



FlashScan V3 Hardware Implementation

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Prerequisites

Intended Audience

EFILive Customers looking to purchase FlashScan V3 or AutoCal V3.

Computer Knowledge

It is expected that readers have a basic understanding of:

- The Windows operating system;
- Starting and using Windows applications;
- Navigating folders using Windows Explorer.



Introduction

What is FlashScan V3 and AutoCal V3?

FlashScan V3 and AutoCal V3 are EFILive's new hardware scheduled to be available in the second quarter of 2020.

Technology advancements and availability of components has forced the retirement of FlashScan V2 and AutoCal, FlashScan HD and AutoCal HD.

V3 is a single hardware design that is housed in easily identifiable enclosures and branding to suit FlashScan V3 or AutoCal V3. FlashScan V3 and AutoCal V3 deliver a range of product advancements to end users while maintaining our signature robust design.

Differences between FlashScan and AutoCal

There are significant differences between FlashScan and AutoCal for end users. It is important that both the tuner and the tuner's customer (end user) understand these differences.

- With FlashScan, users have the ability to create, view, and modify tunes. With AutoCal, only the tuner has that ability.
- AutoCal cannot be used to create or change tune files.
- Tunes from multiple sources can be flashed with FlashScan, however AutoCal is limited to flashing tunes provided by a single tuner.

A FlashScan Device is Required

FlashScan is required to create tunes for an AutoCal device. AutoCal devices cannot create tunes.

FlashScan V3 Hardware Availability

FlashScan V3 will become publicly available at a time determined by EFILive. Factors to determine public release will include:

1. The public release of the V8 Editor.
2. Beta test outcomes.

FlashScan V3 release is independent of AutoCal V3 release.

EFILive Hardware Compatibility

FlashScan V3 can be used with AutoCal V3, AutoCal V2 and AutoCal HD.

AutoCal V3 can be used by tuners with FlashScan V3, FlashScan V2, and FlashScan HD.

Upgrading to FlashScan V3 or AutoCal V3 is optional. EFILive will continue to fully support FlashScan V2 and AutoCal hardware in line with the EFILive Life Cycle Policy.



FlashScan V3

Specifications

FlashScan V3 Hardware Specification

- Large, easy to read color screen.
- Powerful ARM Cortex-M3, 32-bit CPU.
- Built in 512MB micro SD Card stores hundreds of tune files and/or hundreds of hours of logged data.
- Supports 600 VIN licenses.
- Built-in audible alarms.
- Upgradable boot block and firmware.
- Vehicle Input Voltage - Min 9V, Max 28V.
- Supported protocols CAN J1979, CAN J1939 (heavy duty) and VPW.
- Serial interface (RS-232).
- Battery backed real-time clock for accurate timestamps.
- Appears as a Windows USB drive in Windows Explorer.
- Files transfer up to 10 times faster than FlashScan/AutoCal V2.
- Built-in power supply prevents data corruption if external power supply is interrupted.
- Plug-and-Play, uses Windows' built in USB drivers.
- Connect a USB stick in the base of FlashScan V3 and AutoCal V3 to transfer tune files/data logs (not yet available).
- Rugged Molex connectors.

EFILive Software Specification

FlashScan V3 and AutoCal V3 work exclusively with EFILive V8 Scan and Tune software.

EFILive V7 Tune Tool and EFILive V7 Scan Tool are not compatible with FlashScan V3 and AutoCal V3 products.

Tune files written in V7 software can be opened and edited in V8 software provided tune file restrictions allow.

PC/Systems Requirements

- PC or laptop running Win7 or higher.
- USB port.
- Color screen with 1280x960 or greater resolution.
- 1GB of available disk space.

FlashScan V3 Pricing

FlashScan V3 will be priced at:

FlashScan V3	Price \$USD
FlashScan V3 Scan Only	\$599.00
FlashScan V3 with one Tuning Option	\$999.00
FlashScan V3 with two Tuning Options	\$1399.00
FlashScan V3 with three Tuning Options	\$1799.00

Tuning options bundled with FlashScan V3 purchases receive discounted pricing when compared to purchasing tuning options independent of FlashScan V3.

