

DIGITAL GOLD



Digital gold is an alternative to buying the yellow metal in its physical form. One can purchase gold online, and an equivalent amount of that is kept as physical gold in an insured vault. The minimum amount one can buy is as low as one rupee.

What is Digital Gold?

Buying physical gold certainly has its downsides. There are issues of identifying its legitimacy and purity, then there are problems of safekeeping and storage. It is not quite ideal to go out to gold dealers or jewellery stores.

Digital gold, on the other hand, can be bought online and is stored in insured vaults by the seller on behalf of the customer. It also helps us overcome all the aforementioned issues of physical gold purchases. All you require is Internet/mobile banking and you can invest in gold digitally anytime, anywhere.

How digital gold works?

You can invest in digital gold from several mobile e-wallets such as Paytm, Google Pay and PhonePe. Brokers such as HDFC Securities and Motilal Oswal also have an option for digital gold investing.

Currently, there are three companies that offer digital gold in India-

1. Augmont Gold Ltd.
2. MMTC-PAMP India Pvt. Ltd. a joint venture between state-run MMTC Ltd. and Swiss firm MKS PAMP.
3. Digital Gold India Pvt/ Ltd with its SafeGold brand.

Apps and websites like Paytm, G-Pay etc only provide a platform for metal trading companies SafeGold and MMTC PAMP. Once you invest in digital gold, these trading companies purchase an equivalent amount of physical gold and store it under your name in secured vaults. But is the process actually as easy and convenient as it sounds? Let's take a look at how you can invest in Digital Gold

How to trade in digital gold? First, you visit any of the platforms which offer digital gold investments such as Groww, Paytm, HDFC Securities, G-Pay, Motilal Oswal etc.

Once you are on their platform, you perform the following steps:

1. Enter an amount in INR or grams – You can buy gold of a fixed worth, or buy by weight at the live market rate.
2. Choose your payment method – Once you complete the KYC process, you will have multiple payment options to choose from such as an account, card, or wallet.

3. Store your gold in a secured locker – Your account is updated instantly, and can be accessed 24/7.
4. Sell whenever you want – You can choose to sell your gold digitally itself to the platform whenever you want.
5. Take physical delivery of the gold – In case you chose to not sell the gold, you can request for a doorstep delivery of your gold in the form of coins or bullion. Note: Delivery fees are applicable.

Benefits of Investing in Digital Gold:

- You can take physical delivery of the gold at your doorstep.
- You can invest an amount as low as Re.1.
- Digital Gold can be used as collateral for online loans.
- Digital Gold is genuine and the purity is 24K 99.5% for SafeGold and 999.9 in case of MMTC PAMP purchases.
- Your purchase is stored safely and is also 100% insured.
- You can exchange digital gold for physical jewellery or gold coins and bullion.

Disadvantages of Investing in Digital Gold:

- Limit of Rs.2 lakhs for investment on most platforms.
- Lack of an official government-run regulating body such as RBI or SEBI.
- Delivery and making charges are further applied to the price of gold.
- In some cases, companies only offer a limited storage period, after which you either have to take physical delivery or sell the gold.

Gold acts as a safety net during times of crisis

Let us take the recent Covid19 crisis as an example to corroborate the former statement. A nationwide lockdown meant furloughs and increased debt burden for consumers and businesses alike. To keep the economy growing, the government and the Reserve Bank of India had to increase spending while limiting growing debt levels. Such measures came by way of a Fiscal Stimulus and Atma Nirbhar Bharat packages.

ASI/T VISHNU PARMAR

5TH GENERATION MOBILE NETWORK



5G is the 5th generation mobile network.:- It is a new global wireless standard after 1G, 2G, 3G, and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries.

The previous generations of mobile networks are 1G, 2G, 3G, and 4G.

First generation - 1G

1980s: 1G delivered analog voice.

Second generation - 2G

Early 1990s: 2G introduced digital voice (e.g. CDMA- Code Division Multiple Access).

Third generation - 3G

Early 2000s: 3G brought mobile data (e.g. CDMA2000).

Fourth generation - 4G LTE

2010s: 4G LTE ushered in the era of mobile broadband.

