

The India 5G update¹



Since its launch in October 2022 by Honourable Prime Minister Shri Narendra Modi, there is 5G hustle in the country. In just 6 months of the service being commercially available, we have crossed significant milestones.

50M+

Active 5G users in India

100M+

Own a 5G smartphone

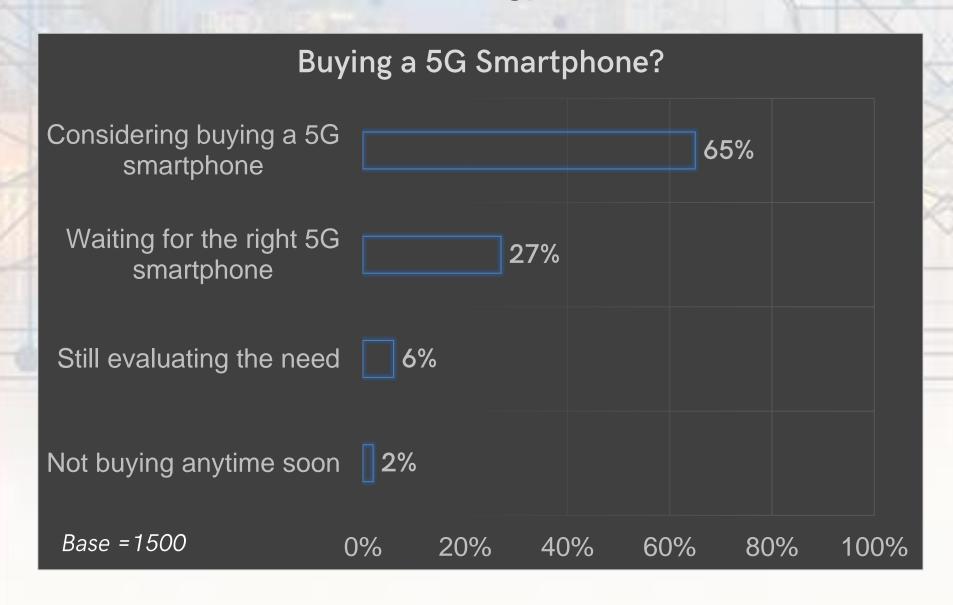
100K+

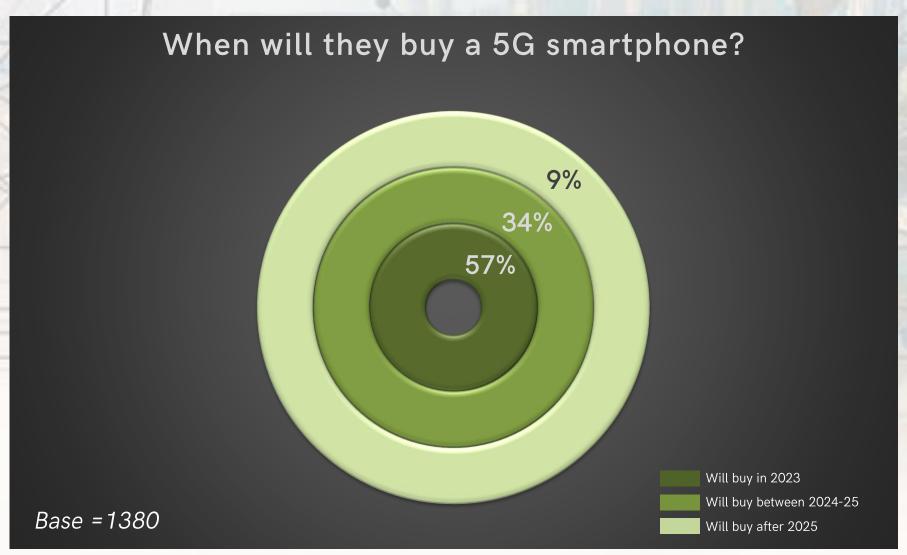
Live 5G BTSs across India

- Over 12% of smartphone users in India are using 5G services; 15% have a 5G enabled smartphone.
- Reliance Jio and Airtel have already launched 5G services, both collectively serve 74% of total cellular active subscribers.
- India expected to cross 200 million 5G subscribers by the end of December 2023.

