



# BMW Pass-Thru

Autologic 2016

Disclaimer – This information is provided as a guide only and subject to change by the vehicle manufacturer. Autologic cannot be held responsible for any errors regarding manufacturer information that leads to diagnosis or programming malfunctions. This document is regularly updated so please check for latest version. E&OE.

- In 2004, the Society of Automotive Engineers (SAE) standardized a set of universal rules (J2534) that allow reprogramming of various modules across multiple data interfaces.
- US legislation requires VMs to make vehicles, diagnostic and reprogramming applications that are compatible with J2534 devices, such as the Drew Technologies CarDAQ-Plus 2 interface. (Only available in Northern America.)
- BMW / Mini actually went a step further and now allows reprogramming of all modules. This means the user is able to reprogram powertrain, chassis, body modules, and change car and key settings

## Abilities

- BMW and MINI allows software reflash abilities for vehicles from 1996 and up
- Ability to program/code all Body, Chassis and Drive control units including MOST control units
- Activate/deactivate car and key memory settings
- Import/delete vehicle order

## Limitations

- For ISTA/P, a data interface, battery maintainer and internet connection is required. The data interface can be a BMW Group ICOM interface or a 'Pass-Thru Device' (PTD) that fulfils the requirements of the SAE J2534 standard.
- Offline Mode is not possible since ISTA/P needs a constant internet connection to work properly.
- Programming times of up to 3 hours is not uncommon if the whole vehicle needs to be updated, since MOST control units are updated through the K-CAN → MOST.
- Only certain Pass-Thru devices program on the MOST interface. Consult with the device manufacturer to confirm.
- For ICOM ,To program MOST bus control units, a separate MOST bus adapter is needed.

## Minimum software and hardware requirements:

- 2GB of RAM
- CPU better than Pentium 4 @ 2GHZ or higher
- 80GB of free hard drive memory
- 15" monitor, with 1024x768 resolution
- Ethernet connection to internet gateway device
- Microsoft Windows 7 Professional 32 bit/64 bit **or** Microsoft Windows 7 Enterprise 32 bit/64 bit with SP1 **or** Microsoft Windows 8 32 bit/64 bit **or** Microsoft Windows 10 64 bit
- **Apple Macintosh is not compatible**

## PC Settings

To avoid problems during the vehicle session, it is necessary to make changes to 'Display properties' and 'power' settings.

### Display and screen saver properties

To set the display properties, proceed as follows:

**Start > Settings > Control Panel > Display.** The **Display Properties** box is displayed. Select the **Screen Saver** index tab and then select **None** as the screen saver and click **OK**.

### Power Management

**Start > Settings > Control Panel > Display.** Select **Power**. The **Power Options Properties** are displayed. Select the **Power Schemes** index tab and select **Always On**. Acknowledge by clicking **OK**.

**Note: If using a laptop always connect the A/C power adapter before you begin programming**

## Security Settings

Be sure to turn off the internet browsers pop-up blocker

## Windows Automatic Updates

It is good practice to turn off windows updates when you are programming to prevent any interruptions

The **Automatic Updates** dialogue box is displayed. Select **Turn off Automatic updates**. Acknowledge by clicking **OK** and remember to turn **Automatic Updates** back on once you have finished programming.

## Firewall Settings when using a J2534 Device:

Port 443 TCP (Outgoing) must be enabled for the PC's IP address. You can also turn off your firewall to have the same effect, but for obvious security reasons it is recommended to edit the firewall port settings instead.

## Requirements when using a BMW ICOM:

The following ports **MUST** be activated in the firewall for the network card connected to that ICOM.

- Port 80 TCP
- Port 23011 TCP
- Port 23012 TCP
- Port 427 UDP
- Port 11352 UDP

If these ports are not open, the connection to the ICOM will fail

## Connectivity Requirements:

- Some models require a 20 Pin Adapter, 7/8 Pin adapter, or 16 Pin OBD Cable for communication. Some J2534 devices do not need the 7/8 Pin Adapter as they are built into the device. See your manufacturer for more information.

**Note: Adapter is NOT needed for BMW ICOM**      7/8 Pin Adapter      20 Pin Cable



## J2534 BMW / MINI Compatibility Vehicle Matrix

1 Series	E82		E88			
7/8 Pin Adapter?	NO		NO			
20 Pin / 16 Pin OBD?	16 Pin OBD		16 Pin OBD			
3 Series	E36	E46		E90	E91	E93
7/8 Pin Adapter?	YES	YES		NO	NO	NO
20 Pin / 16 Pin OBD?	20 Pin	20 Pin or 16 Pin OBD		16 Pin OBD	16 Pin OBD	16 Pin OBD
5 Series	E34		E39		E60	E61
7/8 Pin Adapter?	YES		YES		NO	NO
20 Pin / 16 Pin OBD?	20 Pin		20 Pin or 16 Pin OBD		16 Pin OBD	16 Pin OBD



# ISTA/P Requirements

6 Series	E63	E64
7/8 Pin Adapter?	NO	NO
20 Pin / 16 Pin OBD?	16 Pin OBD	16 Pin OBD

7 Series	E32	E38	E65	E66	F01	F02	G12
7/8 Pin Adapter?	YES	YES	NO	NO	NO	NO	NO
20 Pin / 16 Pin OBD?	20 Pin	20 Pin	16 Pin OBD	16 Pin OBD	16 Pin OBD	16 Pin OBD	16 Pin OBD

8 Series	E31
7/8 Pin Adapter?	YES
20 Pin / 16 Pin OBD?	20 Pin

X Series	E83	E53	E70	E71	F15	F25
7/8 Pin Adapter?	YES	YES	NO	NO	NO	NO
20 Pin / 16 Pin OBD?	16 Pin OBD	20 Pin or 16 Pin OBD	16 Pin OBD	16 Pin OBD	16 Pin OBD	16 Pin OBD