1G, 2G, 3G, and 4G all led to 5G, which is designed to provide more connectivity than was ever available before.

5G is a unified, more capable air interface. It has been designed with an extended capacity to enable next-generation user experiences, empower new deployment models and deliver new services. With high speeds, superior reliability and negligible latency, 5G will expand the mobile ecosystem into new realms. 5G will impact every industry, making safer transportation, remote healthcare, precision agriculture, digitized logistics — and more — a reality.

Where is 5G being used?

5G is used across three main types of connected services, including enhanced mobile broadband, mission-critical communications, and the massive IoT. A defining capability of 5G is that it is designed for forward compatibility—the ability to flexibly support future services that are unknown today.

i) Enhanced mobile broadband

In addition to making our smartphones better, 5G mobile technology can usher in new immersive experiences such as VR and AR with faster, more uniform data rates, lower latency, and lower cost-per-bit.

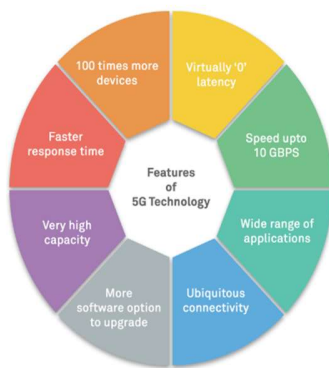
ii) Mission-critical communications

5G can enable new services that can transform industries with ultra-reliable, available, low-latency links like remote control of critical infrastructure, vehicles, and medical procedures.

iii) Massive IoT

5G is meant to seamlessly connect a massive number of embedded sensors in virtually everything through the ability to scale down in data rates, power, and mobility—providing extremely lean and low-cost connectivity solutions.

How fast is 5G?



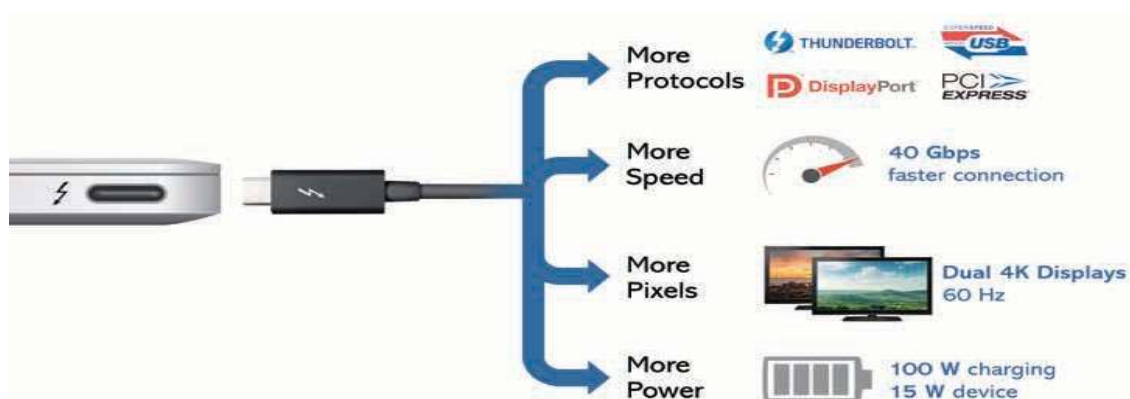
a) 5G is designed to deliver peak data rates up to 20 Gbps based on IMT-2020 requirements. Qualcomm Technologies' flagship 5G solutions, the Qualcomm® Snapdragon™ X65 is designed to achieve up to 10 Gbps in downlink peak data rates.

b) 5G is about more than just how fast it is. In addition to higher peak data rates, 5G is designed to provide much more network capacity by expanding into new spectrum, such as mmWave.

c) 5G can also deliver much lower latency for a more immediate response and can provide an overall more uniform user experience so that the data rates stay consistently high—even when users are moving around. And the new 5G NR mobile network is backed up by a Gigabit LTE coverage foundation, which can provide ubiquitous Gigabit-class connectivity.

