

ANDROID FILE TRANSFER Part 2 FEBRUARY 12, 2015

Universal Serial Bus (USB) is an <u>industry standard</u> developed in the mid-1990s that defines the cables, connectors and <u>communications protocols</u> used in a <u>bus</u> for connection, communication, and power supply between <u>computers</u> and electronic devices.^[2] USB was designed to standardize the connection of <u>computer peripherals</u> (including keyboards, <u>pointing devices</u>, digital cameras, printers, <u>portable media players</u>, <u>disk drives</u> and <u>network adapters</u>) to <u>personal computers</u>, both to communicate and to supply <u>electric</u> <u>power</u>. USB has effectively replaced a variety of earlier interfaces, such as <u>serial</u> and <u>parallel ports</u>, as well as separate <u>power chargers</u> for portable devices.

USB OTG (*On-The-Go*), is an extension of the USB 2.0 specification for connecting peripheral devices to each other. USB OTG devices can communicate with each other without the need to be connected to a PC. For example, you can connect a keyboard, mouse, sd card, or a flash drive directly to a tablet; or a mobile phone can connect to a printer, as long as all the devices are USB OTG-compatible.

Wi-Fi is the name of a popular <u>wireless</u> networking technology that uses radiofrequency waves to provide wireless high-speed <u>Internet</u> and local area <u>network</u> connections. A common misconception is that the term Wi-Fi is short for "*wireless fidelity*," however this is not the case. Wi-Fi is simply a trademarked phrase that means *IEEE 802.11x*. Wi-Fi typically has a range of 300 feet outdoors and 150 feet indoors. Wireless networks in the home typically have an access point called a router.

Bluetooth is a <u>wireless</u> technology standard for exchanging data over short distances, typically up to 30 feet, using short-wavelength <u>UHF radio waves</u>, from fixed and mobile devices, and building <u>personal area networks</u> (PANs). Invented by telecom vendor <u>Ericsson</u> in 1994,^[4] It can connect several devices, overcoming problems of synchronization. When two Bluetooth enabled devices connect to each other, this is called pairing. A fundamental strength of Bluetooth wireless technology is the ability to simultaneously handle data and voice transmissions.

A Personal Cloud is created by connecting an external <u>hard drive</u> to a <u>Wi-Fi</u> router. This enables both wired and wireless computers to access the hard drive and use it for storage or for retrieving files on a local area network, thereby acting like a cloud.

Misc: Internet cloud and E-mail attachments

Wi-Fi Direct, initially called Wi-Fi P2P, is a <u>Wi-Fi</u> standard that enables devices to connect with each other easily without requiring a <u>wireless access point</u>,^[1] for everything from internet to file transfer,^{[2][3]} and to communicate with more than one device simultaneously at typical Wi-Fi speeds.^[4] One advantage of Wi-Fi Direct is the ability to connect devices even if they are from different manufacturers. Only one of the Wi-Fi devices needs to be compliant with Wi-Fi Direct to establish a peer-to-peer connection that transfers data directly between them with greatly reduced setup.

MOBILE PERSONAL CLOUD doesn't have any storage space of its own. Instead, it's a Wi-Fi modem, of sorts, for USB flash drives, memory cards, portable HDDs and SSDs, etc. The Mobile Personal Cloud has dedicated ports for SD and microSD cards with capacities of up to 64 GB, and a USB connector for the rest. A micro-USB port is included as well. Once a storage device is connected, smartphones, tablets and anything else featuring Wi-Fi can access the files on it, or them if more than one is plugged in. Up to five devices (you and yours friends' phones for example) can stream 720p video off them at the same time, or three at 1080p. Sharing pictures and documents is just as easy.

MOBILE HOT SPOT is a portable device (MiFi), or feature on smartphones that provide wireless Internet access on many devices such as your laptop, smartphone, tablet, or portable gaming device, etc. Like MiFi devices from wireless carriers, mobile hotspots typically use cellular providers for <u>3G or 4G Internet access</u>. Mobile hotspots allow multiple devices to connect at the same time.