Z Series	E36-Z3	E86	E85	E52
7/8 Pin Adapter?	YES	YES	YES	YES
20 Pin / 16 Pin OBD?	20 Pin	16 Pin OBD	16 Pin OBD	20 Pin or 16 Pin OBD

Mini	R50	R52	R53	R55	R56
7/8 Pin Adapter?	YES	YES	YES	NO	NO
20 Pin / 16 Pin OBD?	16 Pin OBD	16 Pin OBD	16 Pin OBD	16 Pin OBD	16 Pin OBD



# ISTA/P Requirements



**Drew Technologies CARDAQ Plus 2 J2534**



**BMW ICOM A Generation 2**



**BMW ICOM A Generation 1**



**BMW ICOM B**

# ISTA/P Requirements



Schumacher INC-700A



Fronius Aactiva Professional Flash

# Subscribing to TIS

The links below are the links needed to access TIS for BMW and MINI:

<http://www.bmwtechinfo.com>

<http://www.bmwtis.com>

<http://www.minitis.com>

<http://www.minitechinfo.com>

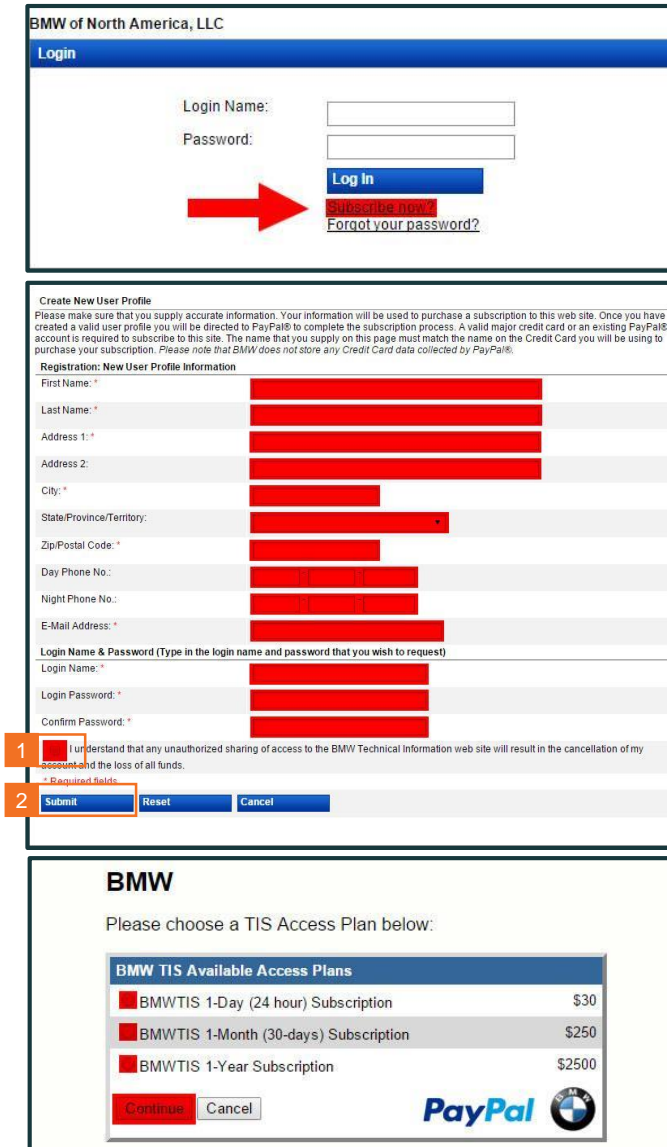
NOTE: You CANNOT use the same account for BMW TIS and MINI TIS, but you can program a BMW using MINITIS and vice versa.

## OSS Server status

At the top right (1) of the BMW TIS website, you will find the OSS (Online Service System) server status. Green checks indicate that the server is up and a red cross will indicate that the server is down

# Setting up a BMW TIS account

1. Launch your internet browser and click the link below <http://www.bmwtis.com>
2. Click 'Subscribe now'
3. Fill in the required fields as marked with a '\*'. Please note:
  - Login Name should be at least six characters.
  - The first character of the Login Name must be a letter.
  - Password must contain characters other than just spaces.
  - Password should contain at least five characters.
4. Read and accept the Terms and Conditions (1)
5. Click 'Submit' (2)
6. Choose your subscription plan



The image shows three screenshots of the BMW TIS account setup process. The first screenshot is the 'Login' page for BMW of North America, LLC, with fields for 'Login Name' and 'Password', and buttons for 'Log In', 'Subscribe now', and 'Forgot your password?'. A red arrow points to the 'Subscribe now' button. The second screenshot is the 'Create New User Profile' page, which includes a disclaimer and a registration form with fields for First Name, Last Name, Address 1, Address 2, City, State/Province/Territory, Zip/Postal Code, Day Phone No., Night Phone No., E-Mail Address, Login Name, Login Password, and Confirm Password. Fields marked with an asterisk (\*) are required. The third screenshot shows the 'BMW TIS Available Access Plans' table with three options: 1-Day (24 hour) Subscription for \$30, 1-Month (30-days) Subscription for \$250, and 1-Year Subscription for \$2500. There are 'Continue' and 'Cancel' buttons at the bottom, along with the PayPal logo.

BMW TIS Available Access Plans	
■ BMWTIS 1-Day (24 hour) Subscription	\$30
■ BMWTIS 1-Month (30-days) Subscription	\$250
■ BMWTIS 1-Year Subscription	\$2500

## Setting up a BMW TIS account

7. You will now be forwarded to the PayPal payment page.
8. You can either pay with an existing PayPal account by selecting 'Pay with my PayPal account' or, to pay without a PayPal account, fill in all the billing information and then click 'Review and Continue.'
9. Return to the Home page and login with your chosen credentials.





Debit or Prepaid Gift Card

Credit Card

PayPal Credit Special Offer

The secure way to use your debit card online  
\$0 liability on unauthorized PayPal transactions.

