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ISHARE

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Ishare

Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of the Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 Institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various Institutions.

We would be very pleased to receive your feedbacks. Please send your feedbacks to ishare@ksrcas.edu

By,

Editorial Board

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Note: Articles in this issue is given by Computer Science students
Mr.M.Shankar , Mr.Y.Mohamed Younus, Mr.B.Ankit kumar Yadav, II B.Sc [CS] 'C'

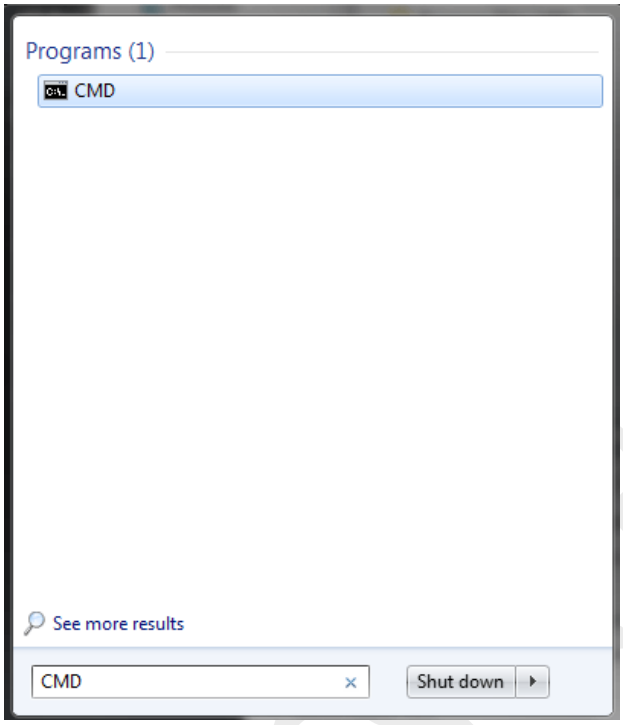
1. How to Create Undeletable Folder in Windows

In this tutorial you will learn cool and simple trick to create an undeletable and unrenamable Folders in Windows operating system. Most of the Peoples are not aware that it is possible to create Undeletable, Unrenamable folder in windows without any software. To Test this concept just follow simple steps given below.

How to create undeletable and unrenamable folders?

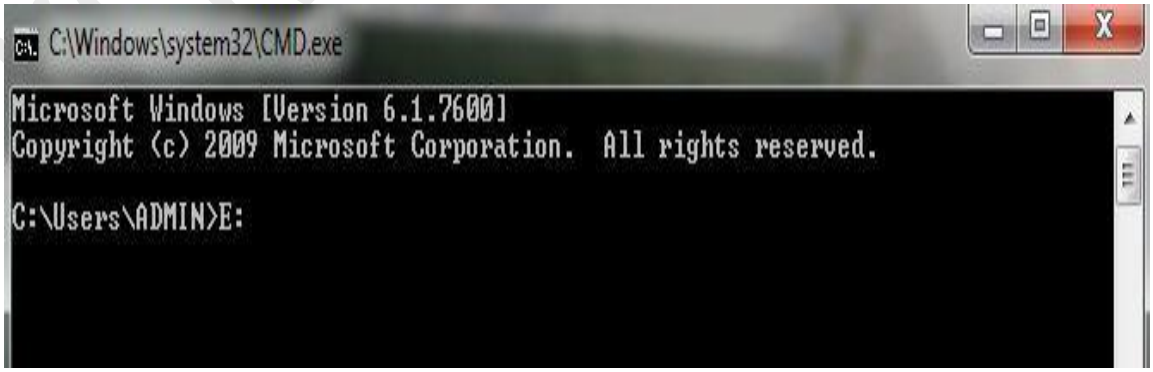
Step1: Open CMD as Command Prompt. (Go to Start and type CMD)

Command Prompt



Note: After this step make sure that you will not select a root directory, means, you can only create this folder on non-rooted drives such as D, E, F, G not the C drive because you have installed your windows on that Drive.

