



Technology Brief...

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Research, Analysis, Strategy, Insight

Why the Samsung Galaxy S21 FE will Resonate with Enterprise

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Samsung recently released details of its latest Smartphone, the Galaxy S21 FE (Fan Edition). While keeping many of the features of the flagship S21 device, Samsung lowered the price to a more affordable \$699 by making changes to the display performance, the camera features, and the processors. But it did keep the all important 5G connectivity capability. While primarily targeted at mid-tier consumer smartphone buyers, there are a number of B2B features that make it attractive to business users, and should make the S21 FE a great solution for many organizations. Indeed, Samsung highlighted the device's Knox security, Microsoft Office365 compatibility, manageability features, and Samsung DeX for large screen and business app users, all of which will resonate well with companies.

We expect the device to have strong appeal in business, especially in SMB, given its price and feature set. It will hit a sweet spot that higher end phones don't. That is, for the larger number of mid-range workers who have some price sensitivity as opposed to the fewer number of higher end execs that go for the top of the line devices where cost is no obstacle. This is a very similar dynamic to the mid-range laptops that most companies buy for the majority of their workforce (in the \$700-\$800 price range) rather than the high end machines for \$1K+ they buy for higher level execs. As a result, the S21 FE should fill a significant need. It's also a great compliment to the more ruggedized Galaxy X Cover Pro which hits a different market niche than the S21 FE.

We're seeing a renewal of companies buying phones for its employees, rather than adopting the primarily BYOD stance of the past. This is a direct result of needing to secure and manage those devices which remains difficult in a full BYOD scenario. So targeting this space with a price-friendly but highly capable device is an excellent strategy for Samsung. It would have been nice if Samsung had spoken about the reliability of the device, as our research shows that each mobile device failure in enterprise costs \$526. Samsung devices are known to be reliable, but specific statements about that reliability, and the positive effect for companies via cost avoidance would show a great ROI for deploying the device. Anything that can lower TCO is well regarded by enterprises.

The one thing that is concerning with the device is the Fan Edition designation. For business users, and especially for IT managers, that connotes something that is not really business-like. Anything Samsung can do to play down that designation

"...with the Galaxy S21 FE Samsung can boast a higher end device at a mid-tier price that many organizations will find attractive to deploy for a large portion of their workforce. We may not see Samsung directly market this device to business users, but it will likely be a popular option in the B2B marketplace, and companies should be examining the device for many of their internal deployments..."

will be useful in attracting more organizations to adopt the device. If Samsung simply refers to it as FE, most people probably won't know what that stands for and will be fine with the designation (or perhaps refer to FE as For Enterprise).

Bottom Line: Samsung continues to hit many different levels of the market for consumer and business mobile devices. But with the Galaxy S21 FE it can boast a higher end device at a mid-tier price that many organizations will find attractive to deploy for a large portion of their workforce. We may not see Samsung directly market this device to business users, but it will likely be a popular option in the B2B marketplace, and companies should be examining the device for many of their internal deployments.

Can AWS Reinvent Manufacturing with Digital Twins?

AWS is a common component of many industries especially since most companies are data driven these days and are rapidly moving to the cloud. But the Industrial segment has traditionally been much more reticent to undergo a digital transformation than other industries. AWS wants to offer services that can change that, and it has already created some components and looks to release new ones soon. Digitalization of the industrial sector is a high growth area as many industrial firms are now racing to implement process and operations improvements to stay competitive. AWS thinks it has a competitive advantage given its affiliation with one of the largest users of industrial digitalization and IoT systems - Amazon.

“...While AWS has a broad range of industrial components available for a variety of users, we expect the TwinMaker Digital Twins components to ultimately be the one of the single most valuable components in this solution set across a variety of users. It provides the ability to optimize business processes and enable best use of the various other AWS Industrial components... ultimately the TwinMaker solution may well be deployed across many other of the AWS industry-specialized solutions ...”

AWS for Industrial

AWS for Industrial is a catch-all term for products and services being offered in the AWS ecosystem for industrial uses. Some of the products include:

- *AWS IoT SiteWise* – IoT environment running on any compute platform including industrial PCs
- *Panorama Appliance* - can run multiple computer vision (CV) models on multiple concurrent video streams
- *Panorama Device SDK* - enables a wide array of edge gateways and smart cameras
- *Lookout for Vision* – a Machine Learning (ML) service that uses computer vision to spot defects in manufactured products at scale. Deployed on cameras continuously looking at the process for ongoing quality issues
- *Lookout for Equipment*- used for predictive maintenance to match typical operations with anomalies
- *Monitron* - an end-to-end system that uses ML to detect abnormal conditions in industrial equipment and enable predictive maintenance. Sensors are placed on the equipment to provide data to analyze. The average industrial machine is >20 years old and doesn't provide operational data.
- *AWS IoT RoboRunner* – enables robots from different manufacturers to work together. Includes APIs for central management.

