



Commonly Asked Questions for 4G

1. What are 4G, 4G+ and Gigabit 4G?

4G commonly known as fourth generation mobile network and technically termed as Long Term Evolution (LTE) with speeds faster than 3G.

4G+ (or also known as LTE Advanced) is an upgrade to the existing 4G network, doubling the current theoretical network speeds of 150Mbps to 300Mbps.

Tri-band 4G+ further uplifts the theoretical network speeds beyond 300Mbps. Together with downlink 256QAM technology, our 4G network speeds is further boosted to 500Mbps starting from May 2017.

Starting from July 2017, Singtel launched Southeast Asia's fastest Gigabit-class LTE mobile data speed, delivering in excess of 1Gbps at selected high traffic locations such as Orchard Road, Raffles Place, Clarke Quay and Tanjong Pagar.

The Gigabit-class transmission speeds are achieved by scaling 4x4 Multiple-Input Multiple-Output (4x4 MIMO) together with 256 QAM technology coupled with triple carrier aggregation of 70Mhz of spectrum exclusive to Singtel.

2. What is the 4G technology which Singtel is using?

Singtel is currently running 4G on LTE 900 (Band 8), LTE1800 (Band 3) and LTE2600 (Band 7). Overseas 4G/LTE operators might be running on different technology, resulting in network compatibility issues when customers bring in 4G smartphones from overseas.

3. Why does my 4G smartphone from overseas not work on Singtel's 4G Network?

Due to different 4G technology adopted by different operators around the world, your 4G smartphone might be configured to run only on a specific country's 4G network and thus not compatible with Singtel's 4G LTE network.

4. What is the typical speed range for surfing on 4G/4G+?

The typical speed range of surfing on 4G that you can experience 80% of the time, over a 24-hour period at various locations with 4G coverage are as below:

	4G	4G+	Tri-band 4G+	450Mbps 4G	500Mbps 4G	800Mbps 4G	>1 Gbps 4G
Theoretical download speeds	150Mbps	300Mbps	337Mbps	450Mbps	500Mbps	800Mbps	1.02 Gbps
Typical Singtel download speeds	16-70Mbps	20- 140Mbps	22-154Mbps	29-204Mbps	32- 227 Mbps	51- 363 Mbps	62 - 385Mbps



*Based on Singtel internal measurements carried out using a Cat 11 (500Mbps 4G) and Cat 16 (800Mbps 4G) device respectively running Ookla Speedtest application for measuring download throughput speed of file size 100MB at limited sites. Tests will be conducted at an expanded number of sites to derive actual typical speed later.

The speed range may vary between users and is subject to:

- Device used
- Hardware and software limitation
- 4G network coverage/traffic
- Distance between user and base station
- Nature of built-up area
- Source of website and other external factors

For details on how the speeds were derived, please refer to <https://www.singtel.com/content/dam/singtel/personal/products-services/mobile/4g/faq/SpeedsQ12021.pdf> for more information.

5. How can I enjoy surfing with speeds of up to 1Gbps?

All Singtel 4G Value Added Service customers have automatically been upgraded to 1Gbps.

As long as you have a supporting 4G+ device with 4G Value Added Service, you will be able to enjoy the upgraded speed of up to 1Gbps. For smartphone data-bundled plans with 4G Value Added Service, please refer to <https://www.singtel.com/personal/i/phones-plans/mobile/postpaid/combo/combo-plans.html>.

6. Where can I enjoy tri-band 4G+ service in Singapore?

Singtel completed nationwide outdoor deployment of tri-band 4G+ with 256QAM. Tri-band 4G+ indoor coverage will be progressively rolled out and cover major shopping malls such as Plaza Singapura and CK Tang.