There is still a lot 5G opportunity! techarc

As the operators expand their 5G footprints and smartphone OEMs widen the 5G smartphone portfolio, especially in the affordable segment (₹10,000 - 15,000) there is going to be a mass adoption of the latest cellular broadband technology.



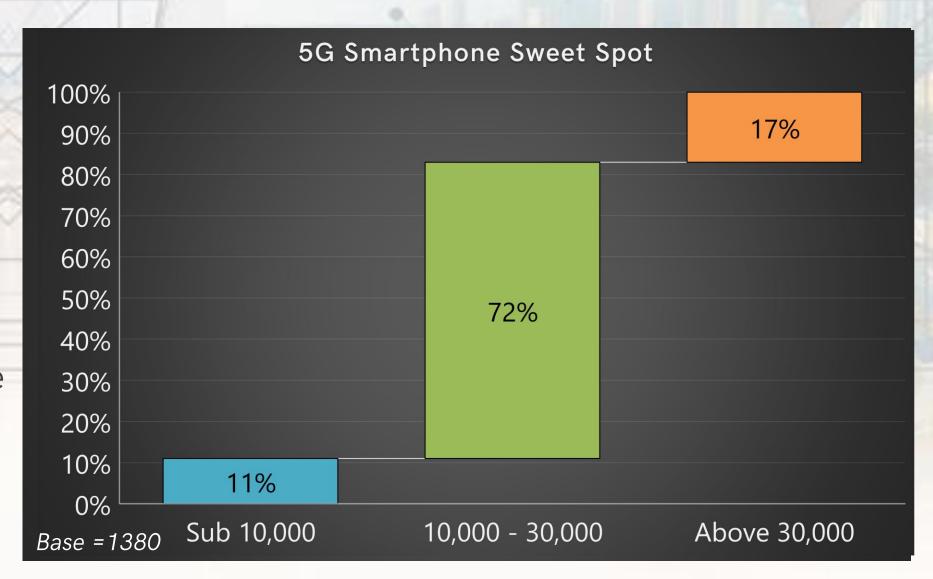


The 5G sweet spot is



Over 70% of the 5G smartphones to be purchased in 2023 and coming few years, are expected to fall within the price range of ₹ 10,000 - 30,000.

- 5G is redefining the structure of the smartphone customer cascading. Unlike the staggered segmentation in 4G and previous technologies, the opportunity here lies in the middle with a growing high-end segment as well.
- Though there is a user base wanting their 5G smartphone in the sub ₹ 10,000 range, OEMs are yet to crack this due to various challenges, many of them being out of their control.

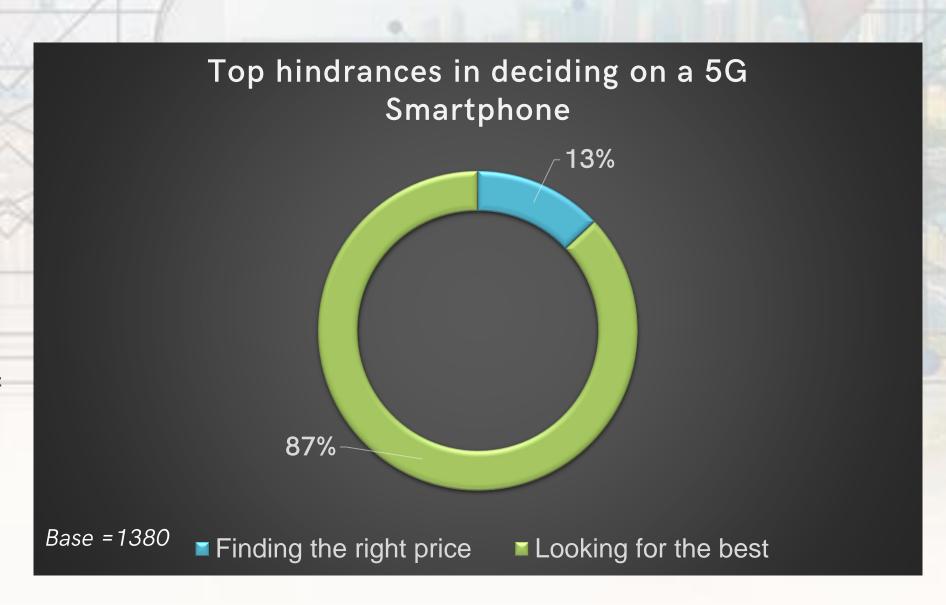


Finding the best, a top priority

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While unavailability of a 5G smartphone at the price suitable to them is delaying their purchase, the top concern is being able to find the best 5G smartphone. Price is a concern for those looking for an affordable 5G smartphone.

