MEmu App Player User Manual



January 2016

www.memuplay.com

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1 About this Document

This is the primary user document of MEmu App Player. In most cases, you will get to know everything you need about how to use this Android emulator. For any other questions, please feel free to contact us at <u>support@microvirt.com</u>.

Official Website:	http://www.memuplay.com
Online Support:	https://www.facebook.com/memuplayer

2 Getting Started

2.1 System Requirement

- Windows XP SP3/Windows Vista/Windows 7/Windows 8/Windows 10
- Intel or AMD CPU (with Virtualization Technology support preferred)
- GPU with OpenGL 2.0+ support (G31, G33, Q33 and Q35 are not supported)
- At least 1 GB memory
- At least 1 GB of free disk space under installation path

Note: Please do NOT try to run MEmu App Player in another virtual machine software.

2.2 Install & Setup

Go to MEmu official website <u>http://www.memuplay.com/</u> and click the Download button to get the latest stable version. Once download completed, double click to run the setup file. If you get an online installer, please make sure you have the internet access during the installation.



2.3 Install App to MEmu

There are two ways to install games or apps in MEmu App Player.

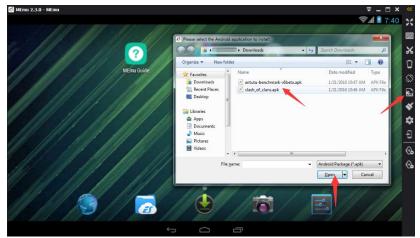
1. Start MEmu App Player, open MEmu Market or Google Play Store, search for the games or apps you want and click Install.



2. Another way, download the APK file of the game or app to your PC, click the APK button

on the side bar and select the APK file from Windows to install.

АРК



2.4 Install App from MEmu to Phone

If you want to sync any game or app from MEmu to your phone, please follow the steps as below.

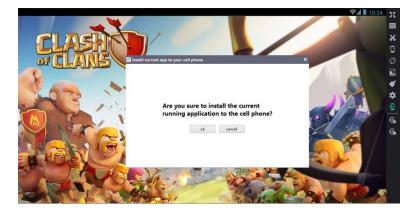
1. Enter into a certain application in the MEmu and click the *Install* button \checkmark on the side bar.



2. Enable the <u>USB Debugging Mode</u> of your phone and connect it to PC through a USB cable. Accept the connection when the confirmation window pops up in your phone.



3. Confirm to install the current application to your phone by Clicking the *OK* button.



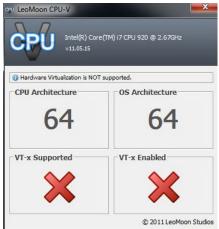
4. Then the current application will be installed to your phone very quickly.



2.5 Enable Hardware Virtualization

MEmu App Player will have better performance if hardware virtualization is enabled on your computer. Most of mainstream Intel and AMD CPUs support hardware virtualization. However, this feature is likely to be disabled by default for some reason. Here we recommend you to enable it by following steps.

- Check the status of hardware virtualization on your computer with a 3rd-party tool: <u>LeoMoon CPU-V</u>.
- 2. If CPU does NOT support hardware virtualization, you will get the result as below. That means nothing could be done in this part.



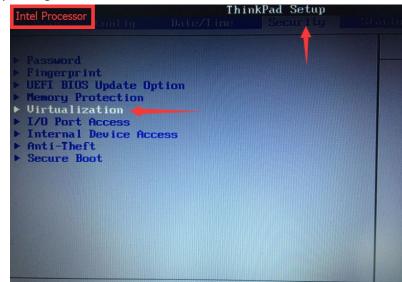
3. If CPU supports hardware virtualization but this feature is disabled, you will get the result as below.

CPU LeoMoon CPU-V	×
CPU Intel(R) Cor v11.05.15	e(TM) 17 CPU 920 @ 2.67GHz
() Hardware Virtualization is sup	ported, but is DISABLED.
- CPU Architecture	OS Architecture
-VT-x Supported	VT-x Enabled
	© 2011 LeoMoon Studios

Please refer to the following steps then:

You have to enable hardware virtualization in the BIOS. Press a designated key repeatedly to enter into BIOS setup page when boots up, look for Virtualization Technology (aka Intel VT or AMD-V), and then enable it. At the end, save and restart the computer to apply the change.