7. What are the handsets that can support speeds of up to 1Gbps?

Please refer to below handset lists that support tri-band 4G+ service in Singapore:

	Tri-band 4G+	Tri-band 4G+ with 256QAM	Gigabit 4G+ with 256QAM and 4x4 MIMO
Theoretical download speeds	337 - 375Mbps	450-500Mbps	800Mbps - 1.02Gbps
Supported handsets	HTC 10	Google Pixel 2 XL	Huawei Mate 10
	Huawei P10	Google Pixel 3	Huawei Mate 10 Pro
	Huawei P10 Plus	Google Pixel 3 XL	Huawei Mate 20 Pro
	iPhone 7	HTC U11	Huawei P20
	iPhone 7 Plus	iPhone 8	Huawei P20 Plus
	LG X Mach	iPhone 8 Plus	iPhone XR
	Samsung Note 5	iPhone X	iPhone XS



	Sony Xperia XZ	LG G6	iPhone XS Max
		LG V20	LG G7+
		LG V30 Plus	OPPO Find X
		Huawei Mate 20	Razer Phone 2
		Razer Phone	Samsung Note9
		Samsung Note8	Samsung S9
		Samsung S7	Samsung S9+
		Samsung S7 Edge	Sony XZ2
		Samsung S8	Sony XZ Premium
		Samsung S8 Plus	

8. Do I have to pay for the upgraded speed?

The monthly subscription charge of 4G Value Added Service will be waived permanently for customers on Singtel Combo mobile plans.

The upgrade to 1Gbps for all Singtel 4G Value Added Service customers is free.

9. Can customers on the old 12GB mobile plans enjoy the 4G Value Added Service?

No, they need to upgrade to the new mobile tiered price plans (Combo 1/Combo 2/Combo 3/ Combo 6/Combo 12). You can go to <https://www.singtel.com/personal/i/phones-plans/mobile/postpaid/combo/combo-plans.html> to find out more.

10. What are the handsets that can support the 4G band 8 (LTE900)?

Majority of the handsets sold in the last 2 years can already support 4G LTE900. The handset models include:

- Samsung S5 (Cat 6)/S6/S6 Edge
- Samsung Galaxy A3/5/7
- Sony Xperia Z1/Z2/Z3
- Nokia 820, 920, 1020
- LG G4, G4 Beat, G3, G3 Beat, G Flex 2
- Apple iPhone 5S, 5C, 6, 6 Plus, 6s, 6s Plus (iOS 9.1 and above)

11. What is the advantage of supporting band 8 LTE900 on our 4G network?

LTE900 is ideal sub 1Ghz frequency to provide better in-building penetrations and ensure consistent 4G/4G+ experience for our customer. Advantage of lower frequencies is that the signals have better penetration, meaning they can pass through objects such as walls with less attenuation.

12. How does Singtel derive the typical download 4G speed for my mobile plan?



For details on how the speeds were derived, please refer to <https://www.singtel.com/content/dam/singtel/personal/products-services/mobile/4g/faq/SpeedsQ12021.pdf> for more information.

4G Rates

1. What are the available 4G Combo Mobile plans?

To see our complete range of plans, please refer to <https://www.singtel.com/personal/i/phones-plans/mobile/postpaid/combo.html>.

2. What can I do with 1GB of data bundle on Mobile Broadband plan?

Your 1GB monthly local data bundle can be used to retrieve approximately 20,000 emails per month, or surf 3000 web pages, or download 500 songs or 100 videos. Calculations are based on the following assumptions:

- One email file: 0.05MB
- One webpage: 0.3MB
- One song download: 2MB
- One video download: 10MB

3. Will I be able to check how much data I have

consumed? You can check your data usage through the

following methods:

- My Singtel app (<http://https://www.singtel.com/apps/utilities/my-singtel-account-3>)
- Dial *3282 (*DATA)
- My Account (<https://myaccount.singtel.com/login.aspx>)

4. What are the excess charges if I exceed the monthly bundled local data?

If you use more than your monthly bundled local data, 3G excess data usage is charged at \$5.35/GB and capped at \$94/month for unlimited usage. For new and re-contracting 3G customers from 16 September 2013 onwards, excess data usage will be charged at \$10.70/GB and capped at \$188/month for unlimited usage.

