

How to installation OS for NVR7800

Application Notes

Version <1.0>



Preface

This application note guide users step by step to install OS for NVR7800 **Note**: In this case we use WIN10 enterprise as an make an example.

Scope

Product model	Firmware version
NVR7800	EV version:5.11I.02 or above
	Boot record version:1.29D or above

Here we have 5 steps in total; you can find each step in the following pages.

- Step 1. Boot up WIN10 drive.
- Step 2. Enter BIOS and change ACPI to RAID mode.
- Step 3. Create GhostOS RAID.
- Step 4. Re-Clone OS image and install driver.
- Step 5. Install EonOneLite

Step 1. Boot up WIN10 drive.

Please download the Rufus first.

Note: Rufus is a utility that helps format and create bootable USB flash drives, such as USB keys/pen drives, memory sticks, etc..

https://rufus.akeo.ie/?locale=en_US

1.1 Please select the bootable USB flash drives.

🖋 Rufus 3.1.1320	– 🗆 X
Drive Properties	
Device	
NO_LABEL (E:) [4.1GB]	~
Boot selection Disk or ISO image (Please select)	✓ Ø SELECT
Partition scheme	Target system
MBR ~	BIOS (or UEFI-CSM) ~ ?
 Show advanced drive properties 	
Format Options ———	
Volume label	
4.1GB	
File system	Cluster size
FAT32 \lor	4096 bytes (Default) 🛛 🗸 🗸
 Show advanced format options 	
Status	
READY	
🔇 () 幸 ⊞	START CLOSE
1 device found	

1.2 Select and prepare to install the media from ISOs file.

🔗 Rufus 3.1.1320	– 🗆 X
Drive Properties —	
Device NO_LABEL (E:) [4.1GB]	~
Boot selection win10entx64_ent_1607.iso	✓ Ø SELECT
Standard Windows installation	~
Partition scheme GPT ~	Target system UEFI (non CSM) \checkmark ?
 Show advanced drive properties Format Options Volume label CENA_X64FREV_EN-US_DV5 	
File system	Cluster size
Show advanced format options Status	4096 bytes (Default) 🗸
READY	
§ i) ≇ ⊞	START CLOSE
Using image: win10entx64_ent_1607.iso	

1.3 Select MBR then press Enter.

🖉 Rufus 3.1.1320		_		×
Drive Properties —				
Device				
NO_LABEL (E:) [4.1GB]				\sim
Boot selection				
win10entx64_ent_1607.iso	~	\oslash	SELEC	CT .
Image option				
Standard Windows installation				\sim
Partition scheme	Target sys	tem		
MBR ~	BIOS (or	UEFI-CS	M)	~ ?
 Show advanced drive properties 				
Volume label CENA_X64FREV_EN-US_DV5				
File system	Cluster siz	e		
NTFS ~	4096 byte	ıs (Defa	ult)	\sim
 Show advanced format options 				
Status ———				
READY				
S i ž II	STAR	т	CLOS	SE .
Using image: win10entx64_ent_1607.iso				

1.4 This process will format data in USB drive, press OK to continue.

🖉 Rufus 3.1.1320	_	
Drive Properties		
Device		
NO_LABEL (E:) [4.1GB]		\sim
Boot selection		
win10entx64_ent_1607.iso	~ ⊘	SELECT
Image option		
Standard Windows installation		\sim
Partition scheme	Target system	
To continue with this operation CANCEL.	n, click OK. To quit	click Cancel
\checkmark Show advanced format options		
Status —		
READY		
© û ≇ ⊞	START	CANCEL
Using image: win10entx64_ent_1607.iso		

1.5 All process will takes about 10 minutes, when process is done it will show "Ready" then please plug out the USB boot up drive.

🖋 Rufus 3.0.1304	-	-		×
Drive Properties —				
• Device				
Ubuntu 18.04 LTS amd64 (G:) [8GB]				\sim
Boot selection				
ubuntu-18.04-desktop-amd64.iso	~ 📀)	SELEC	т
Partition scheme	Target system			
MBR ~	BIOS or UEFI			\sim
 Show advanced drive properties 				
Format Options Volume label Ubuntu 18.04 LTS amd64				
File system	Cluster size			
FAT32 (Default) \checkmark	4096 bytes (D	efault)	\sim
 Show advanced format options 				
Status				
READY	(
S) (i) ≵ III	START		CLOS	ε
1 device found			0	0:00:22

1.6 Find another USB and put Intel driver to prepare for install process.

Note: Different OS system uses different driver.