Step2: Open CMD and type E: and hit enter.



***Step3*:** Now type md con\ (MD represent Make Directory) Hit enter.

Note: **Why We Use con?** Files may be copied to devices. For example, copy file con outputs file to the screen console. Devices themselves may be copied to a destination file, For example, copy con file takes the text typed into the console and puts it into FILE, stopping when EOF (Ctrl+Z) is typed.

You just created a new folder on E Drive and just check it out whether it worked or not, Confirm? OK if yes that means you created a folder, now delete that folder to make sure it is working as undeletable as Title of the tutorial mentioned, now put some folders and music files under con and again try to delete con folder if you see no changes that mean it worked on your computer.

You may use other words such as aux, lpt1, lpt2, lpt3 up to lpt9 instead of con in above step.

Step 4: Open that directory; you will see the folder created of name con.

Step 5: Try to delete that folder or rename that folder windows will show the error message.

How to delete that folder?

It is not possible to delete that folder manually but you can delete this folder by another way mentioned below.

- Open Command Prompt
- Type D: (if u created this type of folder in D: drive) & hit enter
- Type rd con\ (rd – remove directory)
- Open that directory and the folder will not appear because it is removed.

2. How to Remove Shortcut virus from Pendrive

What is Shortcut Virus?

Generally, in the Shortcut Virus, our PC or pen drive gets infected by some malicious program and as a result, all of our files and folders are changed into the shortcut files and original ones got hidden, this

malicious program is generally known as Shortcut virus. If your PC or pen drive is affected by it then all of your files and folders will be hidden and you will not be able to use them which is absolutely not good. This virus spread from one computer to another like viral through pen drives, flash drives, memory cards exchanges or through internet/Bluetooth connections. The most common virus found in removable drives is autorun.inf which keeps on multiplying and infect your system by creating unlimited shortcuts of files and folders. Here I post 3 methods for removing shortcuts virus from pen drive.

Methods to Remove Shortcut Virus from Pendrive:

- Use WinRAR.
- Remove Shortcut Virus using CMD (Command Prompt)
- Shortcut Virus Remover.
- Antivirus to remove Shortcut virus

Use Winrar To Getting Original Files

- Open WINRAR Application.
- Navigate to your Pen drive location or PC Folder location.
- Copy Files and Paste where you want.
- Format your Pen drive.

Try searching "WinRAR" in your Windows PC, If you can't find the software, then download it from WinRAR (Trialware), WinRAR is a File Archive Software for Windows, you can use this software even to access files inside your Windows PC. When you open a

file using WinRAR no other process will run inside this, Virus being a process won't get executed inside this software, hence you could find all your files when you open your Pendrive using WinRAR.

Remove Shortcut Virus Using Cmd

Here are the Steps to Remove the Shortcut virus using CMD, Using Command Prompt to remove a virus and recover files is the best way and there are more Possibilities for virus removal. This Method Removes Shortcut virus from Pen drive, Memory cards, PC, Hard disk, and even Mobiles. Just follow the steps given below

- Go to Start -> Run -> cmd.
- Go to your pen drive memory cards or mobile phone directory.
- Type attrib -h -r -s /s /d e:*.* (Where e is the Drive Label)
- And then press Enter.

There are chances for these two Errors,

- Solution for **Attrib is not a recognized command.**
- Solution for **Access denied for attrib command.**

Note: After when you got your files, just copy your files somewhere.

SHORTCUT VIRUS REMOVER

When Command prompt codes end up with no result, we can try Shortcut Virus Remover tool, Since Shortcut virus is just a process, one can easily find the process running on the PC, You can find and remove

the process, or use the tool given below to remove the process. You could find the "Wscript.vbs" file in Task Manager under process, and also here is software to remove the file in seconds Shortcut virus remover

Antivirus to Remove Shortcut Virus

Install any Antivirus on your PC and scan your pen drive for removing shortcuts. Download Avast or Microsoft security Essentials for Window PC, they are best for removing pen drive for PC.

