

Minecraft Mod Proposal: Nanotech

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Started: 6 June 2014 14:51 EDT

Overview

Nanotech is a mod for Minecraft which adds late game tools, automation, processing, and alternative (as well as more efficient) crafting methods, as well as other features which will be discussed later on in this document. This mod will utilize Redstone Flux as a power source, and could in many ways be considered a mid to late game add-on to Thermal Expansion.

Nanotech introduces nanites into the world of Minecraft. As microscopic machines, nanites are capable of manipulating matter at the molecular level. These nanites are what the mod is all about, and will serve as the basis for nearly everything created thru this mod and its constituent blocks and items.

Getting Started

To get started working with Nanotech, you need to create a Nanite Forge using the following shaped recipe:

F C F

S B S

F S F

F = Machine Frame; C = Bucket of Gelid Cryotheum; S = Pneumatic Servo; B = Block of Enderium

The Nanite Forge requires a varying amount of power (at a fixed rate of 800 RF/t) and resources depending on what kind of nanite cluster you're attempting to make. In general, the more complicated a task you're going to be asking your nanites to perform, the more expensive your nanites will be to create. The table below has rough estimates on what should be required to create various forms of nanite clusters:

Name	Energy	Resources	Notes
Basic Nanite Cluster	80,000 RF	Iron ingot x3, redstone dust x5, gold ingot x1	Produces 2 Basic Nanite Clusters per operation
Basic Computing Cluster	120,000 RF	Basic Nanite Cluster x1, nether quartz x3, redstone dust x3, gold nugget x3	
Distributed Computing Cluster	96,000 RF	Basic Computing Cluster x2, Enderium nugget x3	
Deconstruction Cluster	128,000 RF	Basic Computing Cluster x1, Basic Nanite Cluster x2, Pyrotheum dust x1, diamond x1	Can serve as pickaxe, shovel, and axe of diamond quality. Internal buffer of 12,000 RF (100 RF/use)
Reconstruction Cluster	128,000 RF	Distributed Computing Cluster x1, Basic Nanite Cluster x2, Cryotheum dust x1, diamond x1	
Motion Cluster	88,000 RF	Basic Nanite Cluster x2, pneumatic servo x1, Energy cell frame x1	Can store 80,000 RF, acts as portable RF battery
Engine Cluster	144,000 RF	Motion Cluster x1, Deconstruction Cluster x1, Basic Computing Cluster x1	Can store 128,000 RF, acts as portable RF battery ¹
Destruction Cluster	192,000 RF	Deconstruction Cluster x1, Engine Cluster x1, Bucket of Blazing Pyrotheum x1	Stores 20,000 RF. Can destroy a variable ² area in front of the user on right-click.

¹- Think of it like the comparable portable energy cells from Thermal Expansion.

² - Shift-click to change digging area; 1x1x1, 3x3x1, or 3x3x3. Consumes 200 RF per block broken.

The Nanite Forge can also form a multi-block structure with adjacent forges, up to a 3x3x3 cube. For every Nanite Forge in the structure after the first, the input capacity is increased by 800 RF/t, giving you a maximum of 21,600 RF/t input.

Machines

In addition to the Nanite Forge, Nanotech also comes with several utility machines, all based on nanotechnology, some using nanite clusters made inside the Forge.

Nanotech Smeltery: An ultra-fast, nanite-powered furnace. Requires a computing nanite cluster of any tier; higher-tier clusters improve speed and decrease power consumption. Can accept up to 600 RF/t, and every smelting takes 6,000 RF.

Ore Disassembler: Nanites are far more efficient at getting the goods out of ores; they rip apart the ore block molecule by molecule, extracting the useful bits and discarding the dross. Provides 4 dusts to the ore, with an increased (over a vanilla pulverizer) chance at a secondary output. Can accept up to 800 RF/t, power consumption varies from ore to ore. Requires a computing cluster of any tier; higher-tier clusters improve processing speed and decrease the power requirement per operation.

Recycling Plant: Turn your waste blocks, items, and even fluids into something useful: MORE NANITES! This machine only creates the basic nanite cluster, and it isn't as resource-efficient as the Forge. Certain blocks and items are more useful than others, and the more durability an item has left, the more useful it'll be for the machine. Consumes up to 1,000 RF/t, destroys input to create basic nanite clusters.

