



Frequently Asked Questions

FAQ

Date: 1 July, 2005

Subject: New 2.8Ghz Pentium IV PC and electronics suite upgrade plus new 566Mhz Pentium III PC Controller

This Frequently Asked Questions (FAQ) document addresses the new 2.8Ghz Pentium IV PC and electronics suite upgrade as well as new 566Mhz Pentium III PC Controllers for older SLA® systems.

Q: *Will the new Buildstation™ 5.5 software run on the existing PC?*

A: It will run on a current Pentium II 4XXMhz PC upgraded to Windows XP and 384Mb of RAM. Older PC's may have a problem running Windows XP Pro. However we strongly recommend that the customer upgrade to the new PC controller and electronics suite to take full advantage of the new features in Buildstation 5.5 software.

Q: *Why does the PC controller have to be so powerful and why new electronics?*

A: There are two reasons:

1. The new optional high fidelity slice algorithm in 3D Lightyear™ 1.5 software (you can still slice with the current methods) does not reduce the size of the slice data as do the current methods. As a result the new .BFF file can be up to four times the size of the current BFF. A large BFF with many short vectors in some cases causes the i/o buffer to overflow. When it overflows the laser stops drawing while the buffer clears the overflow and loads more data into the buffer. This is known as a "jump to rest" problem. If the user is not jumping to rest now they may be in the future with the larger file. A larger file would be considered a file that is larger than the physical memory in the machine control PC. A warning message will appear when a BFF is loaded that is larger than the available RAM in the PC. The RAM in the old PC Controller is 128Mb.

Users who currently have the jump to rest issue slow down their drawing speeds so the laser doesn't "jump to rest". This is often seen with Viper™ SLA systems building in the HR mode with many small parts with a lot of short vectors. The new PC and electronics suite will eliminate nearly all jump to rest issues and those who have slowed down builds in the past can now speed up those builds. We have seen improvements of up to 30% for Viper HR system builds.

2. The new features in Buildstation 5.5 software allow more processing and manipulation to be done on the machine control PC. These changes required a new 3D graphics accelerated window to be implemented for Buildstation software. This has the look and feel of a 3D Lightyear window and it requires more horsepower and a powerful AGP 3D graphics board to run. None of this could be obtained with the current Pentium II PC Controller. In addition the machine control PC now has enough capacity and power to run 3D Lightyear. (Not recommended to run 3D Lightyear software during a build).

Q: *What is in the 2.8Ghz Pentium IV PC and electronics suite and why is it so expensive?*

A: Many customers assume that a controller is just a "white box" PC. That is far from the real situation. The original controllers were designed into our equipment quite a while ago when the format of the I/O slots was something called ISA. At the time it was state-of-the-art. All of the special boards to crunch numbers, process signals and talk to the hardware are all ISA type cards. There are also special requirements for backplane timing to keep everything synchronized. We also had to make sure the timing is compatible for every machine we have sold in the last 7 years....PLUS....this new hardware had to be available for the next several years.



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Q: What PC goes with what SLA system?

A: There are 3 configurations of new PC Controllers. The older solid state SLA systems have an incompatible suite of electronics that have completely different i/o designs and are not compatible for the new 2.8Ghz Pentium IV PC and electronics suite. There is a new 566Mhz Pentium III PC Controller available for older SLA Systems available with DOS or Windows XP. Here is the list of SLA systems that are compatible for an upgrade:

Machine / Computer Upgrades

	Config	Catalog Number	
250	3	SVCU 250CTRL	
500	2	SVCU 500CTRL	
350	2	SVCU 500CTRL	
3500*	2	SVCU 500CTRL	*BeforeS/N99BB0006
5000*	2	SVCU 500CTRL	*BeforeS/N99CB0102
3500*	1	SVCU 357CTRL	*AfterS/N99BB0006
5000*	1	SVCU 357CTRL	*AfterS/N99CB0102
7000	1	SVCU 357CTRL	
Viper	1	SVCU VPRCTRL	

Computer Configuration 1	
O/S	Windows XP Pro
Processor	Pentium IV, 2.8 Ghz Processor
Ram	1 Gb
Hard Drive	100 Gb
Graphics	AGP w/ 128Mb Ram
Software	Buildstation 5.5 New signal processing electronics New EPROMs Installation (not including travel)

Note: Customer must be eligible for Buildstation 5.5 software or must purchase the software upgrade at an additional charge

Computer Configuration 2	
O/S	Windows XP Pro
Processor	Pentium III, 566 Mhz
Ram	512 Mb
Hard Drive	40Gb
Graphics	VGA
Software	Buildstation 5.5 Installation (not including travel)

Computer Configuration 3	
O/S	DOS 6.22
Processor	Pentium III, 566 Mhz
Ram	512 Mb
Hard Drive	40Gb
Graphics	VGA
Software	Buildstation 4.0 PC-NFS Version 5.1 Installation (not including travel)

Q: What if someone just wants the new 2.8Ghz controller and not new Buildstation software?

A: The new controller will not run under Buildstation 5.4 or prior software versions. The new PC will only run Buildstation 5.5 software so the customer must be qualified to run Buildstation 5.5 by either a warranty, service contract or by purchasing a software upgrade.



FAQ: Frequently Asked Questions: New 2.8Ghz Pentium IV PC and electronics suite upgrade plus new 566Mhz Pentium III PC Controller

Q: What if I am under a service contract and my old PC no longer functions or "breaks". Will I get a new PC? If so which one?

A: The older PC's (4XXMhz Pentium II or prior) are no longer supportable and have reached an end of life situation. If you are currently covered under a service contract and your PC fails and we can no longer provide internal components you will receive the 566Mhz Pentium III as the replacement PC. However when your service contract expires you will be offered three choices:

1. Upgrade to the new 566Mhz Pentium III controller at a 50% discount
2. Upgrade to the new 2.8Ghz Pentium IV at normal discount levels provided to service contract customers.
3. Exclude the PC from the service contract (no reduction in service contract price). If any problem arises while under contract that requires a PC replacement a 25% discount will be provided to upgrade to the Pentium III controller.

Q: What if I am not under a service contract and I want to sign up for service? Is the PC covered?

A: The older PC's (4XXMhz Pentium II or prior) are no longer supportable and have reached an end of life situation. In order to be covered under a service contract your equipment must be in a supportable configuration. You will be offered 3 choices:

1. Upgrade to the new 566Mhz Pentium III controller at a 25% discount if joining a premier or higher service contract.
2. Upgrade to the new 2.8Ghz Pentium IV at normal discount levels provided to service contract customers.
3. Exclude the PC from the service contract (no reduction in service contract price). If any problem arises while under contract that requires a PC replacement a 25% discount will be provided to upgrade to the Pentium III controller.