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National Stock Exchange of India Limited  
Exchange Plaza, Bandra Kurla Complex,  
Mumbai – 400 051  
SYMBOL: TATACOMM

BSE Limited  
P.J. Towers, Dalal Street,  
Mumbai – 400 001  
Scrip Code: 500483

Dear Sir / Madam,

Sub: Press Release - Micron and Tata Communications Accelerate IoT Deployment with Cloud-Based Virtual SIM.

Please find attached herewith the press release on the captioned subject being issued today.

Please take on Stock Exchange record.

Thanking you,

Yours faithfully,  
For Tata Communications Limited

DocuSigned by:

A handwritten signature in black ink, appearing to read 'Sudipto Das', enclosed in a blue DocuSign signature box.

Sudipto Das

Deputy General Manager

**TATA COMMUNICATIONS**

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## Micron and Tata Communications Accelerate IoT Deployment With Cloud-Based Virtual SIM

*Solution offers flexible global cellular-enabled connectivity,  
underpinned by trusted edge-to-cloud onboarding*

**BOISE, Idaho, and MUMBAI, India, Oct. 27, 2020** — Micron Technology, Inc., (Nasdaq: MU) and Tata Communications (NSE: TATACOMM) today announced they are joining forces to create a worldwide cellular-enabled connectivity solution that will simplify and accelerate large-scale global deployment of internet of things (IoT) devices. This solution will be powered by a new virtual SIM, the world's first cloud-based embedded subscriber identity module (eSIM), which offers a flexible, scalable alternative to conventional physical SIM cards. The cloud-based eSIM will be enabled by [Micron's Authenta™ Key Management Service \(KMS\)](#), the industry's first silicon-based security-as-a-service platform for edge devices.

With this technology, the [Tata Communications MOVE™ Global IoT Solution](#) will offer a pervasive, end-to-end solution for zero-touch onboarding of connected IoT devices to cloud services across 200 countries and territories — backed by the company's relationships with more than 600 mobile network operators worldwide. The solution will unleash innovation in the expanding IoT services ecosystem, which is predicted to nearly triple in revenue by 2026 to \$466 billion ([ABI Research, IoT Market Tracker — Worldwide, 2Q 2020](#)). The companies are demonstrating this solution, launching in 2021, at the [online Micron and Tata Communications IoT Security Conference](#), kicking off today.

“The business landscape we're experiencing today is uncharted territory, one that is forcing organizations to be agile and adopt zero-touch, digital-first technologies and applications,” said Tata Communications Chief Strategy Officer Tri Pham. “IoT solutions can help businesses become more efficient and productive, and can also bring in new opportunities and innovations, enabling them to scale new levels of growth.”

Pham added, “Yet cybersecurity, seamless integration, and reliable, robust connectivity and global reach continue to remain key barriers to global enterprise adoption. By joining forces with Micron to reimagine edge connectivity and security, we will create a new paradigm that will rapidly accelerate and simplify IoT deployment.”

While [industry projections had forecasted](#) 50 billion IoT device deployments by 2020, the reality has fallen short with only around 9 billion IoT devices deployed. This disparity stems from vastly



underestimated challenges with cellular-enabled connectivity and cybersecurity, which hamper IoT growth. Though cellular connectivity offers significant advantages over Wi-Fi — such as longer range, better outdoor performance, stronger security and existing global infrastructure — ABI Research predicts only 420 million cellular-connected IoT devices in 2021, just a fraction of total IoT deployments ([ABI Research, M2M Embedded Cellular Models, 3Q 2020](#)). This gap is due to the intricate logistics required for worldwide cellular-enabled services, such as management of physical SIM cards and fixed contracts per operator per country.

Tackling these challenges head-on, Tata Communications will offer a cloud-based eSIM for IoT, underpinned by Micron's flash-based identity platform Authentica KMS. The solution will enable:

- **Highly scalable IoT security:** In lieu of a physical SIM card to verify mobile identity, Authentica KMS provides device identities for the virtual SIM in the cloud, enabling secure, zero-touch device registration and onboarding to IoT services.
- **Seamless global connectivity:** The new SIM feeds IoT devices with secure borderless cellular-enabled connectivity anytime and anywhere, eliminating the complex management of physical SIM cards, localized operator contracts and roaming fees. This is especially beneficial for the industrial, infrastructure, automotive, aviation, and transport and logistics sectors that demand far-reaching, global connectivity for portable devices even in remote locations, unfettered by borders and close-range Wi-Fi networks. The solution will also allow enterprises to incorporate 5G into their IoT deployment strategies, taking advantage of 5G's lower latency, higher capacity and faster data speeds.
- **On-demand cellular-enabled subscription:** The unique approach to SIM technology enables just-in-time delivery of SIMs so that users don't have to subscribe to a monthly service until the connection is actually needed in the field. This just-in-time delivery reduces customers' capital and operational expenditures, as compared to physical SIM cards that require activation of service contracts well before shipping.
- **Pay-as-you-go flexibility:** Tata Communications MOVE™ platform enables pay-as-you-go service, instead of fixed monthly contracts. This is especially beneficial for customers who don't need always-on cellular-enabled connectivity, such as those combining Wi-Fi and mobile networks.