Debit or Prepaid gift card number

Payment types    

Expiration date

mm  / yy

CSC

What is this?

First name

Last name

Address line 1

Address line 2

(optional)

City/State

ZIP code

Phone type

Why is this needed?

Phone number 555-555-1234

Email

Review and Continue

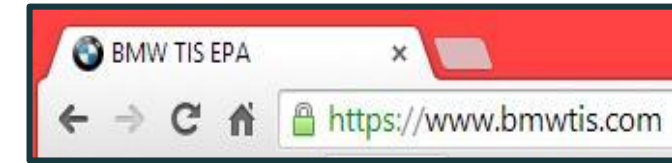
# Installing BMW ISTA

1. Install J2534 manufacturer specific device driver and software (Drewtech J2534 Toolbox)
2. Register your device with your manufacturer



# Installing BMW ISTA

3. Type in <http://www.bmwtis.com> in your browser address bar
4. Login with your Username and Password





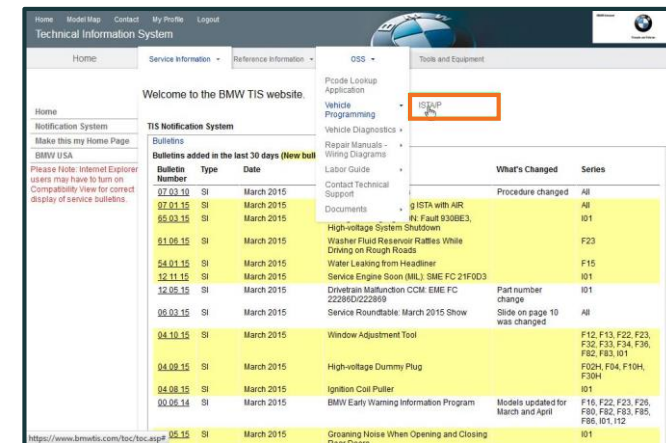
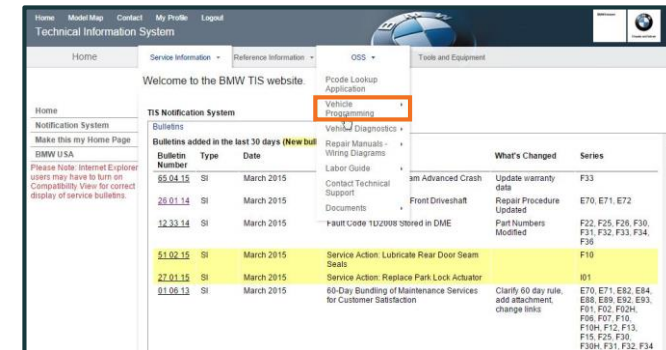
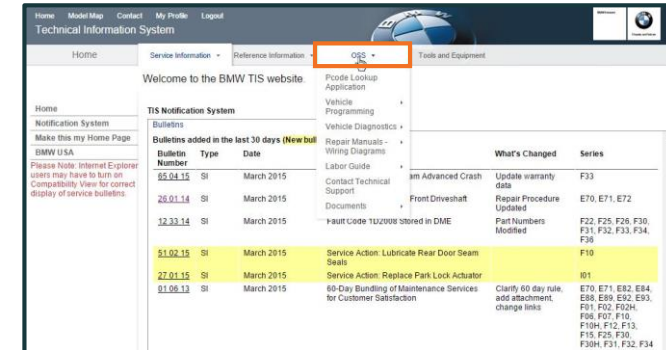
# Installing BMW ISTA



5. Hover over 'OSS'

6. Hover over 'Vehicle Programming'


7. Click on 'ISTA/P'



# Installing BMW ISTA

## 8. Install everything highlighted in green

**Programming.**  
Start ISTA/P.



**Important information about using the ISTA/P workshop system in brief**

- Can only be used for unmodified BMW and MINI cars
- Successful completion of vocational training as a motor mechanic/fitter and further training are necessary
- Use of the special tools listed is mandatory
- The latest driver version must be installed for OMS

Please wait until the status is green before continuing.

**Important note on use**

The information displayed below serves to ensure professional-quality programming of control units on unmodified BMW and MINI cars.

To be able to carry out the aforementioned work, it is essential that the worker in question has completed his/her vocational training as a motor mechanic/fitter and has undergone regular further training.

We expressly point out the fact that if the programming operation is not carried out properly, the road safety of the vehicle may be impaired.

**Download**

User's Guide to ISTA/P Online

[OMS Installation file](#)

[ICOM Firmware](#)

[BMW P11 driver](#)

**Technical requirements**

In order to start ISTA/P with Firefox, the "Microsoft .NET Framework Assistant" add-on must be installed.