3. KALI LINUX

Introduction

Kali Linux is a Debian-based Linux distribution aimed at advanced Penetration Testing and Security Auditing. Kali contains several hundred tools which are geared towards various information security tasks, such as Penetration Testing, Security research, Computer Forensics and Reverse Engineering. Kali Linux is developed, funded and maintained by Offensive Security, a leading information security training company.

Kali Linux was released on the 13th March, 2013 as a complete, top-to-bottom rebuilt of BackTrack Linux, adhering completely too Debian development standards.

More than 600 penetration testing tools included: After reviewing every tool that was included in BackTrack, we eliminated a great number of tools that either simply did not work or which duplicated other tools that provided the same or similar functionality.

Free (as in beer) and always will be: Kali Linux, like BackTrack, is completely free of charge and always will be. You will never, ever have to pay for Kali Linux.

Open source Git tree: We are committed to the open source development model and our development tree is available for all to see. All of the source code which goes into Kali Linux is available for anyone who wants to tweak or rebuild packages to suit their specific needs.

Wide-ranging wireless device support: A regular sticking point with Linux distributions has been supported for wireless interfaces. We have built Kali Linux to support as many wireless devices as we possibly can, allowing it to run properly on a wide variety of hardware and making it compatible with numerous USB and other wireless devices.

Custom kernel, patched for injection: As penetration testers, the development team often needs to do wireless assessments, so our kernel has the latest injection patches included.

Special Features of Kali Linux*:*

- Full Customisation of Kali ISOs

Full customisation of Kali ISOs with live-build allowing you to create your own Kali Linux images – Kali Linux is heavily integrated with live-build, allowing endless flexibility in customising and tailoring every aspect of your Kali Linux ISO images. Want a non-root user, KDE version of Kali with only the top 10 tools installed?

Kali Linux Live USB persistence with LUKS encryption – Kali has extensive support for USB live installs, allowing for features such as file persistence or full (USB) disk encryption.

Kali Linux Forensics Mode– The bootable "Forensics" mode available in Kali makes it perfect for forensics work, as the forensics Kali live image option does not mount any drives (including swap) with this option. The wealth of forensics tools on Kali (metapackage – *kali-forensics-tools*) makes Kali a good choice for any forensics work you need.

Kali Linux running on Android through Linux Deploy – Have a recent Android device other than a Nexus or OnePlus phone? Try

using the Android App "Linux Deploy" to get Kali seamlessly installed in a chroot environment.

Download Kali Linux ISO by using the following QR Code

4. 3Dconnexion

Introduction

3Dconnexion was formed in September 2001 by Logitech, combining LogiCAD3D, based in Europe, and Labtec's3D peripheral business, based in the United States. The two companies had together represented more than 20 years of experience in 3D input devices. LogiCAD3D's product, the Magellan controller, was used in fields such as automotive design and aerospace. A NASA project used a Magellan product to control a robot in space. Like Magellan, the Space Ball also had a history in space, having been used to remotely drive the Sojourner robot on Mars.

Technical Specification

- 3Dconnexion® six-degrees-of-freedom (6Dof) sensor.
- 3Dconnexion® 2.4GHz wireless technology
- Lithium-ion polymer battery (internal, rechargeable)

- Micro-USB connectivity (cable supplied)
- Simultaneous data and recharging.
- Dimensions (LxWxH): 78x78x54mm / 3.1x3.1x2.1”
- Weight: 424g / 0.93lb

System support

- Windows 8
- Windows 7
- Windows Vista
- Windows XP SP2
- Linux with USB host support
- Other systems which have support for USB joysticks

Supported Operating Systems

❖ Microsoft Windows, OS X, Linux

Certifications and Registrations

❖ CE, FCC (Class B), BSMI, KCC, WEEE, WHQL

❖ For more information visit www.3dconnexion.com/compliance

Description

The new SpaceMouse Pro was released just before Christmas - and what a nice gift it would make for any 3D designer, engineer, or architect. This is a solid, attractive design. Sure it is going to impress your colleagues, but the benefit for the company will come when they start asking how much better you work and it then becomes standard equipment for all working in 3D.