Creating Digital Twins

While the above are necessary components for many industrial processes, one of the most interesting AWS industrial components being offered is its Digital Twins service. AWS IoT TwinMaker is currently in preview and represents AWS' attempt to power one of the most compelling and at the same time difficult to achieve

solutions for a variety of both industrial and commercial requirements. A Digital Twin is essentially a computer generated 3D representation of a process, environment, supply chain, or similar complex chain of events, fed by various sensor and data inputs. Its capability to dynamically simulate a physical system can mimic and monitor the total process to enhance real time operations, or to simulate different scenarios that can be used for planning, analysis and process configuration. By using advanced processes like Machine Learning, Digital Twins can provide insights and options not easily achieved with traditional methods.

Digital Twins are not just limited to manufacturing. They can be used in smart buildings, utilities, energy management, healthcare, transportation, and much more. But building a twin is hard, with a need to ingest many data streams, a requirement to build appropriate models, and finally it must provide meaningful visual representations of the output. To be successful, AWS needs to build out an ecosystem of partners with specific expertise in hardware, software, modeling, industry-specific services and process automation. TwinMaker is seen by many industrial solutions vendors as competition on one level, but since it works across different point solutions, many are now looking at it as a complimentary product and not as a direct competitor. As an example, AWS is working with Siemens who is a major competitor but also a partner, using the AWS toolsets to integrate with other vendor's products

Bottom Line: While AWS has a broad range of industrial components available for a variety of users, we expect the TwinMaker Digital Twins components to ultimately be the one of the single most valuable components in this solution set across a variety of users. It provides the ability to optimize business processes and enable best use of the various other AWS Industrial components. Indeed, ultimately the TwinMaker solution may well be deployed across many other of the AWS industry-specialized solutions (e.g., Telecom, Retail, Transportation, Healthcare, etc.), making it a horizontal tool useful by many other companies. However, it's too early to tell if the product will ultimately be successful at this, since building a horizontal Digital Twins capability has been tried by others with limited success. Companies looking at Digital Twins technology enablement, which should be most companies and across many industries, should follow this effort by AWS closely.

“....A company that provides high quality, reliable and above all accurate identity verification and fraud detection services must be a required component of any enterprise to consumer (or enterprise to worker) engagement. We believe that TeleSign has its sights set on becoming the premium provider of such services as it builds on its already substantial ecosystem.....”

TeleSign Secures a New Path

TeleSign has been in the communications industry for 17 years. Originally focused on the telecom messaging space by making sure the proper messages are delivered to the proper people no matter where located, they are now moving to an expanded focus. Indeed, they now see their charter as much more inclusive of a full range of “as a service” to connect, protect, defend and verify the enterprise to consumer focused communications. And it expects to leverage its many assets and carrier partners to do so.

As we move to ever more dependence on mobile interactions that are financial and or safety related in nature, it becomes imperative that we also precisely determine who the company and/or app are connecting with, and verify that the identity is not fraudulent. The challenge is that old methods such as two factor authentication via SMS messages are fraught with issues. What if a fraudster gains physical access to a device and can therefore intercept such two factor authentication communications to perform unauthorized or even illegal operations? What if the SMS message, never really meant to be deterministic, doesn't get through?

The verified identity problem starts as soon as a user must be onboarded to a company's system. How does that company verify it is talking to an actual user and not a cloned device or automated "bot"? Further, the identify should be reverified each and every time there is an interaction via voice, SMS, social media, etc., and it should not require taking 3-5 end user required steps to do so. Finally, the consumers of such interactions expect a seamless and low overhead interaction, so companies that require multiple steps to confirm a user's identity will increase user frustration and lead to that customer leaving for more user friendly interactions. Or it may just make the consumer turn off security features that s/he finds burdensome.

TeleSign is offering an "as a service" solution that looks to both make interactions more secure while also alleviating the overly frustrating burdens of multi-step verifications for consumer interactions. Its primary advantages are speed of identity verification (it can do a fraud scoring of the connection/interaction in essentially real time to allow or reject an interaction), its global reach with connections to virtually all the major network operators, and above all its accuracy of verifications. And by doing all of this as a service, it eliminates the major expense and required resources of companies having to deploy their own verification systems.

Bottom Line: TeleSign is moving to become more than just a messaging infrastructure enabler. The market for critical mobile communications is expanding rapidly, as are the number of users. A company that provides high quality, reliable and above all accurate identity verification and fraud detection services must be a required component of any enterprise to consumer (or enterprise to worker) engagement. We believe that TeleSign has its sights set on becoming the premium provider of such services as it builds on its already substantial ecosystem. But, it must also start establishing its brand with end users and not just be a supplier of services to enterprises and network operators. It needs to become "TeleSign Inside" in order to become much more "sticky" so it's not easily replaced by the major cloud providers and/or some carriers, who also have deigns on this space. We believe they are on the right path to do so, but time will tell how successful they become.



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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.

J.Gold Associates provides its clients with insightful, meaningful and actionable analysis of trends in the computer and technology industries. We have acquired a broad based knowledge of the technology landscape and business deployment requirements, and bring that expertise to bear in our work. We cover the needs of business users in enterprise and SMB markets, plus focus on emerging consumer technologies that will quickly be re-purposed to business use.

We can provide your company with a trusted and expert resource to maximize your investments and minimize your risk. Please contact us to see how we can help you.