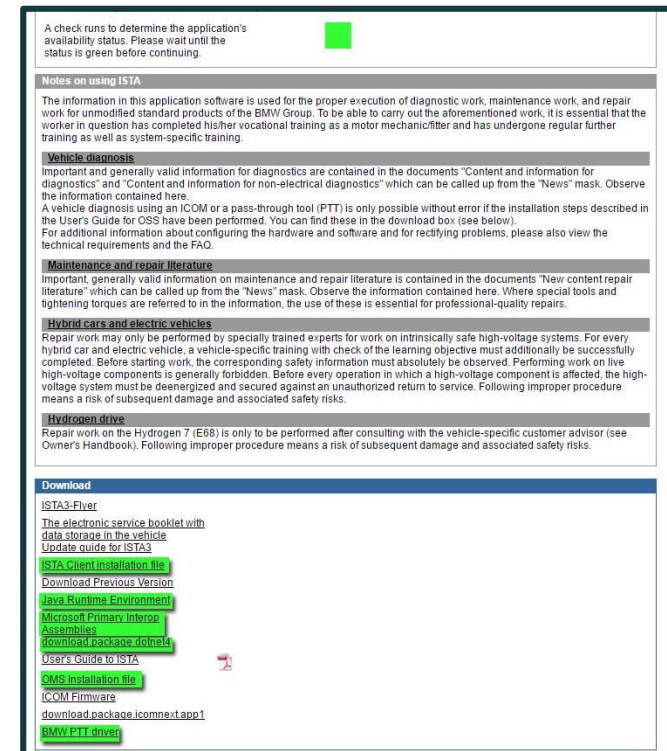
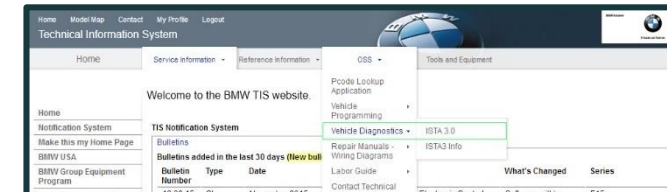
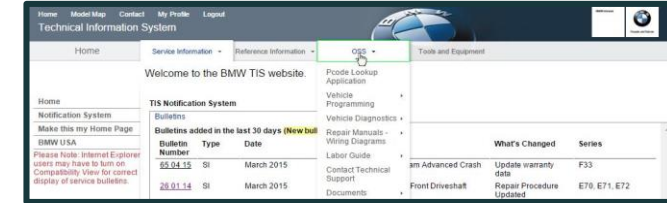
In order to start ISTA/P with Chrome, the "ClickOnce for Google Chrome™" add-on must be installed.

[Microsoft .NET Framework Assistant](#)

[ClickOnce for Google Chrome™](#)

# Installing BMW ISTA

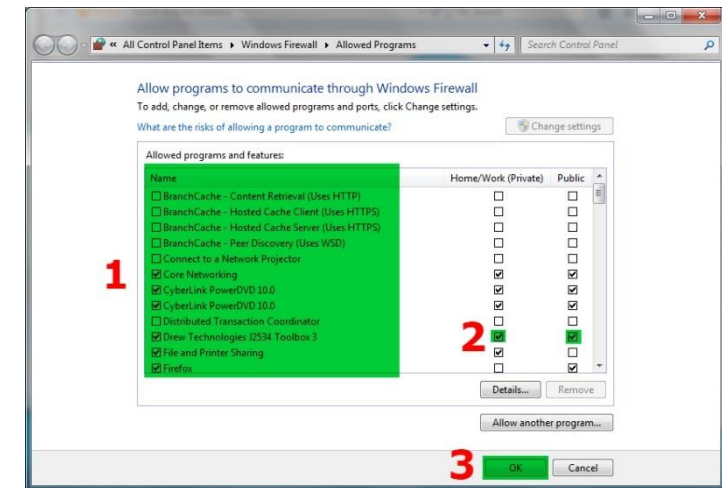
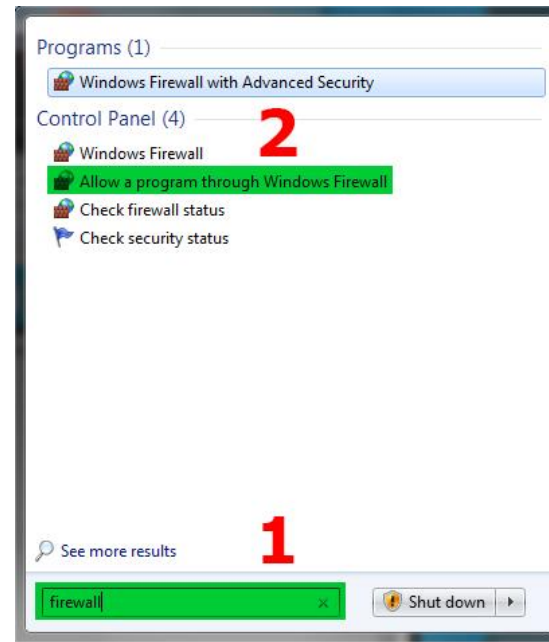
1. Hover over the OSS drop down
2. Select **Vehicle Diagnostics > ISTA 3.0**
3. Install everything highlighted in green



# Installing BMW ISTA

Start > Search for **Firewall** (1) > Click on **Allow a program through Windows Firewall** (2) > Verify that these programs are unblocked:

- Castor
- Idmon
- ISOMInstance
- Pollux
- TaurusAdministration
- TaurusClient
- TaurusServer
- TaurusServices
- TDSServer



# Installing BMW ISTA

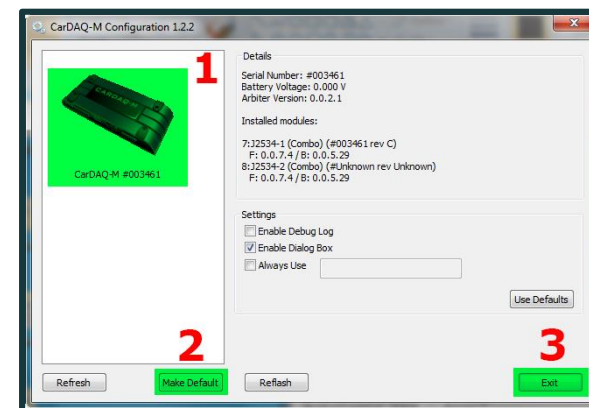
After installing your manufacturer PTD driver, you will have to select your device in the Pass-ThruD Driver configuration tool drop down menu.