Nanite Brain: The most powerful, and useful, creation wrought by nanotechnology. With this multi-block structure, you can command any nanite clusters you have in the world, so long as the chunk they occupy (and any destination chunk other than their own) is loaded. The bigger the brain, the more clusters you can control and monitor at once. At minimum, this machine must be a 5x5x5 solid, but can expand up to 16x16x16. Each block in the structure draws 50 RF/t; this means that even the smallest brain needs at least 6,250 RF/t to operate, and the biggest needs a whopping 204,800 RF/t. Unlike other machines, this is a hard requirement, and if it isn't met, the brain will not function.

Personal Augmentation Station: Ever wish you could just make a better you? Now you can, with the raw might of nanotechnology at your disposal. This structure is a somewhat complicated multi-block; its dimensions are 3 wide by 4 tall by 2 deep, with a slot in one side in which you can stand. Requires 200 RF/t, even when idle, and there are one-time power fees to augment your body, depending on the extent of the augmentation desired. Has an internal buffer of 2,500,000 RF, no maximum RF/t input.

Personal Augmentations

Experiments in nanotechnology have yielded unbelievable dividends: cybernetic augmentations are now easily within your grasp. Give yourself a personal, redstone flux-powered force field and much more! Who needs to *wear* power armour when you can *become* the armour? Below is a listing of Personal Augmentations you can add to yourself, for a cost.

Name	Requirements	RF Cost	Notes
Derma1 Hardening Augmentation	Full set of diamond, gold, and iron armour plus five transderma1 mesh.	160,000 RF	Make your skin hard as diamond! This augmentation gives you a natural armour rating as high as vanilla diamond armour.
Corpse-Eater Augmentation	64 rotten flesh, 64 bones, 64 gunpowder, 10 transderma1 mesh, 2 deconstruction nanite clusters.	160,000 RF	Your body is now home to nanites that eat the corpses of your slain enemies! For every enemy you kill, you gain 2 health, 2 hunger, and 1 hunger saturation.
Offensive Kinetic Enhancement Augmentation	6 transderma1 mesh, 2 pneumatic servos, 1 motion cluster, 1 engine cluster.	120,000 RF	Your bare hands are now lethal weapons! Your unarmed attacks now deal 5 damage per hit, as much as a golden sword!

			They also gain knockback I.
Offensive Nanite Enhancement Augmentation	10 transdermal mesh, 2 impulse itemducts, 2 pneumatic servos, 2 destruction clusters.	200,000 RF	Your bare hands are now even more deadly! You deal +3 damage when unarmed, as vicious nanites rip your enemies apart at a molecular level!
Godspeed Augmentation	16 transdermal mesh, 4 transparent fluiducts, 4 pneumatic servos, 2 engine clusters.	180,000 RF	Your legs are now pneumatic powerhouses! Your movement speed is increased by 50% and you gain uphill step assistance.
Thief's Eye Augmentation	2 transdermal mesh, 2 diamond, 2 distributed computing clusters.	120,000 RF	You now have the ability to see at great distances with the push of a single button! Press [Ctrl], by default, to toggle between 2x, 4x, 8x, and normal zoom.
Situational Awareness Module Augmentation	4 transdermal mesh, 4 distributed computing clusters, 16 electrum ingots.	240,000 RF	You can now tell if mobs are targeting you! Also, you can press [Z], by default, to allow you to see the position of any mob within 32 meters, even thru walls!
Chemical Enhancement Augmentation	8 transdermal mesh, 4 ghast tears, 48 glowstone dust, 48 redstone dust.	220,000 RF	Increases the duration of any potions you drink by 50%, and if able, increase their effectiveness

			by one level.
Thaumic Sight Augmentation	2 transdermal mesh, 1 goggles of revealing	120,000 RF	why wear your Goggles of Revealing when you could save the slot and just shove them inside your eyeballs?
Cryotheum Gel Packs Augmentation	18 transdermal mesh, 16 cryotheum dust, 2 buckets of lava, 16 transparent fluiducts, 4 pneumatic servos.	280,000 RF	Your blood runs colder than the heart of the Ender Dragon. You are now immune to burning, and can freely move in both lava and blazing Pyrotheum.
Endercide Augmentation	24 transdermal mesh, 8 eyes of ender, 4 diamonds, 4 emeralds, 2 pneumatic servos, and 2 deconstruction clusters.	300,000 RF	If there's one thing we all hate, it is endermen. With this augmentation, you can now slaughter them wholesale! You gain +8 damage against endermen, ender tots, and the Ender Dragon herself.