Note: The BIOS settings for Intel VT or AMD-V are usually in the Chipset or Processor menus. The menu names may vary from this guide, the virtualization settings may be found in Security Settings or other non standard menu names.



Advanced	BIOS SETUP UTILITY	AMD Processor
CPU Configuration Module Version: 13.58 AGESA Version: 3.5.3.1		Enable/Disabl Secure Virtua Mode (SVM)
AMD Athlon(tm) II X4 640 Pr Revision: C3 Cache L1: 512KB Cache L2: 2048KB Cache L3: N/A Speed : 3000MHz, NB C1 HT Frequency : 1000MHz Able to Change Freq. : Yes uCode Patch Level : 0x1	Options — Disabled Enabled	← Select S
GART Error Reporting Microcode Updation Secure Untral Machine Mode Cool'n'Quiet	[Disabled] [Enabled] [Enabled]	- 11 Select I +- Change D F1 General I F10 Save and ESC Exit

b. If you have some other virtual machine software in Windows like Hyper-V, you'd better to make sure it's turned off. Otherwise, hardware virtualization might be occupied exclusively.



4. If you get the result as below, it's ready to go with hardware virtualization now.

ceu LeoMoon CPU-V	×
Intel(R) Cor v11.05.15	e(TM) i7 CPU 920 @ 2.67GHz
() Hardware Virtualization is sup	ported, and is ENABLED.
CPU Architecture	OS Architecture
VT-x Supported	VT-x Enabled
	© 2011 LeoMoon Studios

3 Function

3.1 Change Language

Click the *Settings* button on the side bar and go to the *General* setting page. You can change your language preference between English/Simple Chinese/Traditional Chinese. Do not forget, click *Save* and restart MEmu to apply change.

neral Advanced Share	ed GPS			
System settings				
CPU	2			×
Memory	1024			×
Resolution	1280 * 720 (1	92dpi)		•
Custom resolution		Width:	1280	A. V
Custom resolution		Width: Height:	1280 720	
Custom resolution				
Custom resolution Navigation bar position		Height:	720	A. V
		Height:	720	

3.2 Customize Resolution

Click the *Settings* button on the side bar and go to the *General* setting page. There are three frequently-used values in the drop-down box of *Resolution*. You can also change your resolution preference as you want in *Custom Resolution* Box. Do not forget, click *Save* and restart MEmu to apply change.

eneral Advanced Shared	I GPS	
System settings		
CPU	2	
Memory	1024	×
Resolution	1280 * 720 (192dpi) 1280 * 720 (192dpi)	•
	1440 * 810 (216dpi) 1920 * 1080 (288dpi)	
Custom resolution	Width:	1280 🛓
	Height:	720
	DPI:	192
Navigation bar position	Bottom	Ŧ
Language	English	Ŧ

3.3 Customize CPU and Memory

Click the *Settings* button on the side bar and go to the *General* setting page. You can set CPU core number and memory size as needed. Please note that the values shall not exceed the upper limit of the PC you have and also make sure Windows has enough memory to function properly. Do not forget, click *Save* and restart MEmu to apply change.

neral Advanced Shar	ed GPS			
System settings				
CPU	2			A V
Memory	1024			
Resolution	1280 * 720 (192dpi)		•
Custom resolution		Width:	1280	A W
		Height:	720	A. W
		DPI:	192	× v
Navigation bar position	Bottom			•
Language	English			•
Language	English			•

Note: You are allowed to increase the number of CPU core only if the hardware virtualization feature is enabled on your PC.

3.4 Customize Phone Brand and Model

Click the *Settings* button on the side bar and go to the *Advanced* setting page. You can set phone brand and model as you want. Do not forget, click *Save* and restart MEmu to apply change.

neral Advanced Share	ed GPS	
Advance		
Mobile phone brand	Microvirt	
Mobile phone model	MEmu	
IMEI Settings	133524646831486	Generate
Mobile phone number	+8617635642741	Generate
Sensor		
Virtual keyboard		
Show fullscreen		
Root mode		
Hide Toolbar		
Sync time		

3.5 Customize Phone Number and IMEI

Click the *Settings* button on the side bar and go to the *Advanced* setting page. You can set phone number and IMEI as you want. You can also click the *Generate* button to make it random. Do not forget, click *Save* and restart MEmu to apply change.

eral Advanced Shar	ed GPS	
Advance		
Mobile phone brand	Microvirt	
Mobile phone model	MEmu	
IMEI Settings	133524646831486	Generate
Mobile phone number	+8617635642741	Generate
Sensor		
Virtual keyboard		
Show fullscreen		
Root mode		
Hide Toolbar		
Sync time		