NFC, or **near-field communication**, is an easy and intuitive technology that allows you to use your Android device for special purposes. An NFC tag can share and link to information such as web pages, social media and all other sorts of other information generally. Other areas where NFC is starting to evolve into are making payments (Google wallet), opening doors secured with contactless locks, logging on to computers and many more. All of these actions have something in common, they require you to place your NFC device near the thing you want to read or interact with. The distance is typically up to 4 inches, however direct contact is best.

File Transfer Protocol (**FTP**) is a standard <u>network protocol</u> used to transfer <u>computer files</u> from one <u>host</u> to another host over a <u>TCP</u>-based network, such as the <u>Internet</u>.

USB 2.0 / 3.0 - Nexus Media Importer / OTG Disk Explorer

WIFI

WiFi Direct

Bluetooth

Monster Mobile Personal Cloud

Internet Cloud Storage

EMail Attachment

ANDROID USB/OTG ADAPTERS





You can not identify an OTG cable by just looking at it













USB 2.0 / 3.0

WIFI - Web PC Suite / WIFI File Transfer

WiFi Direct

Bluetooth

Monster Mobile Personal Cloud

Internet Cloud Storage

EMail Attachment

WEB PC SUITE

What is Web PC Suite?

Web PC Suite is a useful <u>android app</u> which helps users to manage their Android content on PC or Tablet very easily and wirelessly. With the help of this free Android PC Suite users can accommodatingly manage their android phone's gallery, videos, Music and other data on computer without connecting the USB cable.



To use this app you wouldn't have to do any complex setting, only you will have to install the Web PC Suite app on your device and start enjoying. To get started with this app you should have an Android device along with WiFi connection, WiFi Router and Web PC Suite. Once the WiFi connection setup is done with your PC and android phone then you will be able to access all your files on PC browser page comfortably. Let's see - how Web PC Suite app works.

How to Use Web PC Suite to manage Android Files on PC

Firstly, go to the Google play store and **install Web PC Suite app** on your android phone. Once it is successfully installed on your device, open the Web PC Suite app from your phone, on the first screen of this application you will see a web address and an IP address as shown in below screenshot.



USB 2.0 / 3.0

WIFI

WiFi Direct - ShareIT / Fast File Transfer

Bluetooth

Monster Mobile Personal Cloud

Internet Cloud Storage

EMail Attachment





How to use SHAREit to transfer data from Android to Android or PC?

Step 1: Open SHAREit app on your Android device from which the data is to be shared. Select **'Send'**.



Step 2: From here, you can select the content you want to share. Swipe for more options – Photo, App, Contact, Music, Video and File.

- Photo Use this to share photos. Here you'll see the photos arranged in folders. You can
 select photos by selecting from those folders or select each folder as a whole to share.
- App This lists all the installed apps and you can select specific apps to send or send all apps to the other device easily with this option.
- Contact Lists your contacts for easy sharing.
- Music The music in your phone is listed similarly to that of a Music player (this will save you a lot of time). Music is listed as – All songs, Artists, Album and Folder. You can select the music from these lists similarly as we did with the Photos.
- Video Videos in the phone are shown in a similar way as that in 'Photo'.
- File Here you can browse all your files and folders and select particular files and folders you want to share.

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Step 3: The next step is to share those files you have selected from the last step. First thing to do is in this step is to get your other phone/PC ready for receiving. To do that, open SHAREit on the other phone/PC and select 'Receive'.

Step 4: Now, select 'Next' on the first device. Your device will scan for nearby devices. And, when your friend's phone/PC is found, select it. The selected files will be shared now.





USB 2.0 / 3.0

WIFI

WiFi Direct

Bluetooth - Share function / Bluetooth File Transfer

Monster Mobile Personal Cloud

Internet Cloud Storage

EMail Attachment

On Android, you'll need to open the file you want to share — for example, view the photo in the Gallery app — tap the share button, and then select the Bluetooth option. You'll be prompted to set up the Bluetooth pairing between the two devices.





USB 2.0 / 3.0

WIFI

WiFi Direct

Bluetooth

Monster Mobile Personal Cloud - OTG Cloud by Monster Digital

Near Field Communication

Internet Cloud Storage / EMail Attachment



USB 2.0 / 3.0

WIFI

WiFi Direct

Bluetooth

Monster Mobile Personal Cloud

Near Field Communication - Android Beam / Super Beam

Internet Cloud Storage / EMail Attachment

ANDROID BEAM

Many recent Android devices have integrated <u>NFC</u> <u>hardware</u> and support Android Beam. Android Beam allows you to send content between devices just by pressing them back-to-back.