合管理 - 🎲 開設 共用	11-象▼ 燒蒜 新建瓷料夹				
· 我的最爱	名稿	修改日期	頻型	亦大	
31 希近的位置	Intel_RSTe_and_AHCI_Drivers_GUI_CLI	2017/11/21下午_	模器资料实		
😛 Dropbox	Intel_RSTe_and_AHCI_Drivers_GUI_CLI	2017/11/21下午_	WinRAR ZIP 庄峰	50,494 KB	
12 下载					
10 AE					
2 体验语					
文件					
▲) 前端					
· · · · · · · · · · · · · · · · · · ·					
第一個月					
. ец					
🏭 条統任言 (C:)					
□ 新增磁键图 (D:)					
- 抽取式磁碟 (F:)					
- 抽取文組織(G:)					
L 1838					
VBOXSVR					

Step 2. Enter BIOS and change ACPI to RAID mode.

Note: Before we start please confirm EV version is 5.111.02 or above and Boot record version is 1.29D or above.

If customer is not sure about what's the current NVR7800's EV and Boot version please contact with Surveon Support team first.



105111 -	value V
+5V Value	4.84 V
+12V Value	11.68 V
Backplane Temperature	25.0 C
Boot Record Version	1.29D
Cache Backup Module	
ControllerTemperature(1)	31.0 C
ControllerTemperature(2)	31.0 C
Cooling Fan0	2057.0 RPM
Cooling fan0	
Cooling fan1	

2.1 Please shutdown the NVR7800, plug-in Win10 boot up drive and Intel driver then boot up NVR7800 again.

Keeping press F2 Enter BIOS, Advance / SATA Configuration



2.2 Select SATA Mode Selection then press Enter, select RAID and press enter.



2.3 Press Esc to back to last page, SATA mode Selection will change to RAID.



2.4 Press F4 to Save & Exit, NVR7800 will reboot again.



Step 3. Create GhostOS RAID

3.1 Keep pressing Ctrl+I into SATA RAID Configuration Utility



3.2 Select 1 to Create RAID Volume

	And a state of the	a to Company and			MAIN	MENU J=		and the second second
	1.	Create	RAID	Volume		3.	Reset D	isks to N
	2.	Delete	RAID	Volume		4.	Exit	
	i enven		and the second second	- DISK/L	INTLIME	INFORMA	TION 1-	and the second second
RA I D None	Volume define	s: d.			Guona			
Phys	ical De	vices:					S i au	T
2	HCST H	CCE4EGE	36 207 DI	SF141 *			ACE 701	Non DOLL
4			9H7 KI 907 DI	0030416390	JEDI		403.701	Non-KHIL
3	nusi n	6634303	onr Ki	0000010001	GFJ		403.701	NOU-RHIT
1.								
THE R.								
		A CONTRACTOR OF THE OWNER						

3.3 Setup the RAID Level to RIAD1 (Mirror) and modify the capacity size to full size.

Name:	VolumeØ
RAID Level:	RAID1(Mirror)
Disks:	Select Disks
Strip Size:	N/A
Capacity:	442.5 GB
	Create Volume
	[HELP]
The default value indicat	es the maximum capacity using th
disks. Entering a lower	capacity allows you to create a
vol	ume on these disks.

3.4 Press Exit

Intel(R) Rapid Stora Copyright(C)	ge Technology ente 2003-12 Intel Corp r Main	orprise - SHIH Uption XUM - 3.7.0.1049 Noration. All Rights Reserved.
<mark>1. Create RA</mark> 2. Delete RA	ID Volume ID Volume	3. Reset Disks to Non-RAID 4. Exit
RAID Volumes:		Strin Size Status Postable
0 Volume0	RAID1(Mirror)	N/A 442.5GB Normal Yes
Physical Devices: ID Device Model 2 HGST HTE725050A7 3 HGST HTE725050A7	Serial # TV650AYLGA98LN TF750AY9HK2X5B	Size Type/Status(Vol ID) 465.7GB Member Disk(0) 465.7GB Member Disk(0)
[†↓]-Select	[ESC]-Exit	[ENTER]-Select Menu

Step 4. Re-Clone OS image and install driver.

