



# 5G NR Device Manufacturer

Doubles test capacity with zero additional CapEx

## Organization

- 5G New Radio device manufacturer

## Challenges

- Expanding and ensuring flexibility for test capacity while staying within capital expense limits

## Solutions

- Scalable, OpEx funded access to test assets through KeysightAccess

## Results

- Six months faster time-to-market
- Immediate access to test assets using KeysightAccess
- 42% savings vs a CapEx purchase
- Added the flexibility to exchange assets for different or updated instruments as 5G standards evolve

The creation of 5G cellular mobile communications is an extensive and complex endeavor involving companies around the world including chipmakers and device developers, network equipment manufacturers, and network operators. During regional field trials, chipmakers and device manufacturers strive to win contracts and deliver their products in volume and on time. An abundance of orders may be received quickly if early tests prove successful, and therefore manufacturers may decide to expedite and expand their field trials.

The possibility of a sudden, large increase in production volume can cause uncertainty in the manufacturing process. Production planning must account for a wide range of potential order quantities. The manufacturer must be able to quickly and easily adjust test capacity to meet volume goals and target schedule dates.

A leading wireless company faced the challenge of being able to quickly ramp to meet high production demands as it moved forward with a new 5G NR product. The company's test stations ran all day, every day, but were challenged to keep up with rapidly rising demand. As a solution, Keysight introduced the company's manufacturing team to the KeysightAccess offering that enabled fast expansion of their testing capabilities without using capital expenditure (CapEx) budgets.

# The Challenge: Double Test Capacity without Tapping CapEx

The wireless company had pushed its resources to the limit, racing to be first to market with new 5G NR products. In an attempt to increase product testing, the company ran Keysight E7515B UXM 5G wireless test sets 24 hours a day, seven days a week (Figure 1). Test volume grew rapidly, but to meet contracted production goals, the company would need to double its test capacity as soon as possible.



**Figure 1.** The highly integrated UXM wireless test set is designed for functional testing and design validation

The challenge the company faced was the ability to afford eight additional UXM test sets to expand its test capacity. As the end of the fiscal year rapidly approached, there was no budget for capital equipment purchases.

Use an operational expense budget to fund a fixed term agreement through KeysightAccess

# The Solution: Get the Instruments You Need Now, with KeysightAccess

Highly motivated to expand their test capacity, the company reached out to its local Keysight team. The wireless company's operators and Keysight engineers reviewed the issues, which led to an important discovery. The company did not have CapEx budget available to purchase new test sets, however, the operational expense (OpEx) budget was under spent. The available OpEx balance could not be used to purchase new test sets, but it would fund additional UXM test sets accessible through a KeysightAccess offering.

## The Results: The Customer Was Able to Double Test Capacity Without the Use of CapEx

In this wireless company's case, KeysightAccess enabled long-term use of the needed test assets at a much lower cost than making an outright purchase. With a fixed-term KeysightAccess agreement, the wireless company gained access to instruments valued at \$8 million for an OpEx expenditure of \$4.7 million spread over the fixed-terms.

The result—a 42% savings and the company's immediate access to the test equipment. KeysightAccess accelerated the company's internal purchasing process by avoiding a CapEx approval process. Overall, the customer was able to achieve a six-months faster time to market.

Adding to the successful outcome, if evolving 5G standards require new, different, or upgraded equipment, KeysightAccess end of term options provide the customer the flexibility through the renewal process to return outdated equipment, access new solutions, or continue to use existing equipment for the renewal term.

42% savings and immediate access to test equipment

# Going Forward

KeysightAccess is an instruments service offering that helps customers meet their organizational and financial goals. This program enables customers to conserve capital while addressing crucial needs such as dynamic test capacity. KeysightAccess enabled this customer to accelerate innovation and achieve high-volume first to market success with its 5G NR product.

## Related Information

- [Flyer: KeysightAccess, publication 3120-1354EN](#)
- [Application Note: Solutions for Testing Data Throughput in LTE-A User Equipment, publication 5992-0549EN](#)
- [Data Sheet: Keysight E7515B UXM Wireless Test Set, publication 5992-3811EN](#)

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