3.6 Enable Sensor for Windows Tablet

Click the *Settings* button on the side bar and go to the *Advanced* setting page. You can check Sensor box, click *Save* and restart MEmu to apply change. With this function, MEmu will receive sensor information from Tablet smoothly and you can enjoy Android game on Windows tablet device.

eneral Advanced	Shared GPS	
Advance		
Mobile phone bra	nd Microvirt	
Mobile phone mod	1 MEmu	
IMEI Settings	133524646831486	Generate
Mobile phone numb	er +8617635642741	Generate
Sensor		7
Virtual keyboar	L E	7
Show fullscreen	E.	7
Root mode		7
Hide Toolbar	E	3
Sync time	E	1
	Save	

3.7 Enable Virtual Keyboard

Click the *Settings* button on the side bar and go to the *Advanced* setting page. You can check virtual keyboard box, click *Save* and restart MEmu to apply change.

General	Advanced	Share	d GPS		
Advan	ce				
Ma	bile phone br	and	Microvirt]
Mo	bile phone mo	del	MEmu		
	IMEI Settings		13352464683148	6	Generate
Mo	bile phone num	ber	+8617635642741		Generate
	Sensor				
۷	'irtual keyboa	rd			
:	Show fullscree	n			
	Root mode				
	Hide Toolbar				
	Sync time				
			Save		

With this function, you can enter character without physical keyboard. It's very useful for Windows tablet device.

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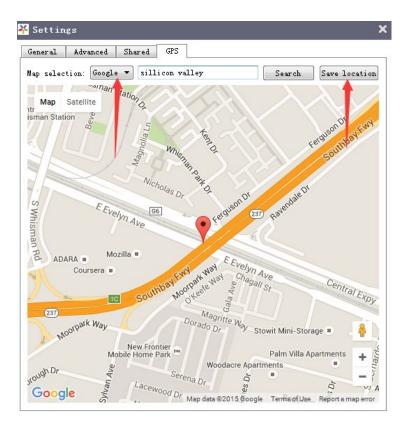
3.8 Enable Root Mode

Click the *Settings* button on the side bar and go to the *Advanced* setting page. You can check root mode box, click *Save* and restart MEmu to apply change.

eneral	Advanced	Shared	GPS	
- Advanc	2e			
Mo	bile phone b	rand	Microvirt	
Mo	bile phone m	odel	MEmu	
	IMEI Setting	;s	133524646831486	Generate
Mot	oile phone nu	mber	+8617635642741	Generate
	Sensor			
v	irtual keybo	ard		
ŝ	Show fullscre	en		
	Root mode			
	Hide Toolbaa	r		
	Sync time			

3.9 Change Map Location

Click the *Settings* button on the side bar and go to the *GPS* setting page. You can set the map engine, then drag the map and click the place where you want to locate yourself, or search the destination in the *Search* field. Once located yourself to the desired place, click *Save Location*, otherwise your setting won't take effect.



3.10 Change Share Folder

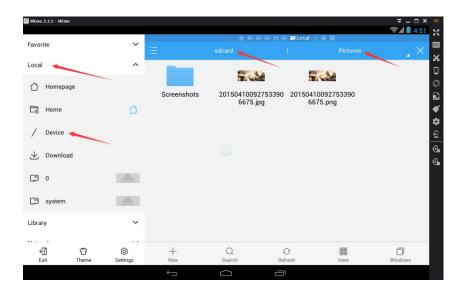
Click the *Settings* button on the side bar and go to the *Shared* setting page. There are four different shared folders of *Music, Video, Picture* and *Download*. You set them respectively to share data between MEmu and Windows.

neral	Advanced	Shared GPS	
-Musi	e		
Share	e folder path	C:\Users\Jason\Music\MEmu Music	Browse
- Vi dea	0		
Share	e folder path	C:\Users\Jason\Videos\MEmu Video	Browse
Picto	re		
Share	e folder path	C:\Users\Jason\Pictures\MEmu Photo	Browse
Down	Load		
Share	e folder path	C:\Users\Jason\Downloads\MEmu Download	Browse
-		Save	

Once you copied files to the shard folder in Windows, click the *ES* icon in the home page of MEmu and then you can see the files in the corresponding library, like Images. As you can see, all the screenshots are saved there too.