4.1 Keep pressing F2 to enter Bios, select Chipset / System Agent (SA) Configuration.



4.2 Select VT-d and switch to Enable then press Enter.



4.3 Enter Boot / Hard Drive BBS Priorities



4.4 Switch Boot Option #1 to the boot up drive we created in step1 then press Esc to exit.



4.5 Choose Save & Exit / Boot Override and select boot up drive, NVR will directly run boot up drive.



4.6 After pressing Enter NVR, it will show Window start page please wait around 2 minutes for install process.



4.7 Follow installation process and press Next to setup and follow step by step to setup the OS information.

- 7 -		
•	Windows [®]	
Langua <u>ge</u> to install: <mark>E</mark>	nglish (United States)	
nd currency format: Er	nglish (United States)	
rd or input method: U	S	<u>.</u>
nter your language and	d other preferences and click "Nළ	d" to continue.
oration. All rights reserved.		Next
	Language to install: ind currency format: id or input method: inter your language an combon. Al rights reserved	Language to install: [English (United States) and currency format: English (United States) rd or input method: US Inter your language and other preferences and click "Ner



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EULAID:RSC_R1_1_ED_E	V_en-us
	L3∕
1	

4.8 Choose Custom: Install Windows only (advanced).



4.9 Please insert another USB drive with Intel driver we prepared in step 1.6 then choose the load driver.

Name		Total size	Free space	Туре
fa Refresh	Delete	Eormat	Ngw 👘	
() Cost univer	Cill Extend			

4.10 Select Browse

Sele	ct the driver to install
	Load driver
	To install the device driver for your drive, insert the installation media containing the driver files, and then click OK. Note: The installation media can be a CD, DVD, or USB flash drive.
	Browse OK Cancel

4.11 Select driver location.

Note: In this case we use WIN10 Enterprise to make example driver location is USB Device \Intel_RSTe... \ Drivers \ x64 \Win8_10... \ AHCI



4.12 Enter 64 \Win8_10... \ AHCI then press OK.

Select the driv	er to install		
	Browse for Folder		
	Browse to the driver, and then dick OF	<.	
	CIM		
	a	•	
	V Drivers V X64		
		Mo 7 268 Min8 10 2K8R 2 2k	
		AHCI	
	> 🔜 x86	2448	
	GUI	× .	
I Hide drivers that	C C C C C C C C C C C C C C C C C C C		
	ОК	Cancel	

4.13 Select first item then press Next

0	Windows Setup
	Select the driver to install
	Intel(R) C600+/C220+ series chipset SATA RAID Controller (C:\555\111\Intel_RSTe_and_AHCI_Drive Intel(R) C600+/C220+ series chipset SATA RAID Controller (C:\555\111\Intel_RSTe_and_AHCI_Drive
	,
	☑ Hide drivers that aren't compatible with this computer's hardware.

4.14 Select Driver 2 Partition 2 (Primary) and press "Next".

Where do you	want to install Windo	ows?		
Name		Total size	Free space	Туре
Drive 2 Pa	rtition 1: System Reserved	500.0 MB	169.0 MB	System
Drive 2 Pa	rtition 2	442.0 GB	431.7 GB	Primary
€p Refresh	₩ Delete	✓ Format	- Ngw	
🕑 Load driver	Extend			

4.15 All installation process takes about 10 minutes when process is done, NVR will auto rebooted.

	Name	Total size	Free space	Туре
3	Drive 2 Partition 1: System Reserved	500.0 MB	169.0 MB	System
	If the partition you've chosen installation, these files and fol Windows.old. You'll be able to use your previous version of V	contains files from ders will be moved access Windows.c Vindows.	a previous Wir to a folder nan old, but you wo	dows ned n't be able to

4.16 After rebooted NVR7800, it will show "Use Express settings".

Change these at any time (scroll to see more). Select Use Express	settings to:	
Personalize your speech, typing, and inking input by sending your in Microsoft use that info to improve the suggestion and recognition p	nput data to Microsoft. Let platforms.	
Let Windows and apps request your location, including location hist use your advertising ID to personalize your experiences. Send Micro location services.	ory, turn on Find My Device, and soft location data to improve	
Help protect you from malicious web content and use page predict browsing, and make your overall experience better in Windows bro sent to Microsoft.	on to improve reading, speed up wsers. Your browsing data will be	
Automatically connect to suggested open hotspots. Not all network	s are secure.	
Get updates from and send updates to PCs on the Internet. Send fu Microsoft.	l diagnostic and usage data to	
Connect with friends. Let Skype use your contacts and verify your pl apply.	none number. SMS charges may	
Learn more		
(4,-	Contract.	