Navigate to **Start > All programs > BMW PassThru\_ > PassThruD**

1. Select your PTD from the drop down menu (1) then click Launch Config. Tool (2)

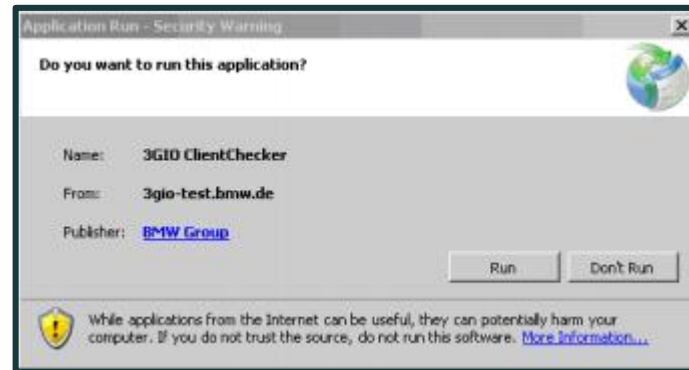


2. Select your device from the left pane (1) and **Make Default** (2) then click **Exit** (3)



# ISTA/P First Startup

You will receive various Windows security messages during the course of first start up. Make sure to allow / acknowledge each window. These are examples of what each window might look like:



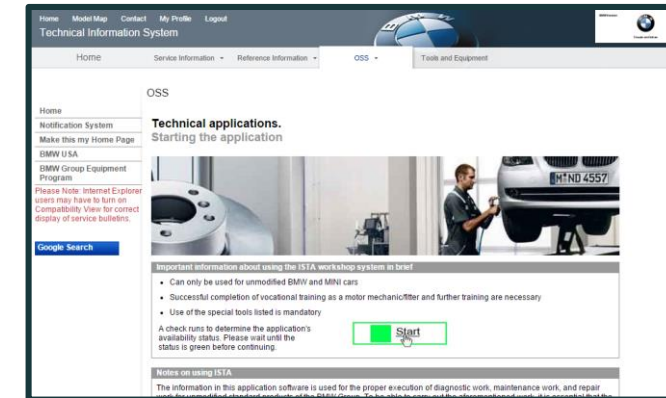


# ISTA/P First Startup

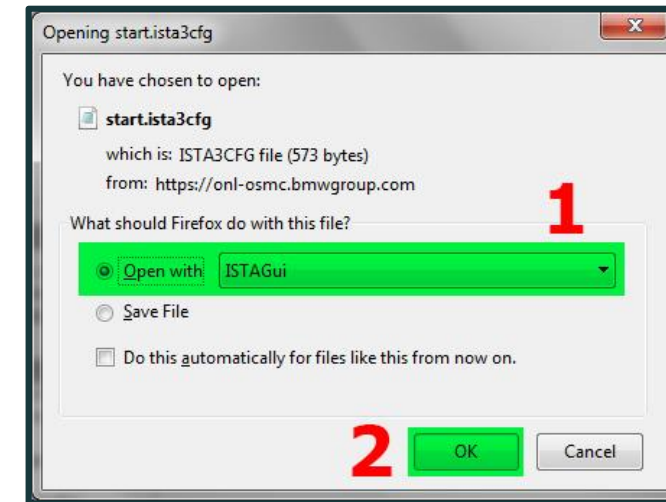
OSS > Vehicle Diagnostics > ISTA 3.0

## 1. Select 'Start'

Note: If you don't see the start button, then recheck your installation. Make sure you have installed all highlighted software as on slides 18 and 19



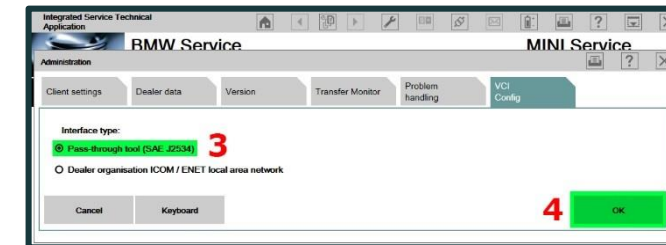
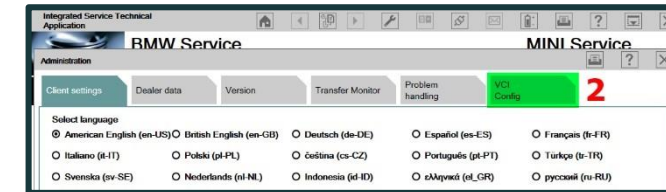
## 2. Every time you click this **Start** button, you will receive a download file window. Click **Open with ISTAGui** (1) and then click **OK**. ISTA/D will commence its start up procedure.



# ISTA/P First Startup

Once ISTA/D – ISTA/P is installed, you will have to configure ISTA to work with your J2534 device.

1. Open ISTA and select the wrench icon on the top toolbar (1)
2. Select **VCI config.** (2)
3. Select **Pass-Through tool (SAE J2534)** (3) then click **OK** (4)





## Requirements before programming:

- On E65 / E66 where the navigation is to be programmed, the BMW navigation system CD must be available.
- Connect an approved battery charger to the vehicle.
- Recharge the battery before starting so that the battery voltage is at least 12.6 volts.
- Shift manual transmission to neutral or automatic transmission to **"Park"**.
- Activate the electromechanical parking brake or apply the parking brake.
- Make sure that the temperature of the transmission oil is less than **85 °C (185 °F)**.
- Switch off all electrical consumers, lights and turn signals.
- Switch off the automatic wiper/washer and headlight (RLS) system. NOTE: The wipers may be actuated during programming. Make sure that the wiper can move freely.
- Make a note of all FM and AM radio frequencies as they will be erased during RADIO programming (Tip: Take a photo of them instead of writing them down. Quicker!)

- Make a note of car / key memory settings as they will be reset during coding. (iDrive or in ISTA/P)
- Make a note of all navigation addresses as they will be erased during Head unit programming. (CCC, CIC, etc.)
- Make a note of all telephone numbers as they will be erased during TELEPHONE programming.
- Make a note of all durations left on serviceable items (**C**ondition **B**ased **S**ervice) in case they are reset during programming.
- Switch the engine off, Ignition ON (terminal 15).
- Switch on the ignition (terminal 15). NOTE: On vehicles with Comfort Access, the ignition key must be inserted in the ignition lock. A key which is not inserted in the ignition lock may cause the discontinuation of encoding.
- Check the fuel level is at least ¼ tank. Programming when there is insufficient fuel in the tank can lead to damage to the fuel pump.