### **Micron and Tata Communications open up innovation for the IoT services ecosystem**

In dramatically simplifying flexible global connectivity, the edge-to-cloud solution will also unlock rich possibilities for innovation in the IoT market.



“The IoT ecosystem is at a tipping point. While there is untapped business opportunity, current hardware security methods are too complex and costly, or they limit scalability and flexibility,” said Kris Baxter, vice president and general manager of Micron’s Embedded Business Unit. “With Tata Communications’ cloud-based virtual SIM, Micron’s Authentica edge security will bridge this gap, fostering enterprise IoT adoption and open innovation in IoT services.”

With physical SIM cards, OEMs must tightly pair device identity to the IoT service during manufacturing to prevent interaction of insecure devices and services, but this results in vendor lock-in. Authentica’s simple authentication decouples IoT service security needs from manufacturing flow by allowing late binding of third-party certificates. This flexibility frees end users to securely access diverse, vendor-agnostic services, allowing them to customize and harness IoT devices as platforms for innovation, akin to the robust customization of smartphones with mobile app stores today. Opening up the ecosystem, Micron and Tata Communications will empower the IoT services market to reach its full promise with a broader device footprint.

### **Micron’s Authentica security-as-a-service solution powers flash-based IoT identities**

As the threat landscape grows riskier with sophisticated bad actors and hacks on IoT devices from [connected fish tanks](#) to [baby monitors](#), cybersecurity is a weak link in IoT adoption. Through its silicon root of trust, Authentica provides a unique level of protection for the lowest layers of IoT software. Starting with the boot process, Authentica uses strong cryptographic identity and security features baked natively into flash memory. To enable device compatibility with this new SIM, OEMs need only to install [Authentica flash](#); no secure key injection or added secure elements are required.

Leveraging this root of trust, Micron’s cloud-based service Authentica KMS authenticates these IoT devices, allowing them to be activated and managed at the edge. This enables platform-hardening and device protection through the entire lifecycle, from manufacturing to installation. The ease of this security-as-a-service solution is particularly beneficial for traditional manufacturers making forays into connected devices for IoT use cases. With Authentica’s plug-and-play security, these OEMs, who lack cybersecurity experience, can focus on their core competencies and rely on Micron’s decades of embedded expertise to provide hardware security.

### **Availability**

This cloud-based eSIM for IoT devices is slated to begin shipping in the first half of 2021. Those interested in learning more about the eSIM can reach out to [MOVE@tatacommunications.com](mailto:MOVE@tatacommunications.com).



For additional inquiries on Micron's Authentia technology, contact [authentia@micron.com](mailto:authentia@micron.com).

### **About Micron Technology, Inc.**

We are an industry leader in innovative memory and storage solutions. Through our global brands — Micron® and Crucial® — our broad portfolio of high-performance memory and storage technologies, including DRAM, NAND, 3D XPoint™ memory and NOR, is transforming how the world uses information to enrich life *for all*. Backed by more than 40 years of technology leadership, our memory and storage solutions enable disruptive trends, including artificial intelligence, 5G, machine learning and autonomous vehicles, in key market segments like mobile, data center, client, consumer, industrial, graphics, automotive, and networking. Our common stock is traded on the Nasdaq under the MU symbol. To learn more about Micron Technology, Inc., visit [micron.com](http://micron.com).

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### **About Tata Communications**

Tata Communications is a digital ecosystem enabler that powers today's fast-growing digital economy. The company enables the digital transformation of enterprises globally, including 300 of the Fortune 500 – unlocking opportunities for businesses by enabling borderless growth, boosting product innovation and customer experience, improving productivity and efficiency, building agility and managing risk. With its solutions orientated approach and proven managed service capabilities and cutting-edge infrastructure, Tata Communications drives the next level of intelligence powered by cloud, mobility, Internet of Things (IoT), collaboration, security, and network services. Tata Communications carries around 30% of the world's internet routes and connects businesses to 60% of the world's cloud giants and 4 out of 5 mobile subscribers. The company's capabilities are underpinned by its global network, the world's largest wholly owned subsea fibre backbone and a Tier-1 IP network with connectivity to more than 200 countries and territories. Tata Communications Limited is listed on the Bombay Stock Exchange and the National Stock Exchange of India.

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