Favorite Cocal	
Favorite Cocal Cocal	<
Local Local	× 0
Local	Ū
Library	
	8.
Pictures(2) Screenshots(1)	*
United (1)	\$
J Music	Ð
	-
▶ Movies	•
	•
E Documents	
APP	
Network 🗸	
Tools V	
Exit Theme Settings New Search Refresh View Windows	

In fact, you can also get these files in the corresponding directory, like /sdcard/Pictures.



3.11 Change Screen Orientation

Click the *Rotate* button on the side bar to switch the orientation between landscape and portrait. Please note that MEmu App Player will adjust the orientation automatically because application may require a certain orientation.

3.12 Take Screen Shot

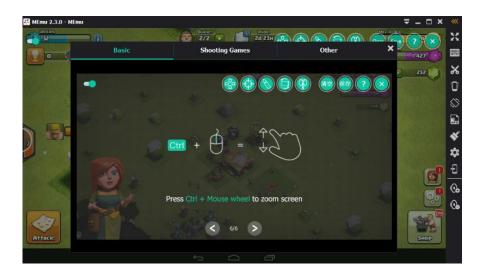
Click the *ScreenShot* button on the side bar to take a snapshot of your phone screen. The PNG screenshots file will be automatically saved in your picture library. Also you can get it from your shared folder in Windows.

3.13 Shake Screen

Click the *Shake* button \lor on the side bar to simulate the physical shake action of your phone. This is a common function of smartphone and many apps use it as input gesture.

3.14 Zoom in and out (Multi-touch)

Scroll the mouse wheel while holding down the *Ctrl* key. It exactly simulates the behavior of zoom in and out. In addition, you can also try with F2 or F3.



3.15 Set Keyboard Mapping

Click the *Keyboard* button on the side bar after you enter into a certain game. You may follow below steps to setup keyboard mapping for easy control.

- 1. Drag the WASD key to the place where the movement key spot locates on the screen.
- 2. Drag the *Select & Attack* key to the place where the attack key spot locates on the screen. As the name suggests, it acts as a combination of select and attack through right click your mouse. It's normally applied in ARPG game.



3. Drag the *Shoot* key vot the place where the shoot key spot locates on the screen.

Drag the Shoot Perspective key 😳 to the place where the front sight spot locates. As

the name suggests, Shoot and Shoot Perspective keys are normally applied in shooting game. Once saved, right click mouse to activate them in the game.



- 4. For accelerometer control, click the *Gravity* key and assign key to the direction of tilt. There are four directions supported and you may map them as needed.
- 5. For slide screen operation, hold the left mouse button down and drag the mouse pointer toward the direction of slide screen, then assign a key to map this operation. By the way, *WASD* key functions identically as slide operation in running games.



Note: When you want to type message in the game, click the switch \bigcirc on the top left corner or press shortcuts "*Alt* + *A*" to avoid keyboard occupation temporarily. Note: You can also get help info about keyboard mapping in the MEmu by clicking the *Help*

key

3.16 Set Joystick Mapping

In addition to keyboard, you can control your character with joystick easily. Please follow below steps to setup joystick mapping.

1. Connect the joystick to your PC and open the properties of this device.

~		
	Control Penel +	• 49 Search Control Panel
	Adjust your computer's settings	View by: Category *
	System and Security Review your computer's status Back up your computer Find and fix problems Network and Internet Connect to the Internet View network status and tasks Choose homegroup and sharing options	User Accounts Change account type Appearance and Personalization Change detkop background Adjust screen resolution
	Choise nomegroup and sharing options Hardware and Sound Yes devices and printee Add a device Connect to a projector Adjust commonly used mobility settings	Clock, Language, and Region Change keyboards or other input methods Change display language Ease of Access Let Windows suggest settings Ut Windows suggest settings
	Programs Uninstall a program Get programs	
Printers	s (2) Game controller settings Logitich Dua Action and Faxes (5)	
	Fouk Reader PDF	soft XPS ent Writer Send To OneNote 2013
🖉 Gar	ne Controllers	
27	These settings help you configure the game co your computer.	
Insta	alled game controllers	
Co	ontroller	Status
	gtech Dual Acton	Properties
		ок