- Leave the ignition switched on unless ISTA prompts otherwise.
- Do not operate or move anything on the vehicle (hood, tailgate, doors, windows, steering wheel, switches etc.). Doing so will wake up the control units in sleep mode and may abort programming.
- Do not disconnect the charger during programming. If the vehicle system voltage is too low, a control unit may not be programmed correctly. This control unit can then no longer be used and will have to be replaced.
- Make sure that the vehicle system voltage does not drop below 13V otherwise programming will stop (Error Message) or abort programming completely.
- Programming of vehicles with EHC (Electronic Height Control) must be performed on a level surface.

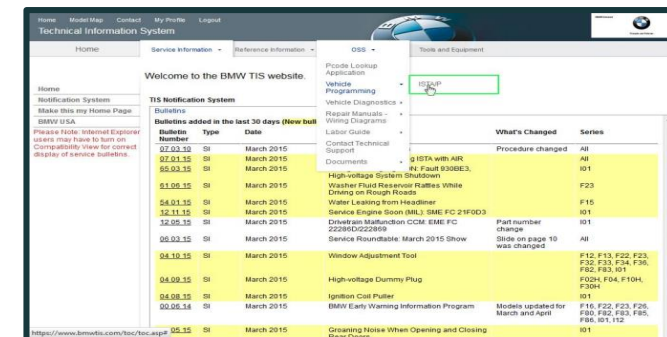
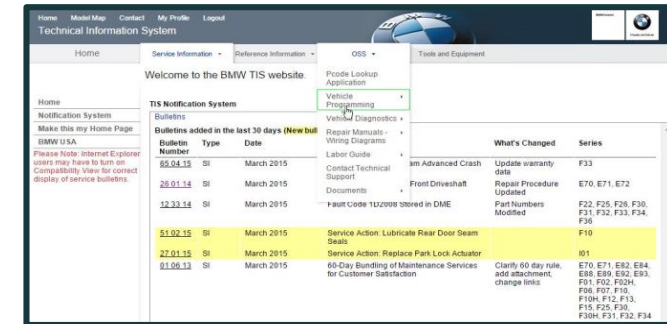
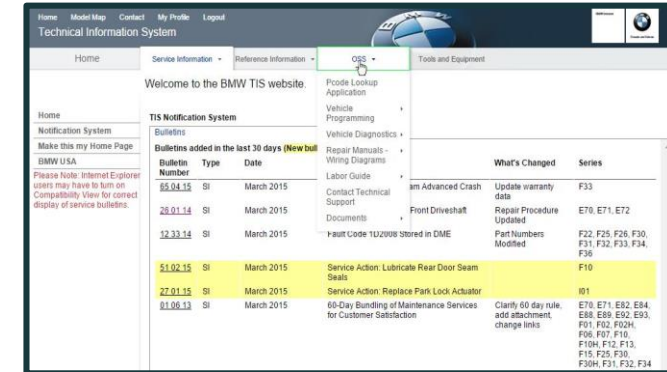
# Using TIS – Example 1



## Programming/Coding with J2534 Pass-Thru tool

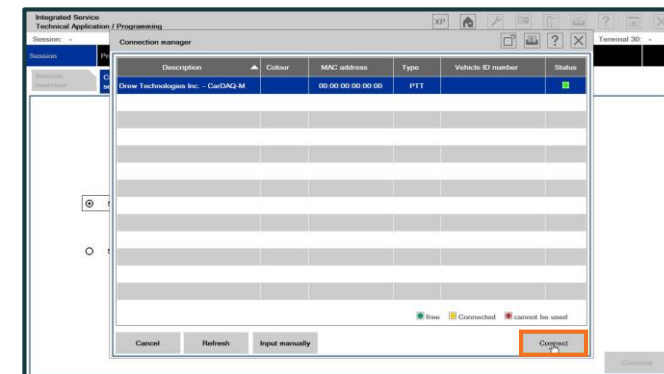
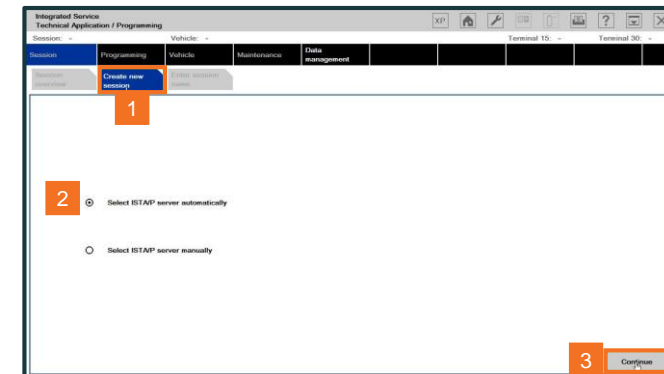
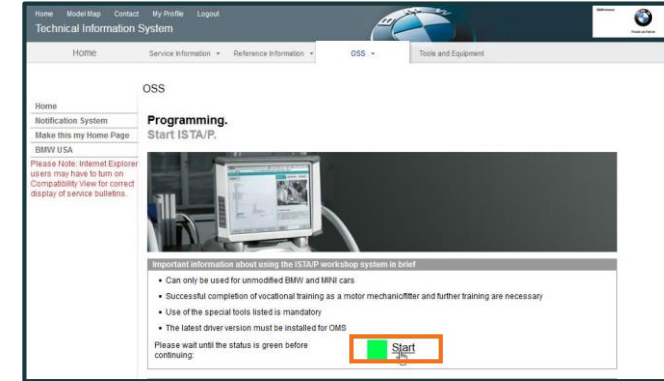
This tutorial will show you how to update the E60 EGS control unit software.