After interviewing 3Dconnexion about the launch and visiting them at Imagina, CADplace took its own look at the new 3D mouse. Let's take a quick tour of the device.

The SpaceMouse Pro has a weighted, solid feel and 6 non-skid pads on the bottom of the device. This 3D mouse is going to stay in place. The palm-rest lets your hand rest naturally on the device which is even more important than the ergonomics of a 2D mouse as your hand relaxes into place for a day's work be it engineering, design, or architecture. In the middle is the 6-degrees of freedom control knob with a responsive feel, supple feel. Under the knob you'll find one of those details that is nothing more than just a nice touch, but one that is appreciated anyway - the blue glow from the SpaceMouse Pro's lights telling you that the device is powered and running.

Wireless Freedom

For the first time, 3Dconnexion's 6-degrees-of-freedom sensor is combined with 3Dconnexion 2.4 GHz wireless technology and a rechargeable battery to deliver the reliability of a wired device, without the clutter of cords.

Connecting Space Mouse Wireless couldn't be easier. Simply pop the **micro-USB receiver** in your PC or Mac and leave it there, while you enjoy a real-time connection to your 3D content.

Button controller

Starting on the left side of the controller are 5 easy-to-access buttons.

- Menu : fast access to the SpaceMouse Pro configuration menu. This lets you adjust the parameters, speed, sensitivity, command options, etc, on the fly while you work.
- Alt, Shift, Ctrl, & Esc buttons that correspond to your keyboard commands. This simple idea keeps your hand on the controller and increases your efficiency.

Product

- SpaceMouse Enterprise
- SpacePilot Pro
- SpaceMouse Pro Wireless
- SpaceMouse Pro
- SpaceMouse Wireless
- SpaceNavigator for Notebooks
- SpaceNavigator
- CadMouse
- SpaceExplorer (Discontinued)
- SpaceTraveler (Discontinued)
- SpaceBall (Discontinued)
- SpaceMouse (Discontinued)
- SpacePilot (Discontinued)

While corporate data loss is not a new concern, newer technologies are emerging to help combat the threat.

5. WI-FI JAMMER

Wi-Fi Jammer Using ESP8266 Wi-Fi Module

What is Jammer?

A jammer is any device that deliberately blocks, jams or interferes with authorized Wireless communications.

In the United States, jammers are illegal and their use can result in large fines.

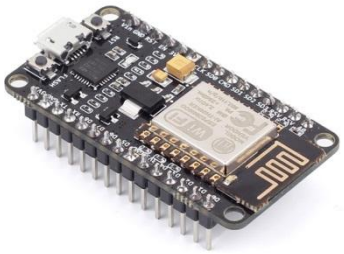
In some cases jammers work by the transmission of radio signals that disrupt communications by decreasing the signal-to-noise ratio.

The concept can be used in wireless data networks to disrupt information flow. It is a common form of censorship in totalitarian countries, in

order to prevent foreign radio stations in border areas from reaching the country.

Jamming is usually distinguished from interference that can occur due to device malfunctions or other accidental circumstances. Devices that simply cause interference are regulated under different regulations. Unintentional 'jamming' occurs when an operator transmits on a busy frequency without first checking whether it is in use, or without being able to hear stations using the frequency. Another form of unintentional jamming occurs when equipment accidentally radiates a signal, such as a cable television plant that accidentally emits on an aircraft emergency frequency.

ESP8266 Module



he ESP8266 Wi-Fi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your Wi-Fi network. The ESP8266 is capable of either hosting an application or offloading all Wi-Fi networking functions from another application processor.

Each ESP8266 module comes pre-programmed with an AT command set firmware, meaning, you can simply hook this up to your Arduino device and get about as much Wi-Fi-ability as a Wi-Fi Shield offers.