2. Press the buttons of joystick and make sure they response properly in the properties page.

ettings	Test	
Test th need t	e game controller. If o be calibrated. To c	the controller is not functioning properly, it may alibrate it, go to the Settings page.
Axes		Z Avis
2	+	Z Rotation
X Axis	/Y Axis	
Butto		Point of View Ha
		••••
•		(•)
5		\bigcirc
	10100	

3. Download <u>JoyToKey_en.zip</u>, unzip it and open *JoyToKey.exe* with administrator privileges. Press the buttons of joystick and make sure they response properly in the Joystick 1 tab.

le(F) Settings(<u>S</u>) Suspend Help(<u>H</u>)					
efault	Joystick 1	Options			
	Button	Function	Auto	Comment	
	Stick1: \leftarrow	Disabled	وبالمعاد		
	Stick1: →	Disabled			
	Stick1: 个	Disabled			
	Stick1: ↓	Disabled			
	Stick2: ←	Disabled			
	Stick2: →	Disabled			
	Stick2: ↑	Disabled			
	Stick2: ↓	Disabled			
	POV: 1	Disabled			
	POV: →	Disabled			
	POV: V	Disabled			
	POV: ←	Disabled			
	Button 1	Disabled			
	Button 2	Disabled			
	Button 3	Disabled	222		
	Button 4	Disabled			
	Button 5	Disabled			
	Button 6	Disabled	()		

4. Enter into a certain game and set keyboard mapping as usual.



5. Assign the buttons of joystick to the keyboard mapping accordingly one by one.

oose one function o	ategory for this button	
isabled Keyboard	Keyboard 2 Mouse Mouse 2 Special	
eyboard emulation : Ba	sic	
A	Assign special keys	
Disabled		
Disabled	Mouse L-Click v to Key1 v Assign	
Disabled		
tabé altab an aném bay	A should be a should be a should be should be a should be as	
right-click an entry box	x, to clear the assignment or to assign special keys.	
	r, to clear the assignment or to assign special keys. processed from the top to bottom.	
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Ceyboard emulation is		
Ceyboard emulation is	processed from the top to bottom.	
Keyboard emulation is	processed from the top to bottom.	
Keyboard emulation is	processed from the top to bottom.	onc
Keyboard emulation is f you combine Alt or C uto Repeat and Toggle Auto Repeat	processed from the top to bottom. trl key, be careful with the order of keys.	onc
Keyboard emulation is f you combine Alt or C uto Repeat and Toggle Auto Repeat Start auto-repeat	processed from the top to bottom. trl key, be careful with the order of keys. times per second or 1 repeat per second at after certain delay 700 milli-seconds	ond
Keyboard emulation is f you combine Alt or C uto Repeat and Toggle Auto Repeat	processed from the top to bottom. trl key, be careful with the order of keys. times per second or 1 repeat per second at after certain delay 700 milli-seconds	onc
Keyboard emulation is f you combine Alt or C uto Repeat and Toggle Auto Repeat Start auto-repeat	processed from the top to bottom. trl key, be careful with the order of keys. times per second or 1 repeat per second at after certain delay 700 milli-seconds	onc
Keyboard emulation is f you combine Alt or C uto Repeat and Toggle Auto Repeat Start auto-repeat Toggle between Of	processed from the top to bottom. trl key, be careful with the order of keys. times per second or 1 repeat per second at after certain delay 700 milli-seconds	

File(<u>F</u>) Settings(<u>S</u>) Suspend Help(<u>H</u>)					
Default	Joystick 1	Options			
	Button	Function	Auto	Comment	-
	Stick1: ←	А			
	Stick1: →	D			
	Stick1: 个	W			
	Stick1: 🗸	S			-
	Stick2: ←				
	Stick2: →	Disabled			
	Stick2: 个	Disabled			7
	Stick2: 🗸	Disabled			
	POV: ↑	Disabled			
	POV: →	Disabled			
	POV:↓	Disabled			
	POV: ←	Disabled			
	Button 1	к			
	Button 2	Disabled			
	Button 3	Disabled			
	Button 4	Disabled			
	Button 5	Disabled			
	Button 6	Disabled			
Create Rename Copy Delete	Edit b	outton assignment	Bulkas	signment wizard	