- The users understand there are use cases like cloud gaming that will prove the efficacy of a 5G smartphone. However, in the absence of any 5G specific use case live and catching up, they consider other factors that could determine the quality of the phone.
- Price of a 5G smartphone has taken back seat in terms of factors that hinder their purchase by interested consumers who are at different stages of evaluation, but actively considering buying one in next 1-2 years.



5G confusion in consumers' minds techarc

Even the users who own a 5G smartphone have doubts in their minds. However, those considering buying a 5G smartphone have an opaque view of 5G. Some of the doubts they have in mind are reproduced below.

We have heard operators have launched 5G using different technologies. If we buy a 5G smartphone will it work with a particular operator only?

It is said there are different bands in 5G. Will my smartphone support all of them? Is it possible my 5G smartphone will work only at few places?

We see 5G only giving us very high speeds compared to 4G. How do we ensure that we get the smartphone offering best speeds?

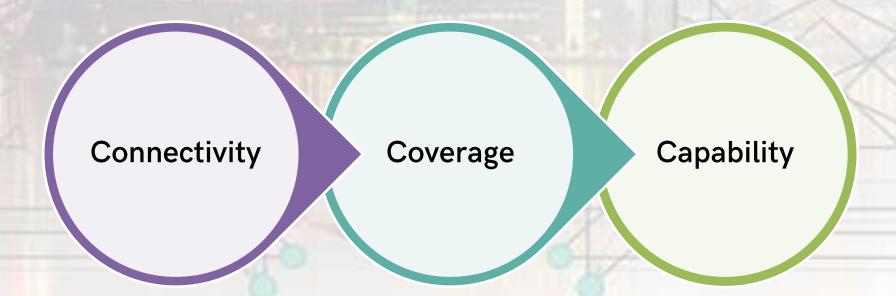
When on mobile network we will get great speeds on 5G. What will happen when we are in Wi-Fi networks? Do 5G smartphones have good Wi-Fi also?

We have seen that there will be new apps and use cases of 5G. How will we know that the phone has all required specifications to support them?

Only the Best addresses their woes techarc

The users shared their interpretation of what could be the Best 5G smartphone along with the importance they give to different factors. Basis this, Best 5G Smartphone framework (3C framework) was designed.

TECHARC'S 3C FRAMEWORK FOR BEST 5G SMARTPHONE



Evaluates if the smartphone can offer seamless, uninterrupted connectivity across any location.

Checks if the smartphone can work with any operator supporting different 5G technologies.

Compares the 5G critical specifications of a smartphone to find out the device with best capability.

- The topmost concern of users is that their 5G smartphone should not have any sorts of limitations in terms of inadequately supporting 5G networks. They should be able to use their smartphones anywhere in any location seamlessly and without any interruption.
- The 2nd ranking concern is that the 5G smartphone should work with any operator's service and should not restrict the right of users to use operator of their preference.
- Lastly, the smartphone should support all 5G use cases in an efficient manner.

And the Best 5G Smartphone is

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Basis user criteria to define the weights and parameters captured in the 3C framework, Motorola emerges as the Best 5G smartphone brand in the maximum opportunity price range of ₹10,000 - 30,000.

INDIA'S BEST 5G SMARTPHONE BRAND 1st 3rd 2nd Techarc Techarc Techarc India's Best **India's Best India's Best Smartphone** Smartphone **Smartphone** Brand **Brand Brand** SAMSUNG motorola 983 966 ₹10,000 - 30,000 price range Score Max = 1000

- The 5G smartphones of these brands appear in all the segments of the range, viz., 10-15k, 15=20k, 20-25k and 25-30k with better 5G relevant specifications, support for all the operators and most critically having maximum number of 5G bands makes these brands the best in the industry.
- Motorola secures 1st rank having all the low and mid bands (F1) of 5G in their smartphones giving users a seamless connectivity to the 5G networks across the country as well as when in international roaming.