This module has a powerful enough on-board processing and storage capability that allows it to be integrated with the sensors and other application specific devices through its GPIOs with minimal development up-front and minimal loading during runtime. Its high degree of on-chip integration allows for minimal external circuitry, including the front-end module, is designed to occupy minimal PCB area. The ESP8266 supports APSD for VoIP applications and Bluetooth co-existence interfaces; it contains a self-calibrated RF allowing it to work under all operating conditions, and requires no external RF parts.

Note:

The ESP8266 Module is not capable of 5-3V logic shifting and will require an external Logic Level Converter. Please do not power it directly from your 5V dev board.

This new version of the ESP8266 Wi-Fi Module has increased the flash disk size from 512k to 1MB.

Features:

- 802.11 b/g/n
- Wi-Fi Direct (P2P), soft-AP
- Integrated TCP/IP protocol stack
- Integrated TR switch, balun, LNA, power amplifier and matching network
- Integrated PLLs, regulators, DCXO and power management units
- +19.5dBm output power in 802.11b mode
- Power down leakage current of <10uA
- 1MB Flash Memory
- Integrated low power 32-bit CPU could be used as application processor
- SDIO 1.1 / 2.0, SPI, UART
- STBC, 1×1 MIMO, 2×1 MIMO
- A-MPDU & A-MSDU aggregation & 0.4ms guard interval
- Wake up and transmit packets in < 2ms
- Standby power consumption of < 1.0mW (DTIM3)

Kinds of cell phone jammers and their utilization

The jamming devices are available in different sizes namely pocket cell phone jammers to large tower sized jamming devices.

The pocket jamming devices have smaller range as in comparison to large sized cell phone jammers.

There are some jamming devices that may stop the phone calls of the entire building; they are usually utilized in infirmaries, school, college and companies etc.

The pocket jamming devices may be utilized while on move.

Benefits of Jammers

Cell phones are becoming more of an irritating tool than an item of connection.

The widespread usage of tool is becoming irritating and dangerous shoulder to shoulder.

Mobile phones are wrongly utilized by students in the exam room; they are utilized in the infirmaries which may be very irritating and dangerous for the ill people and those who have pace maker located in the heart.

Mobile phones are more lately utilized by terrorists for organizing explosions in several locations at a time.

Therefore by, the cell phone jammers are utilized to stop all such situations from becoming out of hand.

Disadvantages of Jammers

Envisage a situation where you are essaying to dial 911 and cannot get through because someone has a cell phone jammer with him.

Otherwise, you want to call the police to avoid a robbery in your building but the robber has a cell phone jammer with him.

So, what could you do in such a dangerous situation? Jamming devices utilized with some thoughts may be much more useful than just a method of enjoyment.

6. HACKING CARS

Here's the brutal truth about hacking (and stealing) a car:

It is WAY too simple to hack into someone's car and too many people today think that their "car security" is enough.

They say, "if I lock my car, I'm all good".

If only it were that easy…

Today we are going to show you hacking tools and equipment that will almost guarantees that your "car security" is questionable at best.

In this article we will see about two hardware hacking tools that will allow you to remotey hack into a car.

The two products we discuss here are:

- The HackRF One;
- The 'Macchina M2'

It is VERY easy to hack into a car;

We list hardware that lets hackers intercept the radio signal from the key;

Code can be downloaded to a laptop (or other portable hacking device) and the thieves then transmit the stolen signal and have access to the car;

One bit of hacking hardware that we list, called the 'HackRF One' the radio device works from a distance of up to 40ft away!

#1 Say Hello To Your Little New Friend: 'HackRF One'

The 'HackRF One', made by Great Scott Gadgets, is a radio device works from up to 30ft away, allowing the hacker to remain hidden.

How does the hackrf one work?

The HackRF One from Great Scott Gadgets is a Software Defined Radio peripheral that works by being able to transmit and receive radio signals from 1 MHz to 6 GHz. The device is an open source hardware platform that can also be deployed as a USB peripheral or programmed for executing commands in a stand-alone mode.

