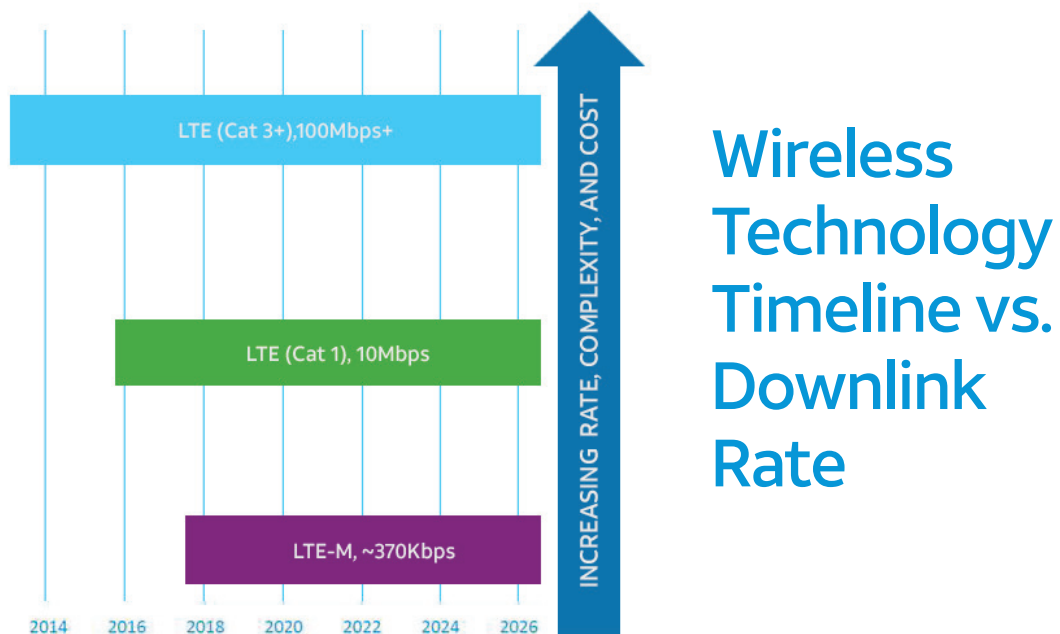




The Network Technology Roadmap

All networks are not the same, so AT&T offers a multi-network approach to provide you with the dependability and flexibility you need to optimize your IoT solution. Beginning with the LTE-Category 3 in 2013, adding the LTE-Category 1 in 2015, and fully deploying our LTE-M network across our nationwide 4G LTE network in 2017, AT&T continues to provide the latest in IoT network performance and capability. This network enables developers to use advanced modules that provide the basis for a new generation of devices, while lowering connectivity costs.

You can see on this chart how each evolutionary step allows us to decrease the downlink rate, cost and complexity.



Advantages of LTE-M over traditional IoT connectivity options:

- Longer battery life (expected up to 10 years).
- Better coverage for IoT devices underground and deep inside buildings.
- Reduced module size (as small as 1/6 the size of current modules).



Wireless Technology Comparison for LTE

Each solution brings you carrier grade, multi-layered, best-in-class security; and is 3GPP R8 Approved. This table will help you consider and compare the differentiating features of each LTE network solution so you can make the best choice for your module and device.

Looking toward the future of LTE, the module cost will decrease as the benefits increase.

Features	LTE (Category 3+)	LTE (Category 1)	LTE-M (Category M1)
Module Cost	\$\$\$	\$\$	\$
Module Availability	Now	Now	Now
Network Buildout	Complete, in service	Complete, in service	Completing Through 2017
Data Rates	~100 Mbps	~10 Mbps	~370 kbps
Battery life	Days	Up to 10 yrs ¹	Up to 10 yrs+
Mobility	High	High	Mid ²
Coverage improvement	None	None	Up to 15dB
Voice support	Yes (VoLTE)	Yes (VoLTE)	Future ³
Vertical market examples	<ul style="list-style-type: none"> • Smartphone/ Tablets • Automotive Infotainment • Video Surveillance • Routers 	<ul style="list-style-type: none"> • Automotive SSD • mHealth • Wearables • mPERS 	<ul style="list-style-type: none"> • Smart Cities (meters) • Alarm Monitoring • Asset monitoring UBI • Sub-Terrain
Deployment	Complete - Nationwide	Complete - Nationwide	SW Upgrade - Nationwide
Global	Global Carrier	Global Carrier	Global Carrier support expected

1 – LTE Cat 1 device needs to support 3GPP Rel12 with support for Power Saving Mode for battery life.

2 – Initial deployment is idle mode reselection only.

3 – VoLTE (Voice) support on Cat M1 under investigation on feasibility.