Each FlashScan V3 will ship with two cables.

1. Vehicle cable (RJ45 to SAE-J1962).
2. PC cable (USB A to B).

Two optional cables are available for purchase.

1. Serial cable (RJ12 to RS232 9-pin female).
2. FlashScan Expansion cable - to connect with external CAN based systems (e.g. dyno or wide band), plus data logging start/stop switch (switch not included).

Two optional adapters are available for purchase.

1. J1939 round 9 pin adapter to suit Cummins HD On-Road from 2001-2016.
2. J1939 round 9 pin adapter to suit Cummins HD On-Road from 2017+.

Licensing

Requirements

To flash a controller, the following licensing conditions must be met:

1. The Tuning Option that matches the controller type must be enabled.
2. A VIN License is available (if not already licensed) for engine and powertrain control modules. Supported transmission control modules do not require a VIN License.

Tuning Options

Tuning Options are required to enable calibration flashing. Each Tuning Option ships with 2 VIN Licenses to tune two supported controllers. Where no Tuning Options are enabled, FlashScan V3 will function as a Scan Tool.

Available Tuning Options are:

GM Tuning Option to add the ability to tune supported GM Gas and Diesel controllers.

Dodge Cummins Tuning Option to add the ability to tune supported Dodge Cummins controllers.

Cummins HD Tuning Option to add the ability to tune supported Heavy Duty Cummins controllers.

Tuning Options can be bundled with FlashScan V3 at time of purchase for discounted pricing, or can be added via online code at any point in time to activate tuning features.

Tuning Option License upgrade pricing:

FlashScan V3 Tuning Options	Price \$USD
GM Tuning Option	\$450.00
Dodge Cummins Tuning Option	\$450.00
Cummins HD Tuning Option	\$450.00

Where a Tuning Option is purchased from the EFILive website, the FlashScan V3 serial number is required for order placement. The serial number will be validated before the product can be added to the cart.

Tuning Option activation codes and associated VIN Licenses are delivered via email usually 10 minutes of order placement. The activation code is also located within the order history on your EFILive store account.

VIN Licensing

FlashScan V3 supports 600 VIN Licenses. Each Tuning Option ships with 2 VIN Licenses to tune two supported controllers. VIN Licenses are priced at \$125.00 USD.

Each engine and powertrain controller to be tuned requires an available VIN License. The license is allocated during the flashing process. Reflashing the same controller multiple times using the same device only uses one license. Supported transmission control modules do not require a VIN License.

Once the controller is licensed, the vehicle's VIN will be stored in the VIN License on the FlashScan device, making it easier to keep track of which vehicles have licensed.

Although FlashScan V3 can be used to return a vehicle to stock, doing so will not "reset" the license that was used to flash the vehicle.

VIN Licenses can be purchased through the EFILive store by providing both the FlashScan V3 serial number and Authentication code. The FlashScan V3 Serial number and Auth Code will be validated before the product can be added to the cart.

VIN License activation codes are delivered via email usually within 10 minutes of order placement. The activation code is also located within the order history on your EFILive store account.

Stream Licensing

Stream Licenses are not available for FlashScan V3.

Pro Tuning License

The Pro Tuning License is not currently available. When available, customers will need to sign a legal waiver prior to enabling this function.

Adding a Pro-Tuning license to EFILive does not and will not provide additional tuning parameters.

The features for the Pro Tuning License when it becomes available are:

1. The ability to load User Defined Calibrations (*.cax8 files) that contain calibration definitions that overlap with existing EFILive defined calibrations (*.calz files).
2. The ability to override the restriction that prevents overwriting a controller's operating system with a non-compatible operating system from a different model-year.



EFILive technical support is provided to trouble shoot and resolve issues that occur when using the standard EFILive software with software safeguards in place. Enabling the Pro Tuning License removes some of these safeguards.