If you are interested in learning more about how to operate the HackRF One then we'd recommend that you watch the "Software Defined Radio with HackRF Video Series."

The key concepts and technologies are: GNU Radio, Digital Signal Processing (DSP) and Software Defined Radio (SDR). The software can be installed on any Linux machine. You'd expect this hacking software

to be installed on Kali Linux, but instead we note that it works best with Pentoo Linux.

How much does the hackrf one cost*?*

The cost of this product slightly varies between authorized sellers, but the good news is that you can buy it either form Amazon or even eBay.

7. 3D PRINTERS

Technologies, Processes and Techniques

Introduction:

3D printing is also called additive manufacturing. This term accurately describes how this technology works to create objects. "Additive" refers to the successive addition of thin layers between 16 to 180 microns or more to create an object. In fact, all 3D printing technologies are similar, as they construct an object layer by layer to create complex shapes.

There are 3 main steps in 3D printing.

The first step is the preparation just before printing, when you design a 3D file of the object you want to print. This 3D file can be created using CAD software, with a 3D scanner or simply downloaded

from an online marketplace. Once you have checked that your 3D file is ready to be printed, you can proceed to the second step.

First step

First step is the preparation just before printing, when you design a 3D file of the object you want to print. This 3D file can be created using CAD software, with a 3D scanner or simply downloaded from an

online marketplace. Once you have checked that your 3D file is ready to be printed, you can proceed to the second step.

Second step

Second step is the actual printing process. First, you need to choose which material will best achieve the specific properties required for your object. The variety of materials used in 3D printing is very broad. It includes plastics, ceramics, resins, metals, sand, textiles, biomaterials, glass, food and even lunar dust! Most of these materials also allow for plenty of finishing options that enable you to achieve the precise design result you had in mind, and some others, like glass for example, are still being developed as 3D printing material and are not easily accessible yet.

Triple-jetting Third step

Third step is the finishing process. This step requires specific skills and materials. When the object is first printed, often it cannot be directly used or delivered until it has been sanded, lacquered or painted to complete it as intended. The material chosen for the project will determine which printing methods are most suitable. Among these, the most commonly used techniques for each group of materials are described next.



Fused Deposition Modeling (FDM) Technology

Fused Deposition Modeling (FDM) Technology is at the very entry of the market as it mainly used by individuals. It is probably the most popular printing method due to the number of printers available on the market. FDM is an affordable 3D printing process compared to other 3D printing technologies. This process works by material being melted and extruded through a nozzle to 3D print a cross section of an object each layer at a time. The bed lowers for each new layer and this process repeats until the object is completed. Layer thickness determines the quality of the 3D print. Some FDM 3D printers have two or more print heads to print in multiple colours and use support for overhanging areas of a complex 3D print.

SLS Technology

SLS Technology Laser sintering is a 3D printing technique consisting of the fabrication of an object by melting successive layers of powder together in order to form an object. The process most notably facilitates in the creation of complex and interlocking forms. It is available for Plastic and Alamode. The technology you will need is the photopolymerisation, a technique that involves the solidification of photo-sensitive resin by means of a UV light. It is used by different 3D printing processes

Stereolithography (SLA)

Stereolithography (SLA) uses a vat of curable photopolymer resin. The build plate descends in small increments and the liquid polymer is exposed to light where the UV laser draws a cross section layer by layer. The process is repeated until a model has been created. The object is 3D printed by pulling the object out of the resin (bottom up), which creates space for the uncured resin at the bottom of the container and can then form the next layer of the object. Another method is to 3D print the object by pulling it downward into the tank with the next layer being cured on the top.

Digital Light Processing (DLP)

Digital Light Processing (DLP) a projector is used to cure photopolymer resin. This is very similar to the SLA method except that

instead of using a UV laser to cure the photopolymer resin, a safelight (light bulb) is used. Objects are created similarly to SLA with the object being either pulled out of the resin, which creates space for the uncured resin at the bottom of the container thus forming the next layer of the object, or down into the tank with the next layer being cured at the top.