4.17 Assign PC name then press Next.

Create an account	for this PC			
If you want to use a password, choose sor others to guess.	mething that will be easy for	you to remember but ha	ird for	
Who's going to use this PC?				
jiser name				
Make it secure.				
Enter password				
Re-enter password				
Password hint				
			-	
G				
			L	

4.18 Press "Not now" to skip the Meet Cortana.

Meet Cortana		
Cortana is your sidekick, ready to help with anything that keeps you super, heroic, or just on tim	e.	
To let Cortana provide personalized experiences and relevant suggestions; Microsoft collects and information including your location and location history, contacts, voice input, speech and hand patterns; typing history, searching history, calendar details, content and communication history messages and apps; and other information on your device. In Microsoft Edge, Cortana uses your browsing history. You can always tinker with what Cortana remembers in the Notebook and disa Cortana in Microsoft Edge.	d uses writing from sble	
Θ		
I'm your searcher, findeHi, I'm Cortana.her, plan-aheader, no I'm here to make things easier and help you get things don need that).	ote 1e,	
Learn more		
Ģ	Not new	Use Contona

4.19 Then it will enter Window page, it means all installation process is completed.

Caution: Before go to the next step please remove all external USB drive to avoid Windows error.



Step 5. Install EonOneLite

5.1 Please find a USB, unzip the EonOneLite and RAID driver and put the file into USB Please plug-in USB to NVR7800 and copy all file to Window desktop.

RAID Driver Download link:

(This VRaid driver is for WIN10 Enterprise only, please contact with your Window provider for the RAID driver).

https://www.dropbox.com/s/4khxvu1q6lr6ibz/VRaid_Win10_v1.1.1.4.zip?dl=0_

EonOneLite 2.1.A16 Download link:

(For newest EonOneLite version please contact with Infortend support team). https://www.dropbox.com/s/cu257ehrjbyt62y/EonOneLite 2.1.a.16.zip?dl=0



5.2 Insert USB to NVR7800, select PC then right click then choose Properties.



5.3 Choose Device Manager

🔜 System			- 🗆 X
🗧 🖃 🔹 🛧 🔜 > Control P	Panel > System and Security > Sy	stem	v む Search Control Panel の
Control Panel Home	View basic information Windows edition	about your computer	•
P Remote settings	Windows 10 Enterprise		
System protection Advanced system settings	© 2016 Microsoft Corpora	tion. All rights reserved.	VVIndows IU
· · · · · · · · · · · · · · · · · · ·	System		
	Processor:	Intel(R) Xeon(R) CPU E3-1225 v3 @ 3.20GHz 3.19 GHz	
	Installed memory (RAM):	8.00 GB (3.75 GB usable)	
	System type:	64-bit Operating System, x64-based processor	
	Pen and Touch:	No Pen or Touch Input is available for this Display	
	Computer name, domain, and	I workgroup settings	
	Computer name:	DESKTOP-POMA90G	Schange settings
	Full computer name:	DESKTOP-POMA90G	
	Computer description:		
	Workgroup:	WORKGROUP	
	Windows activation		
	Windows is not activated.	Read the Microsoft Software License Terms	
See also	Product ID: 00329-00000-0	10003-AA690	SActivate Windows
Security and Maintenance			

5.4 Select SCSI Controller



5.5 Press right key and click "Update Driver Software".



5.6 Choose "Browse my computer for driver software".



5.7 click Browse and select VRaid_WIN10 driver.