If a controller becomes unresponsive after being flashed with a tune file created and/or edited where a Pro Tuning License is active, EFILive will not provide technical support or a replacement VIN license under the VIN License Replacement Policy.

License Transfers

License transfers are available for VIN Licenses and Stream Licenses. License transfer is not available for Pro Tuning License or Tuning Options.

The target device must have the capacity to accept the transferred licenses. Where AutoCal is the target device, VIN slot limits must be sufficient to support the number of licenses to be transferred.

Transferred VIN Licenses do not use available VIN licenses, so there must be sufficient un-allocated license slots on the target device.

VIN Licenses

VIN Licenses can be transferred between the following devices where the license numbers on both devices match.

Transfer From (Host Device)	Transfer To (Target Device)
FlashScan V2, AutoCal V2, FlashScan HD, AutoCal HD	FlashScan V3, AutoCal V3
FlashScan V3, AutoCal V3	FlashScan V3, AutoCal V3

The license transfer product can be bundled with FlashScan V3 or purchased as a license product independently. The following table details how the license transfer will function:

License Transfer	V2 to V3	V3 to V3
Device License Rules		
Devices have the same license numbers.	✓	✓
Devices have different license numbers.	✗	✗
What will be copied from the host device to the target device?		
All used VIN Licenses.	✓	✓
Available VIN Licenses (unused licenses).	✗	✗
License slots consumed (where the license is already on both host and target devices). Most V2 to V3 transfers will only consume one license slot, however in some unique scenarios two slots may be consumed.	2*	1
Tuning Options	✗	✗
Pro-Tuning License	✗	✗
Stream Licenses	✗	✗
Order Requirements & Pricing		
License transfer price	\$149.00	\$99.00
FlashScan/AutoCal Serial and Auth-Code.	✓	✓
FlashScan/AutoCal host device license backup file (*.lbu). Where the user has both the host and target device, an *.lbu file is needed from both devices.	✓	✓
Target device serial number.	✓	✓
The user must send to EFILive, the *.lbu file of the target device after they have imported the *.vimex file so that EFILive can synchronize the VIN License database to match the imported VIN licenses on the target device.	✓	✓

A license activation file will be provided for the user to transfer the licenses using EFILive V8 Scan and Tune software. License activation files will only be generated during regular New Zealand business hours.

FlashScan/AutoCal V2 remains fully functional after License Transfer. Tuning Options, VIN Licenses and Stream Licenses (where applicable) can be purchased for host device after it has been used to transfer licenses.









A future software enhancement may allow FlashScan/AutoCal V3 users to export and import selected VIN Licenses without the need to submit an order or provide a license backup file.

Stream Licenses

Stream Licenses on FlashScan V2 may be moved to FlashScan V3 by purchasing FlashScan V3 with the Stream & VIN License Transfer option.

FlashScan V2 must be returned to EFILive for a manual transfer to take place onto FlashScan. Stream License transfer is not available outside of the EFILive New Zealand office.

FlashScan V2 will not be returned after the transfer is performed, EFILive will retain the FlashScan V2 device.

Stream & License Transfer	V2 to V3
What will be copied from the host device to the target device?	
Activated Stream Licenses	
All used VIN Licenses.	
Available VIN Licenses (unused licenses).	
Tuning Options	
Pro-Tuning License	
Order Requirements & Pricing	
Stream and VIN License transfer price	\$499.00
FlashScan V3 purchase plus applicable Tuning Options	
FlashScan V2 Serial and Auth-Code.	
FlashScan V2 device license backup file (*.lbu).	

EFILive will transfer Streams and VIN Licenses from FlashScan V2 to FlashScan V3 within one business day of the physical receipt of FlashScan V2.

Customers should make provisions to be without their devices for up to one week given freight times and time zone differences between their location and the EFILive New Zealand office.

This service will only be offered for a limited time and will cease on June 30th 2021.

Product Selection

There will be two products to choose from in the EFILive store for FlashScan V3 hardware purchases.