Sculpteo uses DLP technology for Silver and Brass 3D printing. We 3D print a wax model first then, we use a lost-wax casting technique: a mould is made around the wax before it is melted and filled with silver, creating your object.

Continuous Liquid Interface Production (CLIP)

Continuous Liquid Interface Production (CLIP) works by projecting a continuous sequence of UV images, generated by a digital light projector, through an oxygen-permeable, UV-transparent window below a liquid resin bath. The dead zone created above the window maintains a liquid interface below the part. Above the dead zone, the curing part is drawn out of the resin bath.

MultiJet printers

MultiJet printers Similar to Stereolithography, the high-quality PolyJet and MultiJet 3D printing processes use a UV light to crosslink a photopolymer. However, rather than scanning a laser to cure layers, a printer jet sprays tiny droplets of the photopolymer (similar to ink in an inkjet printer) in the shape of the first layer. The UV lamp attached to

the printer head crosslink's the polymer and locks the shape of the layer in place. The build platform then descends by one layer thickness, and more material is deposited directly onto the previous layer.

Category: Metal

Metal printing processes like powder bed fusion, metal binder jetting, and directed energy deposition grew at an explosive pace.

Xact Metal Set to Introduce Affordable XM200 Metal. Printer

Most laser metal printers use a system of mirrors to direct beams to a powder bed, the XM200 has a different setup.

The printer uses a moving high-speed x-y scanner while the powder solidifies into shape. The usual format of using mirrors to direct the laser often leads to an inconsistent power level across different areas of the powder bed.

The printer requires a controlled gas system. It purges out all the oxygen and fills up the build area with argon (an inert gas) instead.

Specs

Specs	Description
Build Volume	125 in³ (5 x 5 x 5 in) 2049 cc (127 x 127 x 127 mm)
Exterior Dimensions	Approx. 610 x 610 x 1295 mm3 (24 x 24 x 51 in3)

Laser Type	Quality 250W fiber laser
Precision Optics	Spot size greater than 10 microns
Fusing Speed	Up to 1.5 m/s with orthogonal high-speed scanner
Voltage	Single Phased Power Supply 220V (50-60 Hz) Consumption 2500W (12 Amps)
Display	7" intuitive touch screen
Weight	Approximately 500 lbs (227kgs)
Materials/ Powder	316L Stainless Steel, Inconel 718 Superalloy, Titanium 6Al 4V, Aluminum Si10Mg, Maraging Steel

DLP TECHNOLOGY

DLP combined with the lost-wax casting technique allows objects to be printed in 3D. Sculpteo uses DLP technology for Silver and Brass 3D prints. First, we 3D print a wax model. Then, we use a lost-wax casting technique: a mould is made around the wax before it is melted and filled with silver, thus creating your object.

Direct Metal Laser Sintering (DMLS)

Direct Metal Laser Sintering (DMLS) uses a laser as a power source in order to sinter metal powder by aiming a laser and tracing a cross section of the object layer by layer. Direct Metal Laser Sintering is similar to the selective laser sintering process.

Electron Beam Melting (EBM)

Electron Beam Melting (EBM) uses an electron beam as the power source instead of a laser to 3D print metal. An electron beam melts metal powder layer by layer within a high vacuum and can achieve full melting of the metal powder. This method can produce high-density metal parts thus retaining the material's properties.

If we want use mutli colour

Binder jetting

Binder Jetting is popular since you can create detailed 3D prints with colour. An automated roller is used to spread a layer of powder onto the build platform. Excess powder is pushed to the sides and ensures that the bed is filled with a layer of packed powder. On a fast axis, the print heads apply a liquid binder and colour simultaneously to create a cross section of the object on the powder.