Best 5G Smartphone Brands



- These brands also rank comparatively better on specifications and their respective technology generations making them best suited for 5G use cases. For instance, 5G smartphones of these brands in the price range have best chipsets giving them highest clock speeds and other features improving their computational performance and added features that will be leveraged in 5G applications. Similarly, RAM, Display size, Display technology, Refresh rate, Battery capacity and Wi-Fi generation were key specifications evaluated to compare their capability handling of 5G use cases and applications.
- Another critical factor in defining the best 5G smartphone was support for all the operators. At present Jio and Airtel are the only two operators live with their 5G networks based on SA and NSA architectures. However, by now all the smartphone OEMs support this and it no longer remains a competitive edge for any brand. But it remains a critical parameter for offering users a hassle free 5G experience without curbing their freedom of choosing the operator.
- Because of multiple bands supported by these brands in low and mid frequencies, enables them to offer higher and better coverage. It also offers uninterrupted connectivity across the network.

Key Brands Comparison (10-15k) techarc

	moto g51 5G	Vivo T1	Redmi Note 10T	Oppo A53s	Samsung F23
	12 Bands	3 Bands	4 Bands	5 Bands	8 Bands
5G Bands	n1/n3/n5/n7/n8/n20/ n28/n38/n40/n41/n77 /n78	(n40, n77, n78)	(n1, n3, n41, n77, n78)	(n1, n28, n40, n41, n77, n78)	(n1, n3, n5, n8, n28, n40, n41, n78)
Processor	Snapdragon 480+ 5G	Snapdragon 695 5G	MediaTek Dimensity 700 MT6833	MediaTek Dimensity 700 MT6833	Snapdragon 750G 5G
RAM	4 GB	4 GB	4 GB	6GB	4GB
Display	6.8-inch FHD+	6.58-inch FHD+	6.5-inch FHD+	6.52-inch HD+	6.6-inch FHD+
Refresh Rate	120Hz	120Hz	90Hz	60Hz	120Hz
Wi-Fi	Wi-Fi 5	Wi-Fi 5	Wi-Fi 5	Wi-Fi 5	Wi-Fi 5
Battery Capacity	5,000 mAh	5,000 mAh	5,000 mAh	5,000 mAh	5,000 mAh

Key Brands Comparison (15-20k) techarc

	moto g73 5G	Realme 9 Pro+	Samsung M33	Орро К10	Redmi Note 11 Pro+
	12 Bands	6 Bands	8 Bands	8 Bands	7 Bands
5G Bands	n1/n3/n5/n7/n8/n20/ n28/n38/n40/n41/n77 /n78	(n1, n28, n40, n41, n77, n78)	(n1, n3, n5, n8, n28, n40, n41, n78)	(n1, n3, n8, n28, n40, n41, n77, n78)	(n1, n3, n5, n8, n28, n40, n78)
Processor	MediaTek Dimensity 930	MediaTek Dimensity 920	Exynos 1280	MediaTek Dimensity 810 5G	MediaTek Dimensity 920 5G
RAM	8GB	6GB	6GB	8GB	6GB
Display	6.5-inch FHD+	6.4-inch FHD+	6.6-inch FHD+	6.56-inch HD+	6.67-inch FHD+
Refresh Rate	120 Hz	90 Hz	120 Hz	90 Hz	120 Hz
Wi-Fi	Wi-Fi 5	Wi-Fi 6	Wi-Fi 5	Wi-Fi 5	Wi-Fi 5
Battery Capacity	5,000 mAh	4,500 mAh	6,000 mAh	5,000 mAh	4,500 mAh

Key Brands Comparison (20-25k) techarc

		moto g82 5G	Samsung Galaxy A52s	OnePlus Nord CE 2	Xiaomi 11i Hypercharge	Oppo A78 5G (8GB)
/		11 Bands	8 Bands	8 Bands	8 Bands	6 Bands
5G Ban	ds	(n1, n3, n5, n7, n8, n28, n38, n41, n66, n77, n78)	(n1, n3, n5, n8, n28, n40, n41, n78)	(n1, n3, n5, n8, n40, n41, n77, n78)	(n1, n3, n5, n8, n28, n40, n77, n78)	(n1, n5, n8, n28, n41, n78)
Process	sor	Snapdragon 695 5G	Snapdragon 778G 5G	MediaTek Dimensity 900	MediaTek Dimensity 920	MediaTek Dimensity 700
RAM		6GB	4GB	6GB	6GB	8GB
Display		6.6-inch FHD+	6.5-inch FHD+	6.43-inch FHD+	6.67-inch HD+	6.56-inch HD+
Refresh	Rate	120 Hz	120 Hz	90 Hz	120 Hz	90 Hz
Wi-Fi		Wi-Fi 5	Wi-Fi 6	Wi-Fi 6	Wi-Fi 6	Wi-Fi 5
Battery	Capacity	5,000 mAh	4,500 mAh	4,500 mAh	4,500 mAh	5,000 mAh