6. Save the assignments at the end.

e(F) Settings(S) Suspend Help(H	Joystick 1	0			
Save 🛋	JOYSLICK 1	Options			
	Button	Function	Auto	Comment	
Rename	Stick1: ←	A			
Сору	Stick1: →	D			100
Delete	Stick1: 1	w			
Open file folder in Explorer	Stick1:	S			
Open me tolder in Explorer	Stick2: ←	Disabled			
Exit (X)	Stick2: →	Disabled			
	Stick2: 1	Disabled			
	Stick2:				
	POV: 个	Disabled			
	POV: →	Disabled			
	POV: ↓	Disabled			
	POV: ←	Disabled			
	Button 1	к			
	Button 2	Disabled			
	Button 3	Disabled			
	Button 4	Disabled			
	Button 5	Disabled			
	Button 6	Disabled			

Note: You can also map mouse operations with joystick if you want. The only difference is in step 5, assign the buttons of joystick to the mouse operations.

hoose one func	tion catego	ry for this t	outton					_
		yboard 2	Mouse	Mouse 2	Specia	•		
louse emulation		/		_				
Cursor mover	ment	Wheel	l rotation 0		Analog acc Towards r accelerate	naximu	m input,	
-35		-		E	1		о с	-
Mouse click		-						
□ Left I	Wheel (m	iddle)		ight	Button4	Г	Button5	
				0				
Adjust mouse cur	rsor speed w	hile the butto	on is pressed					4
Adjust mouse cur	rsor speed w	hile the butto	on is pressec	-)%	Default	
	-}	hile the butto		- 	, 100)%	Default	
	oggle				, 100		Default	ond
uto Repeat and T	oggle	, time	es per secon	d				ond
uto Repeat and To	oggle	time certain delay	es per secon	d	1 repeat per			ond
🗖 Start auto	oggle	time certain delay	es per secon	d	1 repeat per			ond

Note: Please make sure you launch JoyToKey.exe with administrator privileges.

3.17 Cleanup Memory

Click the *Cleanup* button on the side bar to kill all background processes in the Android to reclaim memory. You may try to speed up MEmu through this function whenever necessary.

3.18 Mange Multiple Instances

There are two shortcuts of MEmu App Player on your desktop after installation. One is *MEmu*, the other is *MEmu* - *Multiple Instances Manager*.

If you want to play multiple Android games simultaneously, double click the shortcut to start *Multiple Instances Manager*. Click the *Create* button to create several instances of MEmu and run them as you want, or you can clone an existing instance of MEmu by clicking the *Clone* button. In addition, you can type any note in the *Note* column.

				Note
Emu	D	Clone	Export	Type your notes here!
Emu_1		Clone	Export	Clone from MEmu
1Emu_2	D	Clone	Export	Clone from MEmu

In theory, there is no limit on the number of running MEmu instances, as long as your PC's hardware resource is capable to support, especially memory size. For example, you can play Clash of Kings, Clash of Clans and Boom Beach in a big screen at the same time.



3.19 Import and Export Data

When re-install *MEmu App Player*, apps and user data will be refreshed along with Android image. In *Multiple Instances Manager*, you are allowed to backup/restore these data by simple two steps.

- 1. Click the *Export* button to backup your apps/data into a certain ova file.
- 2. Click the Import button to restore your apps/data from that specific ova file.

1020	-		Note	
MEmu	► Ū	Clone Expo	ort	-
MEmu_1	► 	Clone Expo	Import from test.o	va

Note: The ova file is likely to be very large if you installed a lot of apps before, so the backup or restore process will be time-consuming.

Note: The online upgrade process of MEmu will remain the apps and user data.

4 **Optimization**

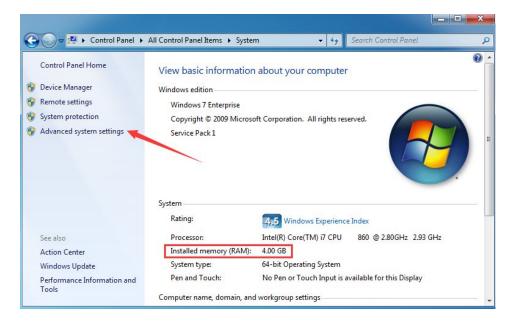
4.1 Virtual Memory

You can speedup MEmu App Player to some extent by enlarging virtual memory. We recommend you to optimize it by the following steps:

1. Right click on the *My Computer* icon on the Windows desktop and then click *Properties* from the context menu.

	Open
0	Manage
9	Scan for threats
	Map network drive
	Disconnect network drive
	Create shortcut
	Delete
	Rename
	Properties

2. Click the *Advanced system settings* tab on the left panel. As you can see, there is 4GB physical memory installed in this system. We are going to enlarge virtual memory (swapped from disk) size to keep MEmu running more smoothly.