1. Hover over **OSS**
2. Click on **Vehicle Programming**
3. Click on **ISTA/P**



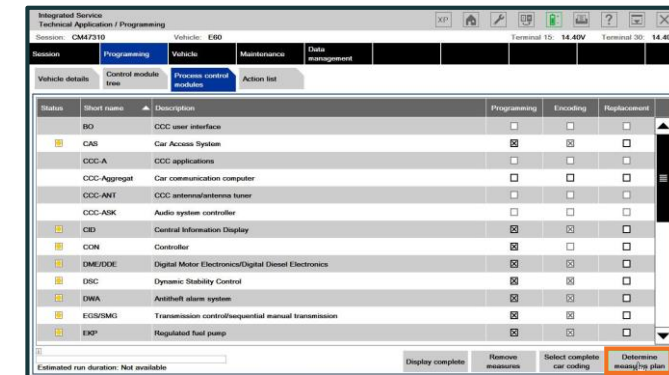
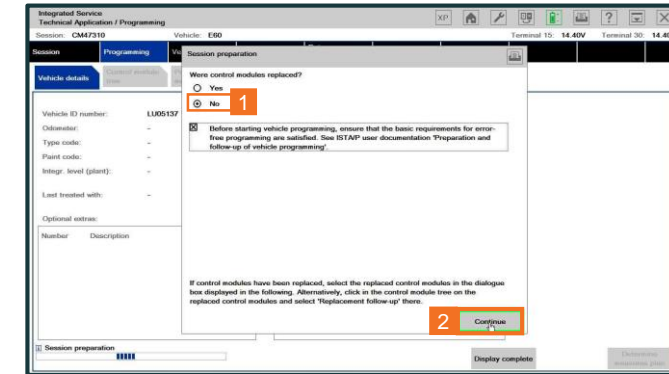
# Using TIS – Example 1

4. Click 'Start'  
(If you don't see the start button it means there is something wrong with the installation)
5. Click 'Create New Session' (1) and make sure that the first option for automatic selection (2) is selected and then click 'Continue' (3)
6. Select your J2534 Pass-Thru device from the connection list and then press 'Connect'



# Using TIS – Example 1

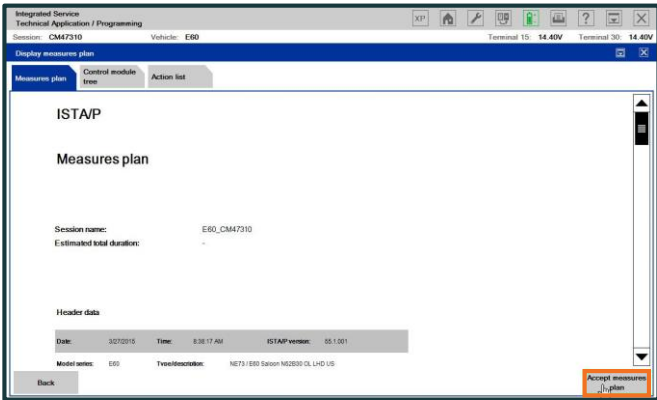
7. When asked 'were control modules replaced?' click 'No' (1)
8. Read the disclaimer and then click the disclaimer box
9. Click 'continue' (2)
10. Click 'Process Control Modules'
11. Click 'Determine Measures Plan.' This screen will allow you to see which control units require programming