1. FlashScan V3 - Use this product if you do not require the license number of your FlashScan to match another device you own. Build your device to include your required;
 - a. Tuning Options
 - b. Additional cables
 - c. Additional adapters
2. FlashScan V3 with matching License – Use this product where the license number of your V3 device must match another device you own, and/or you wish to purchase VIN License transfer or Stream License transfer options.

The License Back Up file upload is mandatory to use this product. The *.ibu file is used to set your FlashScan V3 device license to match the device license contained in your license backup file. Build your device to include your required:

- a. Tuning Options
- b. Additional Cables
- c. Additional Adapters
- d. V2 to V3 VIN License Transfer
- e. Stream License Transfer (Tuning Options already on FlashScan V2 do not need to be repurchased).

The following products can be added to FlashScan V3 via online purchase without having to return the device to EFILive.

1. Tuning Options
2. VIN Licenses
3. V2 to V3 VIN License Transfer
4. V3 to V3 VIN License Transfer

The Stream License Transfer is only available where the customer purchases FlashScan V3 at the same time as the stream license transfer.



FAQ

Do I need to upgrade?

No. EFILive will continue to fully support FlashScan V2 and AutoCal hardware in line with the EFILive Life Cycle Policy. The introduction of new hardware is required to continue hardware production given the retirement of key manufacturing components for FlashScan V2 and AutoCal.

As a result of hardware redesign, EFILive has made additional improvements to meet key challenges relating to late model controller specifications, and changing customer requirements. In particular processor speed, interface communication methods and hardware storage capacity have been addressed.

Can I choose to upgrade anyway?

FlashScan V3

Yes. If you wish to purchase new hardware you can do so.

AutoCal V3

End users should discuss upgrading their AutoCal with their Tuner. Your tuner will need to:

1. Link your new AutoCal to the Tuner's FlashScan device.
2. Reconfigure tune file security for compatibility with the new device (Dependant on the tune file security settings used by the tuner).

Can I transfer Licenses between devices?

VIN Licenses can be transferred between the following devices where the license number on both devices match.

Transfer From (Host Device)	Transfer To (Target Device)
FlashScan V2, AutoCal V2, FlashScan HD, AutoCal HD	FlashScan V3, AutoCal V3
FlashScan V3, AutoCal V3	FlashScan V3, AutoCal V3

To order a license transfer you must provide your host device Serial and Auth code, your License Back Up file (*.lbu) and target device serial number.

Stream Licenses can be transferred by shipping FlashScan V2 to EFILive for manual transfer. Stream License transfer is not available outside of the EFILive New Zealand office

Can FlashScan V3 lock/unlock tune files secured with FlashScan V2?

If you order the FlashScan V3 with Matching License product, your FlashScan V3 will have the same license number as your FlashScan V2 and can lock/unlock tune files.

Can FlashScan V3 link/unlink AutoCal previously linked/unlinked with FlashScan V2?

If you order the FlashScan V3 with Matching License product, your FlashScan V3 will have the same license number as your FlashScan V2 and can lock/unlock tune files.

What happened to FlashScan HD and AutoCal HD?

FlashScan HD and AutoCal HD products were retired. The hardware specific differences between FlashScan HD and AutoCal HD have been incorporated into FlashScan V3 and AutoCal V3 to provide a single hardware platform moving forward.

The Cummins HD Tuning Option is now available on FlashScan V3 and AutoCal V3 to support these platforms.

I connected FlashScan V3 to V7 software and it doesn't work.

That is correct, FlashScan V3 will only work with EFILive V8 Scan and Tune software.

My tune files were written in the V7 Tune Tool, will they be compatible with FlashScan V3?

Yes, but the tune file should be opened and saved in V8 Scan and Tune to ensure version compatibility. If tune file security was applied to the file, those restrictions must be removed to open the file.

Alternatively, for bulk files a conversion tool is available to update tune files in V8 Scan and Tune under the [F8: Tools] -> [F6: Bulk Files] option.