4G excess data usage will be charged at \$10.70/GB and capped at \$188/month for unlimited usage, with effect from 16 September 2013.



4G Smartphone

1. What are the price plans available for sign up?

Please refer to <https://www.singtel.com/personal/i/phones-plans/mobile/postpaid/combo.html> to view our price plans.

2. I would like to re-contract to sign up for 4G service. How do I check my eligibility? You can check your recontract eligibility via the following modes:

- *1626
 - Key ***1626#** on your mobile phone.
 - Reply with option '4' to check your handset upgrade eligibility.
 - A reply via SMS will be sent to your mobile phone shortly.
 - Note: * Send service not available for Corporate Individual Scheme (CIS) and Small Medium Enterprise (SME) customers.
- Singtel My Account
 - Log in to Singtel My Account with your ONEPass ID and password.
 - At the Account Summary landing page, click on "View more" of the selected mobile number to see your handset upgrade eligibility date.
 - Note: Not available for Small Medium Enterprise (SME) customers.

3. I have a current 4G smartphone from overseas. Can I enjoy 4G service from Singtel?

No. Due to different 4G technology adopted by different operators around the world, the 4G smartphone might be configured to run only on country specific 4G LTE network and thus is not compatible with Singtel's 4G network.

4. How will I know that I am connected to 4G network on my mobile?

The 4G signal will be reflected on your 4G smartphone signal bar.

5. Can I roam overseas and enjoy the 4G speed on my 4G smartphone?

Currently, you will be able to enjoy roaming on 4G networks overseas only in selected countries. You may visit www.singtel.com/dataroam for the list of countries that offer 4G networks.

6. Can overseas travelers use Singtel's 4G service on prepaid?

Yes, 4G service is currently offered on prepaid. Customers on prepaid will be able to enjoy unrivalled 4G network coverage with 4G supported handsets. Similarly, 4G service is already enabled for prepaid by default.



7. Do I need to change out my 2G or 3G SIM cards to enjoy 4G service?

If you are currently holding to a 2G SIM card, you will need to change out to 3G SIM card. For existing 3G SIM card users, you will not be required to change out your SIM cards.

Customers on 3G USIM will need to change to 3G Micro SIM if the 4G smartphone is only Micro SIM compatible. SIM card charges will apply.

8. I own a 4G smartphone and have subscribed to 4G service. Will I be able to enjoy a higher 3G speed when I move out of 4G to 3G coverage?

Yes, you will be able to enjoy 3G connectivity with download speeds of up to a theoretical limit of 42Mbps. (The speed range may vary between users and is subject to device used, hardware and software limitation, 4G network coverage/traffic, distance between user and base station, nature of built-up area, source of website and other external factors.)

9. Will I be able to enjoy a higher 3G speed even when I turn off my 4G/LTE settings on my device?

Yes, you will be able to enjoy 3G connectivity with download speeds of up to a theoretical limit speed of 42Mbps. Singtel's 4G service provides mobile Internet access that is up to five times faster than existing 3G-based smartphone services, with one-fifth of the network latency, hence you are strongly encouraged to turn on your 4G / LTE settings on your device in order to experience the 4G speed.

10. I noticed that all my voice calls are made on 3G instead of 4G. Why is this so?

4G network is a mobile data network, hence, normal voice calls are currently supported on 3G. Only 4G ClearVoice (VoLTE) customer using supported handset will be able to enjoy HD voice calls on our 4G network.

11. I noticed that the call connection is slower and LTE is switched to 3G when the call got connected. Why is it so?

4G network is a mobile data network therefore voice calls are still currently supported on 3G network instead. When a voice call is made or received on 3G, the 4G Smartphone will display the 3G network. After the voice call is completed, 4G smartphone will switch back to 4G based on the availability of 4G network coverage within 10-12 seconds, depending on various 4G phone models.

