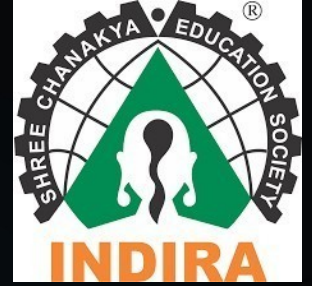


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5G Wireless Technology



By :

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What is 5G



- 5G Wireless: 5th generation wireless technology.
- Complete wireless communication with almost no limitations.
- Can be called REAL wireless world.
- Has incredible transmission speed.
- Concept is only theory not real.

What Does 5G Offers?

- Worldwide cellular phones
- Extraordinary data capabilities
- High connectivity
- More power & features in hand held phones
- Large phone memory, more dialing speed, more clarity in audio & video



Fifth generation

Enhanced
mobile
broadband



5G



Massive
Internet of
Things (IoT)

Mission-
critical
services



Evolution From 1G to 5G

Technology	1G	2G/2.5G	3G	4G	5G
Deployment	1970/1984	1980/1999	1990/2002	2000/2010	2014/2015
Bandwidth	2kbps	14-64kbps	2mbps	200mbps	>1gbps
Technology	Analog cellular	Digital cellular	Broadbandw idth/cdma/ip technology	Unified ip & seamless combo of LAN/WAN/WLAN/PAN	4G+WWWW
Service	Mobile telephony	Digital voice, short messaging	Integrated high quality audio, video & data	Dynamic information access, variable devices	Dynamic information access, variable devices with AI capabilities
Multiplexing	FDMA	TDMA/CDMA	CDMA	CDMA	CDMA
Switching	Circuit	Circuit/circuit for access network&air interface	Packet except for air interface	All packet	All packet
Core network	PSTN	PSTN	Packet network	Internet	Internet
Handoff	Horizontal	Horizontal	Horizontal	Horizontal&Vertical	Horizontal&Vertical

Key Concepts



- Real wireless world with no more limitations with access & zone issues
- Wearable devices
- IPv6, where a visiting care of mobile IP address is assigned according to location & connected network
- One unified global standard
- Smart radio
- The user can simultaneously be connected with several wireless access technology
- Multiple concurrent data transfer path





Hardware of 5G



- 5G Hardware:
- Uses UWB (Ultra Wide Band) networks with higher BW at low energy levels
- BW is of 4000 Mbps, which is 400 times faster than today's wireless networks
- Uses smart antenna
- Uses CDMA (Code Division Multiple Access)

Software of 5G



- 5G Software:
- 5G will be single unified standard of different wireless networks, including LAN technologies, LAN/WAN, WWW- World Wide Wireless Web, unified IP & seamless combination of broadband
- Software defined radio, encryption, flexibility, Anti-Virus

Features of 5G

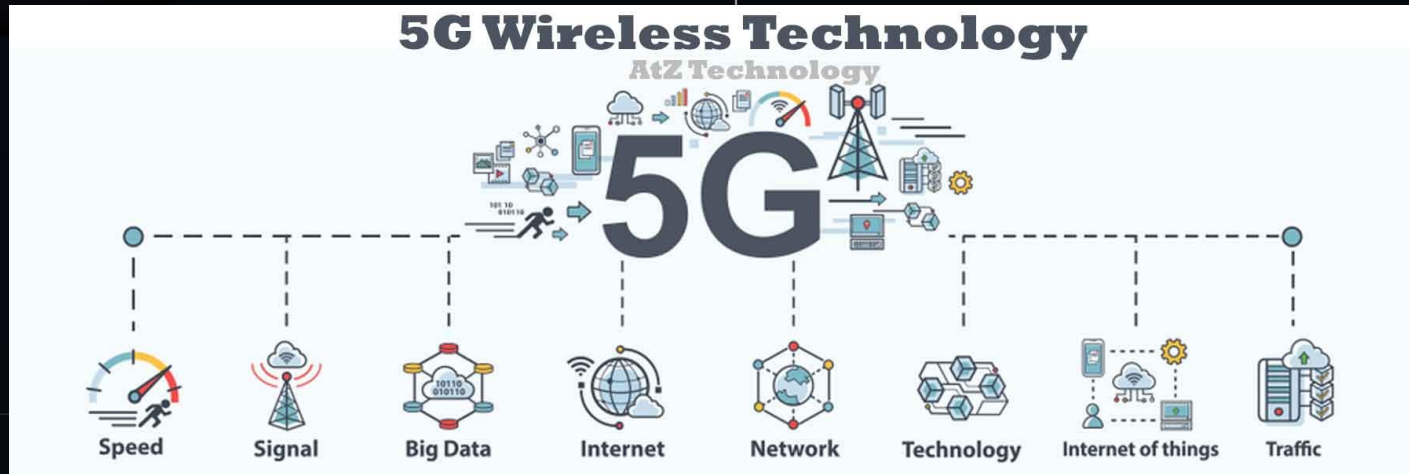


- High resolution for crazy cell phone users
- Bi-directional large BW
- Less traffic
- 25 Mbps connectivity speed
- Enhanced & available connectivity just about the world
- Uploading & Downloading speed of 5G touching the peak (up to 1 Gbps)
- Better & fast solution
- High quality service based on policy to avoid error
- Support virtual private networks
- More attractive & effective
- Provides subscriber supervision tools for fast action

Advantages of 5G



- Data BW of 1 Gbps or higher
- Globally accessible
- Dynamic information access
- Available at low cost



Applications of 5G



- Wearable devices with AI (Artificial Intelligence) capabilities
- Pervasive (Global) networks
- Media independent handover
- Radio resource management
- VoIP (Voice over IP) enabled devices
- With 6th sense technology