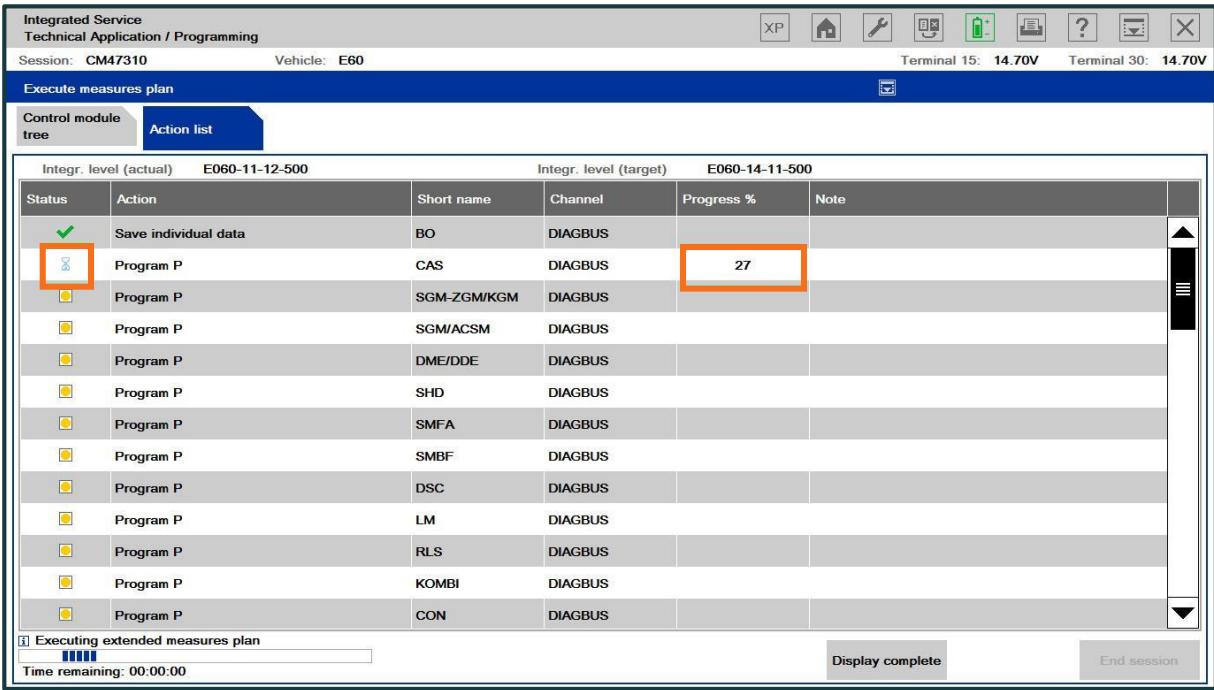
# Using TIS – Example 1



12. Click ‘Accept Measures Plan’



13. The vehicle should now be programming

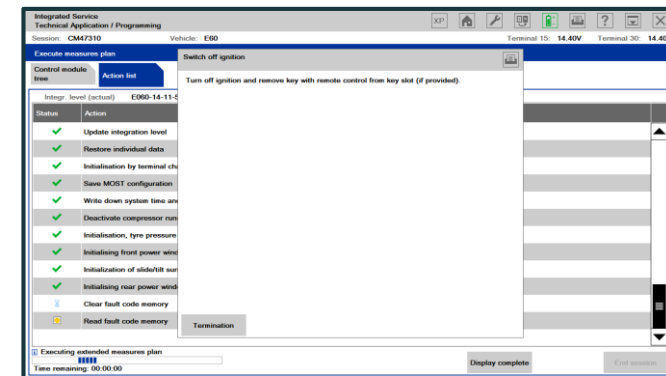
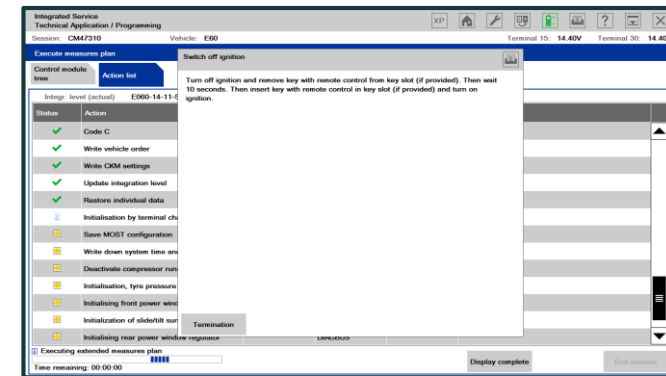
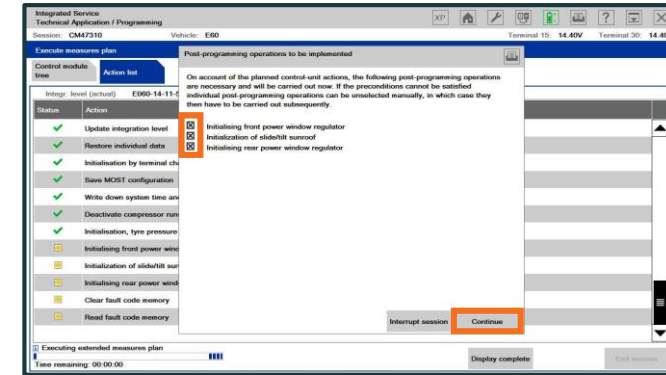


# Using TIS – Example 1

14. You will get post-programming actions. For example:

- Initialisation of sunroof
- All window regulators
- Clear/read all fault codes

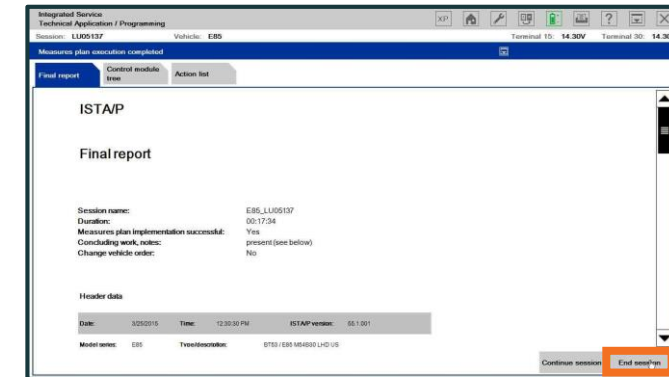
15. Click 'Continue' and then follow the prompts on screen.





## Using TIS – Example 1

16. When the vehicle is done programming, you will get a final report.
17. Scroll through the report and check for any failures
18. Click 'end session' to finish.



## Requirements after programming

- Perform the remaining initialisations (sunroof, windows, steering angle sensor etc.)
- ISTA/P will automatically clear and reread fault codes
- Review any Check Control messages
- Road test the vehicle and check operation of all systems

# Tips and Best Practices

- Use Internet Explorer browser for best compatibility
- Only use Ethernet to connect to the internet. Don't use WIFI
- Do not install another manufacturers pass thru software on PC/Laptop
- Install Mozilla browser extension (Microsoft .NET Framework Assistant) if using Firefox Browser
- Make sure Windows Firewall is completely off (McAfee, Norton, Windows Firewall, etc.)
- Pass Thru manufacturer driver installed (Drew Technologies etc.)
- BMW Pass Thru Driver (BMW PTT Driver)
- Administrator rights to computer
- 7-8 adapter for older cars
- Good Battery Charger with Flash Capabilities 13.2v – 14.9v recommended
- **When in doubt, restart the computer!**
- Make sure to completely exit out (Don't shut the computer off) of ISTA/P or ISTA/D when having an issue so FASTA data can be sent to BMW if support is needed.

## Technical Support

- For vehicle order, enabling codes, and IBAC codes contact **BMW NA** by selecting the Contact link at the top left section of the bmwtis, bmwtechinfo, minitis or minitechinfo website. Attach your BMW TIS account name, return email address and vehicle VIN number
- For any BMW TIS website issues or ISTA issues contact **BMW NA** by clicking on the contact link at the top of each website
- If you have any software installation issues or vehicle connection issues and you have an **Autologic Support** subscription, call **1-877-945-6442**.
- For **Drew Technologies** (J2534 Device) Technical support call **734-222-5228** or email [support@drewtech.com](mailto:support@drewtech.com)
- To start logging, open **DrewTech's J2534 Toolbox**, click on **Debug Check**, then click on **Debug**. (Only DrewTech can decode these logs.)

Thank you for using this Autologic Pass-Thru guide.

We hope that you found it useful.

If you have any further issues, please contact our Assist  
Pass-Thru Support Team.