5.8 Press Next to start installation process

Browse for	driver coffware	on your computer			
browse ioi	unver sonware	on your computer			
Search for driv	er software in this lo	cation:			
Users\123\De	sktop\VRaid_Win10_	v1.1.1.4 (1)\VRaid_Win10_v1.1	.1.4 ~	Browse	
Include sub	folders				
→ Let m	e pick from a lis	t of device drivers on r	ny comp	uter	
→ Let m This list softwar	e pick from a list will show installed d in the same catego	t of device drivers on r river software compatible wit y as the device.	ny comp h the devic	uter e, and all drive	
→ Let m This list softwar	e pick from a list will show installed d in the same catego	t of device drivers on r river software compatible wit y as the device.	ny comp h the devic	uter e, and all drive	

5.9 All process takes about 10 seconds when NVR shows the following message it means upgrading process is done, please choose Close.



5.10 Please select EonOneLite "setup" file to start EonOneLite installation process.

+ - > Ec	nOneLite 2.1.a.16 > EonOneLite 2.1.a.16 >			
	Name	Data modified	Time	Size
🖈 Quick access	MALUS	8/25/2018 1145 AIVI	File Tolder	Size
Desktop 🖈	📕 rootAgent.app	8/23/2018 1:45 AM	File folder	
L Downloads	Autorun	10/20/2005 2:29 PM	Setup Information	1 KE
	Client.pem	1/28/2003 1:31 AM	PEM File	2 KB
Documents or	🚺 data	10/5/2017 12:41 PM	Compressed (zipp	75,783 KB
Pictures 📌	💽 getkey	7/2/2001 1:51 PM	Application	28 KB
J Music	IFTNative.dll	11/12/2012 6:34 PM	Application extens	50 KB
Wideos	📄 installshield.jar	1/12/2017 7:03 PM	JAR File	3,980 KE
a OneDrive	j2pi.sh	7/2/2001 1:48 PM	SH File	12,970 KE
	ire1.7.0_80-i586.tar.gz	9/8/2015 5:30 PM	GZ File	47,421 KE
This PC	ire1.7.0_80-x64.tar.gz	9/8/2015 5:31 PM	GZ File	46,007 KE
Desktop	linux.sh	9/22/2015 3:10 PM	SH File	5 KE
Documents	linuxCmd.sh	9/22/2015 3:10 PM	SH File	4 KE
Downloade	📳 mac.app	12/23/2010 4:24 PM	Compressed (zipp	16 KB
- Dowinoaus	mac.root	10/8/2004 10:01 AM	Compressed (zipp	2 KE
J Music	mac.sw3_link.tar	7/5/2016 3:21 PM	TAR File	18 KE
E Pictures	policy.jav	9/28/2001 11:40 AM	JAV File	1 KE
Videos	📄 random.pem	10/3/2003 5:52 PM	PEM File	2 KE
Local Disk (C:)	C rootca.pem	1/28/2003 1:31 AM	PEM File	1 KE
- New Volume (D:	setup	10/12/2007 9:36 AM	Application	140 KB
ACRONIS (E:)	unix.sh Size: 866 bytes	7/6/2016 9:29 AM	SH File	3 KE
	Date modified: 1/28/2003 1:31 AM	9/30/2010 11:46 AM	SH File	3 KB

5.11 Please follow all installation process, it takes about 1 minutes, when it is done please reboot NVR7800.



Infortrend EonOne License Agreement



×



5.12 When it shows this message it means all installation process is done.

Installing Infortrend EonOne Program	<u>.</u>	
Olinfortrend	E	Ry.
Information In C Please restart the computer to make sure settings and s OK	ervices take effec	× t correctly.
Installation has completed.		
The EonOne program was installed successfu Click Finish to exit the setup window.	lly on your comp	uter.
	G	Finish

5.13 After NVR is rebooted, click EonOneLite default login user name and password are admin/admin. **Note**: During NVR rebooting please also remove external USB drive if you don't need to use.



5.14 EonOneLite it takes around 1 minute to open software when login for the first time, then after login, the customer can start to build up the RAID for this NVR7800.

	Overview	ivent Log Action
Device Information		System Status
Model: Version: Volume:	EV 5016G 5.111.02 Vol-1 1.8 TB	Healthy Uptime 0 days 16:49:28
Performance		Hardware
CPU 1% MEMORY 0%	Read 0 Byto/s Write 0 Byto/s Software S	