stream as well, so that might be part of the decision process. And since ARM is renewing its focus on the data center market with some of its latest IP, there is some synergy between the two. Nvidia could use that as a licensing mechanism for some of its own IP, particularly in high speed networking. Nvidia has made HW acquisitions in the past that ultimately didn't succeed (e.g., Icera), but this time seems different, as Nvidia has a cornerstone to build on with its advanced AI/ML.

Bottom Line: Nvidia sees an opening against Intel and wants to be a full service provider for data center and cloud systems, particularly as it can leverage its GPU/DPU and AI strengths. But it won't have an easy time replacing Intel (and AMD) x86 based systems, as a huge amount of code running in enterprise data centers and in the cloud is optimized for x86 (and not ARM). It will be a huge task to convert that to ARM. Still, there certainly are some niches where Nvidia could very well compete, and with its combined assets could prevail over Intel (although certainly Intel is not sitting still and is becoming more competitive in this space as well).

Cisco Goes Big on Secured Remote Work

"…Cisco has made impressive process in pivoting itself over the past 2-3 years from a unique hardware-dependent supplier into one that's on the threshold of becoming a premiere "as a service" provider of key infrastructure products and services. While it has some way to go to migrate its large installed proprietary hardware base, its new direction should help it attack the lucrative markets for cloud native and as a service products that many organizations are pivoting to now....."

Cisco recently held its Cisco Live event, where it made a number of announcements, especially geared towards the future of remote work. It made some major announcements for WebEx, which now includes a wellness feature that's critical to the long term functioning of any organization. In fact, this may have been one of the biggest announcements at the event. Cisco also increased its focus on security – a major imperative for Cisco as it transforms from a "hardware box" company to an "as a Service" company powering a distributed workforce and hybrid cloud future. To do this, Cisco is moving to make all of their products delivered as a service with their Cisco Plus initiative. While this will be a multi-year journey, it's a critical area for Cisco as organizations move rapidly towards an "as a Service", purchase what I need when I need it, world. This report will examine two key areas of potential growth for Cisco – Security and Collaboration.

Security (SecureX)

Cisco wants to be every enterprise's infrastructure platform for security, and the SecureX platform is their way of becoming the central point for security across the entire organization, and not just for network access. While fairly new, SecureX has made some significant progress, and has added 6K customers since the launch. However, Cisco is making it very easy for existing customers to sign on, so while impressive, this number may not yet represent actual market acceptance.

Some of the components being added are indeed critical to many organizations. For example, Cisco is providing a Secure Access System Edge (SASE) capability across the entire enterprise with Cisco Plus SASE. It includes Umbrella Security features as well as Meraki and Viptella integrations. And it announced Duo passwordless access for SaaS applications. This is impressive and hits many enterprise "hot spots", but there is a lot of competition in this space from the cloud providers (e.g., Azure, AWS) and stand alone players (e.g., Okta).

Cisco has been accumulating some key technologies and brings some advantages in security, including Cisco Talent – the private threat intelligence team that worked on the Solarwinds attack. One reason Cisco thinks it can lead in security is because it processes 350B DNS requests per day from 150M users, including 500M authentications per month. This is a massive data stream they can analyze to discover new threats and produce additional intelligence. And Cisco is making available ThousandEyes monitoring of network transactions and adding that capability to their Catalyst switches and also now has full security capability enabled in the AppDynamics monitoring solution. Other Cisco components becoming available include a secure browser to achieve remote browser isolation to prevent infiltration, cloud malware detection, and data loss prevention. These functions are all critical for remote work security and privacy, and form key components of Cisco's efforts at providing a zero trust platform.

Collaboration (Webex)
Cisco wants to join in the wellness craze now being defined by the next generation of collaboration tools. Indeed, stand allow pure collaboration (e.g., video, audio, screen sharing) is being superseded but a much richer set of tools that will make stand alone products obsolete in enterprises. Included in this next generation of Webex will be Personal Insights by Webex – a monitoring and analysis solution to find how well people are engaged, what interactions users have and which are most productive, how teams are interacting, etc. Built on top of Webex collaboration, this is a way for Cisco to add value on top of simple interaction tools (audio, video, text, screen sharing), and has become a new "arms race" area for many of the collaboration products in the market (e.g., Microsoft VIVA). The key component of such a system is the analytics that can be produced and the interpretation of what that analysis generates. Because Cisco is capable of tracking and tracing a full complement of network interactions and associating them with individuals, it can provide a fairly complete picture of the activities taken during a normal work period. Webex is also adding integrations with key enterprise apps like Salesforce, Google Workspace, Box, OneDrive, SharePoint, and adding vertical solutions capability for telehealth, remote learning, etc. Cisco is not alone in this new next generation collaboration space. Microsoft announced its VIVA platform with many of the same goals and integrating into the large base of Windows 365 installations, while other players like Google, Citrix and VMware have their own collaboration enhancement initiatives underway.

Bottom Line: Cisco has made impressive process in pivoting itself over the past 2-3 years from a unique hardware-dependent supplier into one that's on the threshold of becoming a premiere "as a service" provider of key infrastructure products and services. While it has some way to go to migrate its large installed proprietary hardware base, its new direction should help it attack the lucrative markets for cloud native and as a service products that many organizations are pivoting to now and will continue to do over the next several years as a key part of their digital transformation.

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About J.Gold Associates, LLC.

J.Gold Associates provides advisory services, syndicated research, strategic consulting and in-context analysis to help its clients make important technology choices and to enable improved product deployment decisions and go to market strategies. We work with our clients to produce successful new product strategies and deployments through workshops and reviews, business and strategic plan coaching and reviews, assistance in product selection and vendor evaluations, needs analysis, competitive analysis, and ongoing expertise transfer.

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