12. I noticed that I could not receive calls occasionally but instead I have receive SMS alerts about the missed calls. Why is it so?

When you are out of mobile coverage whether in 2G, 3G or LTE network, you will not be able to make or receive calls. When an incoming call arrives, the network will have the caller ID recorded and sent to you via SMS – when you go back into coverage.



Commonly Asked Questions for 3G

1. What is Singtel doing to enhance the 3G network for customers?

Singtel is continuously investing to expand and enhance our network to ensure high quality and reliable mobile services. In the last 3 years, we have invested more than S\$2 billion across all our networks, including mobile. Here are some examples of what we are working on right now:

- All 4G customers have been upgraded to 1Gbps. Customers can enjoy the maximum speed of 1Gbps with a supported handset at selected high traffic locations in Singapore.
- We have upgraded our 3G network to offer download speeds of up to 42Mbps. This is double the 21Mbps speed of existing 3G networks. However, a supported handset is required to enjoy the 42Mbps upgrade.
- We implemented 3 and 4-cell carrier technologies to double the traffic handling capacity at all 3G sites.
- Our 4G nationwide network, with speeds of up to 1Gbps, is the first in Singapore to offer Tri-band street coverage for 95% of the island.

2. Why am I getting weak coverage in MRT tunnels? What is Singtel doing to improve coverage?

The capacity of mobile base stations in MRT tunnels and stations is shared among many users, and this may result in a slower broadband experience during peak periods.

Singtel is working with SMRT and the other mobile operators to enhance the coverage in MRT tunnels and stations. The mobile infrastructure in tunnels and stations is shared amongst the operators. To avoid disruption to train services, work for the upgrades in the MRT is performed during hours when trains are not in operation and tunnels are accessible to our engineers. The progress of the upgrade work is dependent on the maintenance windows allocated to us by SMRT. We try to work as quickly as possible within the limited time.

3. Why do I experience poor reception at home and in the office? What is Singtel doing to improve coverage in these locations?

There are various factors that may affect coverage, and these are often due to the inherent nature of mobile technologies. For example, users may sometimes experience weak reception in locations where signals are blocked by walls and structures.

These issues are not unique to the Singtel network and could affect customers of any operator. Sometimes reception issues may be due to the configuration of the customer's mobile device or its ability to receive signals.

In HDB blocks, condos and office buildings, operators provide coverage at public access areas such as lobbies and common corridors. We require permission from building owners and the authorities to install our mobile equipment. The schedule of deployment and equipment location sites are often not within our control and sometimes, our requests to install new infrastructure are rejected. However, our engineers do their best to expedite the process as much as possible.

Users may also experience weaker reception if their office or apartment is not located near to shared mobile infrastructure and signals are blocked by walls and structures. That is why many



customers choose to connect their mobile devices to their WiFi-enabled fixed broadband networks when at home or in the office.

Singtel has an ongoing programme in place to enhance the network. Some of the upgrades that we are currently working on are summarised in the answer of Q1.

4. Why do I experience slow speeds in shopping malls? What is Singtel doing to fix this?

The mobile infrastructure in most shopping malls is shared among all mobile operators. During peak periods, the capacity is shared among many users, which may result in slower download speeds.

Singtel is continuously investing in its mobile network to enhance capacity and coverage. This includes being the only telco to secure the LTE 900 4G frequency band which gives better in-building penetration, and regularly scheduled upgrades in major shopping malls across the island.

5. Is Singtel's 3G network deteriorating because of your 4G network?

No. Our 4G network expansion does not affect the quality of our 3G network services in any way. Our 3G and 4G services operate on separate networks. As more mobile users adopt 4G services, we expect the quality of our 3G services to improve.

6. How does Singtel derive the typical download 3G speed for my mobile plan?

Please refer to <https://www.singtel.com/content/dam/singtel/personal/products-services/mobile/4g/faq/SpeedsQ12021.pdf> for more information.