3. Choose the Advanced tab of System Properties panel and click the Settings button.

Hardware	Advanced	System Protection	Remote
goed on as	n Administra	tor to make most of th	hese change
	abadulina m	amany usana and uir	tual mamanu
, processor s	cheduling, m	entory usage, and vir	tual memory
			C-W
			Settings
and colored to			
igs related to	s your logon		
			Cattinger
			Settings
ecoverv			
1	ure and deb		
p, system for		agging information	
			Settings
			Jeungs
		22	
			ent Variables
		Environme	rit valiables
		Environme	TIL Valiable
		Environme	FIL Valiables
	gged on as , processor s ngs related to	gged on as in Administra , processor scheduling, m ngs related to your logon lecovery	gged on as an Administrator to make most of the processor scheduling, memory usage, and vir

4. Choose the *Advanced* tab of Performance Options panel and click the *Change* button.

isual Effects	Advanced	Data Executio	on Preventio	n
Processor s	cheduling			
Choose ho	w <mark>to alloca</mark> te	processor res	ources.	
Adjust for	best perform	ance of:		
Program	ns	🔘 Backgrou	nd services	
Virtual mem	iory			
A paging fil if it were R		on the hard dis	k <mark>that Winc</mark>	lows uses as
Total pagin	g file size for	all drives:	4031 M	3
			-	Change
		ОК	Cancel	Apply

5. Uncheck the *Automatically manage paging file size for all drives* box on the top and then start to configure virtual memory (paging file) manually. As you can see, there are two disk drives in this system. Usually it's suggested to allocate twice size of physical memory of virtual memory from the non-system drive. For the sake of recording system errors, allocate a minimum size of virtual memory from system drive. It's also allowed to allocate a normal virtual memory in the system drive if there is only one drive.

6. Select system drive (C:), choose *Custom size* and input 200MB as *Initial size* and 200MB as *Maximum size* (200MB is the minimum size of virtual memory). Then click the Set button to apply.

Paging file size for eac Drive [Volume Label]	
C: [SYS]	200 - 200
Z: [PAK]	4096 - 8192
Selected drive:	C: [SYS] 41521 MB
Space available:	41521 MB
O custom size:	-
Initial size (MB):	200
Ma <u>x</u> imum size <mark>(M</mark> B):	200
System managed s	size
问 <u>N</u> o paging file	Set
fotal paging file size f	or all drives
Minimum allowed:	16 MB
Recommended:	6046 MB
Currently allocated:	9127 MP

7. Select one of non-system drive (Z:), choose *Custom size* and input 4096MB as *Initial size* and 8192MB as *Maximum size* (8192MB is twice size of physical memory). Then click the Set button to apply.

Paging file size for ea	ch drive
Drive [Volume Label]	Paging File Size (MB)
C: [SYS]	200 - 200
Z: IBAKI	4096 - 8192
Selected drive:	Z: [BAK]
Space available	53088 MB
Output of the state of the s	
Initial size (MB):	4096
Ma <u>x</u> imum size (MB):	8192
System managed :	size 🗡
No paging file	<u>S</u> et
Total paging file size f	for all drives
Minimum allowed:	16 MB
Recommended:	6046 MB
Currently allocated:	4031 MB

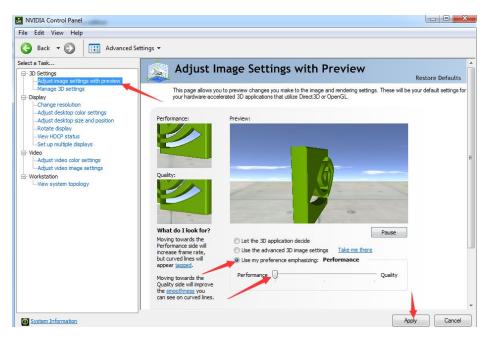
Note: Please make sure there is enough space in the disk drive for the virtual memory allocation (paging file).