Android Beam is ideal for sharing content – web pages, maps, videos, photos, and more – with other people's phones and tablets. You can quickly transfer content between nearby devices without a long setup process.

Android Beam is supported on android 4.1 (Jellybean) and higher.

Check NFC Support

Before you try to transfer data between two Android devices, you will need to ensure they both support NFC. Many Android smartphones support NFC, as do Google's Nexus 7 and Nexus 10 tablets. However, other Android tablets generally don't come with NFC support.

To check for NFC support, open your device's Settings screen and tap More... under Wireless & networks.



Ensure NFC is present, and that both NFC and Android Beam are enabled. If either feature is disabled enable it

If you don't see the NFC option, your device probably doesn't include NFC hardware. It's also possible that you are using an <u>old version of Android</u>. Android Beam was introduced in Android 4.0, Ice Cream Sandwich.

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VPN	
Tethering & portable hotspot	
NFC	
Allow data exchange when the phone touches another device	<u>×</u>
Android Beam	
Ready to transmit app content via NFC	

Repeat this process on both devices to ensure they both support NFC.

Open the Content You Want to Share

Now you will need to navigate to the content you want to share. For example, here's how you would share various types of content:

- Web Page: Open it in Chrome.
- YouTube Video: Open it in the YouTube app.
- Map Directions or a Location: Open the Google Maps app and pull up the directions or the location.
- Contact Information: Open the contact card in the People app.
- An App: Open its page in Google Play.
- Photos: Open a photo in the gallery. You can also send multiple photos by opening the gallery, long-pressing a photo's thumbnail, and then tapping all the other photos you want to send to select them. With the photos selected, start the beaming process.

Beam the Content

Before you can send content between two devices with Android Beam, they must both be powered on and unlocked. If either device's screen is off, or if either device is at its lock screen, Android Beam won't work.

With both devices on and unlocked, press them back-to-back.



A note about tablets: While lining up two smartphones back-to-back should be simple, this may be a bit more finicky for tablets. For example, if you have a Nexus 7, you can't just press your smartphone against anywhere on the back of the Nexus 7. It must be pressed against the area where the NFC chip is. For the Nexus 7, that's near the upper part of the back, not the lower part, as seen in the photo above. On the Nexus 10, the NFC chip should be located near the rear camera. Of course, if you have two Nexus 7's, you can just press them back-to-back. You should hear a sound when the NFC connection is established, and you will see Touch to beam appear on the screen along with an animated background. Touch the item on the screen and it will appear on the other device's screen.



Note that the S Beam feature included on Samsung Android phones like the Galaxy S III is different from Android Beam. However, Samsung phones also include Android Beam.

The actual data transfer here happens over Bluetooth. NFC is used to easily establish a shortlived Bluetooth connection without any tedious pairing process. For the average user, this should just work like magic. You don't even need to know that Android Beam uses Bluetooth. In fact, you don't even need to enable Bluetooth before using Android Beam. Android handles everything automatically.

SUPERBEAM USING NFC

SuperBeam is an app that aims to take advantage of a range of wireless technologies to juggle files between Android devices. The heavy lifting is done over Wifi or Wifi Direct, with an <u>NFC</u> connection or QR code being used to get things going.

First up, both devices must be running the SuperBeam app. Next, select the file you want to send -- either in the gallery app, or a file manager e.g. Astro, and choose SuperBeam. The app will then ask you if the device you're sending to is on the same network. If so, it'll send your bits over that network; if not, a Wifi Direct connection will eventually be established between the two.

From there you've got a few options. The easiest is NFC -- hold the two devices back-to-back and press the screen on the sending device. Alternatively you can use the "SuperBeam Scanner" app from the app drawer and scan the QR code on the sending device's screen.

Transfer speeds will depend on the Wifi capabilities of the devices (and infrastructure) you're using, but solid transfer rates of up to 20Mbps are possible on a 5GHz Wifi N network. SuperBeam isn't as simple as S Beam or Android Beam, but its ability to transfer just about anything between just about any device makes it more versatile for power users. It's available for free on the Google Play Store for phones and tablets running Android 4.0 and above.