Key Brands Comparison (25-30k) t



	Motorola edge 30	Oppo Reno8	Samsung Galaxy M53	OnePlus Nord 2T	Poco F4
/	13 Bands	9 Bands	8 Bands	8 Bands	9 Bands
5G Bands	(n1/n2/n3/n5/n7/n8/n 20/n28/n38/n40/n41/ n77/n78)	(n1, n3, n5, n8, n28, n40, n41, n77, n78)	(n1, n3, n5, n8, n28, n40, n41, n78)	(n1, n3, n5, n8, n28, n40, n41, n78)	(n1, n3, n5, n8, n28, n40, n41, n77, n78)
Processor	Snapdragon 778G+ 5G	MediaTek Dimensity 1300	MediaTek Dimensity 900	MediaTek Dimensity 1300	Snapdragon 870 5G
RAM	6GB	8GB	6GB	8GB	6GB
Display	6.5-inch FHD+	6.4-inch FHD+	6.7-inch FHD+	6.43-inch FHD+	6.67-inch HD+
Refresh Rate	144 Hz	90 Hz	120 Hz	90 Hz	120 Hz
Wi-Fi	Wi-Fi 6e	Wi-Fi 6	Wi-Fi 5	Wi-Fi 6	Wi-Fi 6
Battery Capacity	4,020 mAh	4,500 mAh	5,000 mAh	4,500 mAh	4,500 mAh

About the Report



A robust methodology was implemented in this research to substantially establish Best 5G Smartphone brands in India.

Consumer Interpretation

In this step consumers were asked about their 5G smartphone plans, their hindrances about buying a 5G smartphone and the sweet spot of their purchase.

The consumers were further asked to define the pain points and identify parameters which would make a 5G phone, industry's best 5G smartphone.

The survey was conducted among 1500 respondents spread over metro and non-metro cities of the country, with 65% representation from metro cities.

Industry Benchmarking

Basis the data and insights captured in consumer survey, industry benchmarking was done to compare the 5G portfolio of the key smartphone brands operating in the price range with the maximum opportunity, in this case 10,000 to 30,000.

Model wise comparison tables were populated with 5G critical specifications including bands supported, architectures supported, processor attributes, wi-fi generation, display size, type and resolution, battery capacity and RAM of the smartphone to be able to have granular comparison.

Statistical Modelling

Basis data and information of the previous two stages, Techarc 3C framework of best 5G smartphone was developed. Factors and attributes incorporated were as per the feedback of the consumers and weights were defined as per the significance consumers attached to different parameters.

A weighted score was arrived at the brand level by adding model wise score of each 5G smartphone of the brands. Finally, a ranking was obtained by a weighted sum of the 3C's of the brands to identify the best 5G smartphone brands of India.

Research Notes



- The sole purpose of this research was to understand the user perception about 5G smartphones in India and their preferences and buying behaviour.
- The brands selected for this purpose were the popular 5G smartphone brand choices of users in the range that included Samsung, Xiaomi / Redmi, OPPO, Vivo, Realme, Motorola, OnePlus and POCO.
- The research was conducted between April 17th to April 28th including the user survey covering 10 metro and non-metro cities with a sample size of 1,500 respondent. 65% of the respondents were from metro cities.
- The respondent segmentation was done as per the new consumer classification system or New SEC system.
- No part of the research including any claims, citations, attribution by any brand is allowed without prior explicit consent from Techarc.
- Techarc 3C framework for ascertaining best 5G brand is its intellectual property and proprietary to it.
- Techarc is not liable for any legal obligation, including paying any compensation, etc., due to any kind of loss or damage caused by relying on the research findings of this report.



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Research@techarc.net

or visit www.techarc.net