4.2 NVIDIA Graphic Card

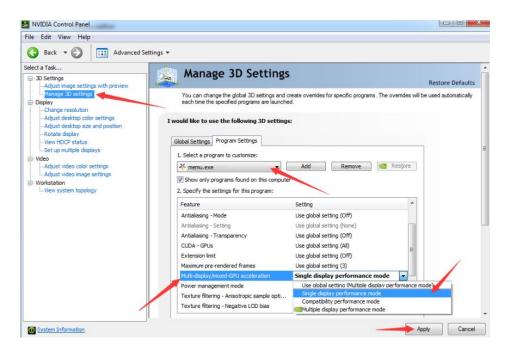
1. Right click on the Windows desktop and then click *NVIDA Control Panel* from the context menu. Otherwise, you need to install proper NVIDIA graphic driver firstly.

	View	•
	Sort by	•
	Refresh	
	Paste	
	Paste shortcut	
	NVIDIA Control Panel	
Ð	SVN Checkout	1
R	TortoiseSVN	•
	New	•
	nView Properties	
E	Screen resolution	
	Gadgets	
	Personalize	

2. Go to *Adjust image settings with preview* under *3D Settings* tab as below. Select *Use my preference emphasizing* on the right panel and set it as *Performance* at the left extreme.



3. Go to Manage 3D settings under 3D Settings tab as below. Click Program Settings tab on the right panel and add Memu.exe by clicking the Add button. Select Multi-display/mixed-GPU acceleration feature and choose Single display performance mode.



4. Then select *Texture filtering - Quality* and choose *High performance*. Finally click the *Apply* button at the bottom right hand side of the window.

NVIDIA Control Panel		and the sine of			
File Edit View Help					
G Back • S Advanced Set	tings 🔻				
Select a Task	Managa 2D Cattings				
- 3D Settings	Manage 3D Settings		Restore Defaults		
Manage 3D settings	You can change the global 3D settings and create overrides for specific programs. The overrides will be used automatically each time the specified programs are launched.				
Adjust desktop color settings Adjust desktop size and position Rotate display	I would like to use the following 3D settings	s			
View HDCP status	Global Settings Program Settings				
Set up multiple displays	1. Select a program to customize:				
Adjust video color settings	🔆 memu.exe	Add Remove Restore			
LAdjust video image settings	Show only programs found on this computer 2. Specify the settings for this program:				
	Feature	Setting ^			
	Maximum pre-rendered frames	Use global setting (3)			
	Multi-display/mixed-GPU acceleration	Single display performance mode			
	Power management mode	Use global setting (Adaptive)			
	Texture filtering - Anisotropic sample opti Texture filtering - Negative LOD bias	On Use clobal setting (Allow)			
	Texture filtering - Quality	High performance			
	Texture filtering - Trilinear optimization	Use clobal setting (Ouality)	/		
	Threaded optimization	High quality			
	Triple buffering	@Quality Performance			
	Vertical sync	High performance			

4.3 AMD Graphic Card

1. Right click on the Windows desktop and then click *AMD Catalyst Control Center* from the context menu. Otherwise, you need to install proper AMD graphic driver firstly.

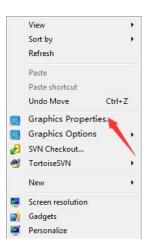
æ	AMD Catalyst Control Center				
	View Sort by Refresh				
	Paste Paste shortcut				
	New	•			
	Screen resolution Personalize				

2. Go to 3D Application Settings under the Gaming tab as below. Add Memu.exe in the column of Application Settings. Then select Texture Filtering Quality under Texture Filtering category and choose Performance. Finally click the Apply button at the bottom right hand side of the window.



4.4 Intel Integrated Graphic Card

1. Right click on the Windows desktop and then click *Graphics Properties* from the context menu. Otherwise, you need to install proper Intel integrated graphic driver firstly.



2. Go to *Current Settings* under *3D* tab as below. Then choose *Performance* in the *General Settings*. Finally click the *Apply* button at the bottom right hand side of the window.

Intel® HD	Graphics Control	Panel		- □ ×
Customize your grap settings to enhance y visual experience.				Options and Support
	Video	1	Power	
Intel® HD G 🕞 3D	raphics Control Pane	ľ		- □ ×
Select Profile	Application Optimal Mode	1	General Settings	0
Current Settings 💊	✓ Enable Disable		✓ Performance	
	Multi-Sample Anti-Aliasing	0	Balanced Mode	
	✓ Use Application Settings		Quality	
	Turn Off		Custom Settings	
	Conservative Morphological Anti-Aliasing	0		
	Override Application Settings			
	Enhance Application Settings			
	✓ Turn Off			
				
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Note: Please try to use discrete graphics instead of integrated graphics if you have multiple choices.

End of File