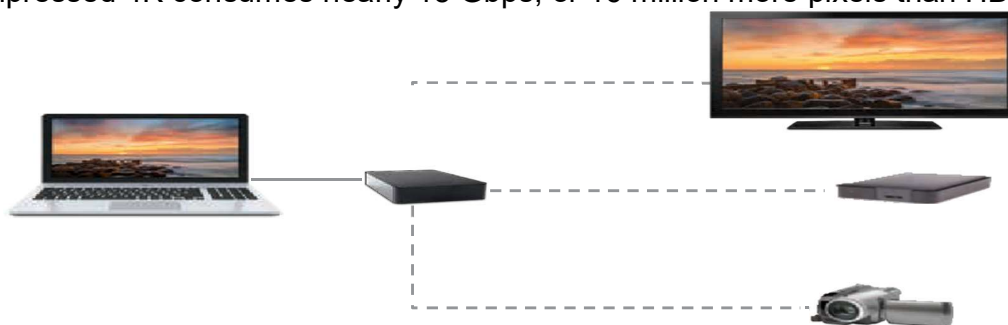
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THUNDERBOLT TECHNOLOGY



Major computing industry trends have necessitated a new form of I/O that can deliver on the vision of future computing:

- Continued advances of video and audio media quality (4K content and displays) creating unprecedented amounts of data.
- Relentless shrinking of system form factors with less room for multiple, large connectors.
- Dramatic growth of processing and storage from new technologies and the march forward of Moore's law.
- Demand for the flexible performance from a single system to meet the needs of a desk bound creator and an on-the-go mobile consumer at the same time
- Thunderbolt 3 is a way to gain uncompromised performance of the fastest data, and the highest quality display technology available in their PC – all over a single standard connector.
- Whereas uncompressed 1080p content consumed around 4 Gbps of data, uncompressed 4K consumes nearly 15 Gbps, or 16 million more pixels than HD.



The Thunderbolt Vision

Thunderbolt is a sophisticated technology, with a simple vision – The connector that just works. Intel believes Thunderbolt can be the only external connector you need for your PC. Power? Data? Display? External graphics? Thunderbolt is the single connector that can deliver on all your connectivity needs, from the mundane to the complex. Connect to a dock and expand to your legacy peripherals, directly cable to a Monitor or two, or connect to a single (or series of) high performance dedicated Thunderbolt devices. Importantly, Thunderbolt 3 builds on the new USB-C reversible connector and integrates the latest USB 3.1 technology to deliver high performance and high compatibility to the existing standard. One connector for everything; that is the Thunderbolt vision. A consumer doesn't need to know anything other than if they plug their device into a Thunderbolt 3 port, everything will just work.

How Thunderbolt 3 Works

Thunderbolt is a tunneling architecture designed to take a few underlying protocols, and combine them onto a single interface, so that the total speed and performance of the link can be shared between the underlying usages of these protocols – whether they are data, display, or something else. At the physical interface level, Intel’s Thunderbolt 3 silicon builds in a few important features:

A physical interface (PHY) layer that can dynamically switch it’s operating mode to drive either:

- USB 2.0, 3.0, and 3.1
- Display Port 1.1 and 1.2a
- Thunderbolt at 20 and 40 Gbps.

In the Thunderbolt mode, Thunderbolt 3 port has the ability to support at least one or two (4 lane) DisplayPort interface(s), and up to 4 lanes of PCI Express Gen 3.

Different Connection Modes

With Thunderbolt 3 having dynamic detection of the capabilities of the cables and devices that are plugged in, there are several modes that can be detected and activated, in a way generally transparent to the consumer.

If a cable and device supporting Thunderbolt are plugged in, the Thunderbolt silicon activates its highest capability mode and configures four high-speed links at either 10 Gbps or 20 Gbps (depending on cable and device support) to support the Thunderbolt transport. This provides bidirectional data rates of 20 or 40 Gbps.

HC /RO PRAVEEN KUMAR

Acknowledgement

We are highly thankful for reading out this compilation and hope it will be useful for you in day to day professional and personal life. We would like to hear your interest areas, suggestions from you to make this newsletter more informative and interesting. Your views will definitely help us to create this newsletter as an effective medium to reach you with latest development in the fields of communication and technology.

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