Selective Deposition lamination

Selective Deposition Lamination is a 3D printing process using paper. This process is similar to Laminated Object Manufacturing (LOM) rapid prototyping method. The process involves layers of adhesive coated paper (or plastic or metal laminates) that are successively glued together with a heated roller and cut to shape with a laser cutter layer by layer. A roller with the material moves each new sheet of material over the last and repeats the process until the object is completed.

Triple-jetting technology

Triple-jetting technology (PolyJet) used in Stratasys Objet500 Connex3, is the most advanced method of PolyJet 3D printing. This technology performs precise printing with three materials and thus makes three-colour mixing possible. To know more about this technology, you can refer to PolyJet & MultiJet.

8. INTEL CORE PROCESSOR i9

***Introduction* : Intel core processor**

Intel Core is a line of mid-to-high end consumer, workstation, and enthusiast central processing units (CPU) marketed by Intel Corporation. These processors displaced the existing mid-to-high end Pentium processors of the time, moving the Pentium to the entry level, and bumping the Celeron series of processors to low end. Identical or more capable versions of Core processors are also sold as Xeon processors for the server and workstation markets.

Processor Definition

A processor core (or simply "core") is an individual processor within a CPU. Many computers today have multi-core processors, meaning the CPU contains more than one core.

Multicore processor

For many years, computer CPUs only had a single core. In the early 2000s, as processor clock speeds began plateauing, CPU manufacturers needed to find other ways to increase processing performance. Initially, they achieved this by putting multiple processors in high-end computers. While this was effective, it added significant cost to the computers and the multiprocessing performance was limited by the bus speed between the CPUs.

By combining processors on a single chip, CPU manufactures were able to increase performance more efficiently at a lower cost. The individual processing units became known as "cores" rather than processors. In the mid-2000s, dual-core and quad-core CPUs began replacing multi-processor configurations. While initially only high-end computers contained multiple cores, today nearly all PCs have multi-core processors.

Intel core processor i9

That's just below the 4.5GHz top speed of Intel's Core i7-7700K, its fastest mainstream processor for desktops. Basically, that means the

18-core chip will be no slouch when it comes single-threaded performance for games. ... The 16-core i9 CPU reached a Cinebench R15 score of 3,200, while running an NVIDIA GTX 1080Ti GPU.

Product and Performance Information

This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

Technical Specifications

Essentials

Vertical Segment	Desktop
Processor Number	i9-7900X
Status	Launched
Launch Date	Q2'17
Lithography	14 nm

Performance

No. of Cores	10
No. of Threads	20

Processor Base Frequency	3.30 GHz
Max Turbo Frequency	4.30 GHz
Cache	13.75 MB L3
Bus Speed	8 GT/s DMI3
No. of QPI Links	0
Turbo Boost Max Technology 3.0 Frequency	4.50 GHz
TDP	140 W

Supplemental Information

Embedded Options Available	No
Conflict Free	Yes

Memory Specifications

Max Memory Size	128 GB
Memory Types	DDR4-2666
Max No. of Memory Channels	4
ECC Memory Supported	No

Expansion Options

Scalability	1S Only
PCI Express Revision	3.0
Max No. of PCI Express Lanes	44

Features and Performance

Maximize Performance

Whether you are working on your latest feature film or the next episode of a YouTube series, the unlocked Intel Core™ X-series processors are designed to scale to your performance needs by using the two fastest cores at higher frequencies and up to 18 cores when extreme mega tasking is required. Experience extreme performance, immersive 4K visuals, high speed storage and memory, and the latest technological advancements – all designed to get you from planning to final product faster than ever.

Power Your Creativity

Spend more time creating and less time waiting. The Intel Core X-series processor can handle your most demanding workload. Upload and edit your 360˚ videos quickly and experience VR videos–all in stunning 4K. There are no limits to what you can create on your new computer.

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AAC actuator

This transfer of energy then vibrates the smartphone's frame and reaches the earpiece through the display.
It is said that this technology has not been a winner among customers and Xiaomi would be developing a new one which would arise from the partnership with AAC Technologies.

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