# EXPERIENCE THE NEW GENERATION OF SCAN TOOLS

## AUTO HEX II
### BEYOND THE EDGE OF IMPOSSIBLE



## MICROTRONIK™
### TOMORROW TECHNOLOGY

USB

The upgrowing automotive electronics industry is facing limitation to reliable and safe diagnostic scanning tools.
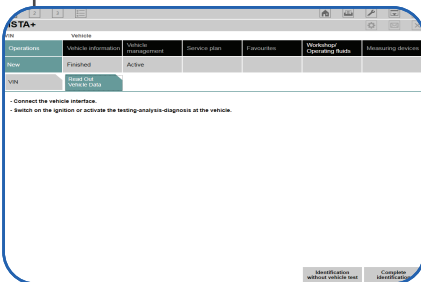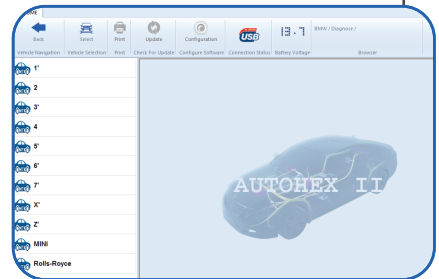
AutoHexII is the right answer for such situations.

AutoHexII has been designed to be a technical assistant especially in BMW cars for doing wide range of operations from programing to making keys and a lot more.

# Diagnosis

Autohex can diagnose all models of fourwheel automobiles coming under BMW group of companies.

You will get clear picture of the fault codes and about its status and can print it to hard copy.



Run ISTAD as passthru and get a detailed dealer level diagnose results ,do service functions,get wiring diagrams and a lot more functions needed for a garage.
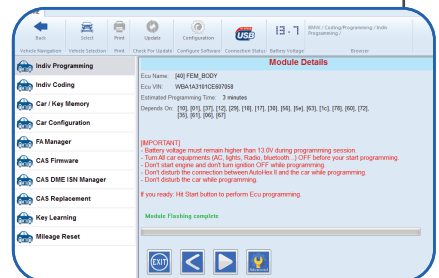
# Individual Programming

This feature allows to program every Electronic control units individually to latest flash versions.

Non compatible used ECU can be programmed to adapt in car depending on various calculations.

The function is easy as one click so user no need to do any calculations or find flash versions manually, **AutohexII** will calculate the latest flash based on FA (vehicle order) and part number.



- Safe and robust method of flashing
- Flash non compatible ECU's
- User friendly operations
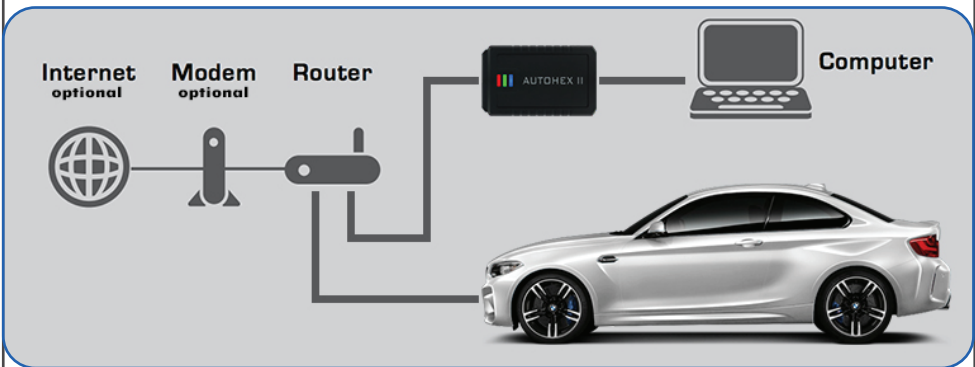
# Enet - DoIP PROTOCOL

Enet is the mode communication used between ECU's internally and also between On Board diagnostic systems to car.

In BMW it is used in F and G chassis.

It is also adpated by all other automotive brands to remove complexity and making stable communication between Electronic units.

AutoHex hardware can communicate using this method to car, so that flashing multimedia ECU's in F/G series will be more safer and faster than expected.

- Able to program used multimedia units like (HU-H, KOMBI)
- Supports full DoIP standards with different multiplixing pins.
- program and change VIN for used Head units
- Future adaptivity of other car brands.
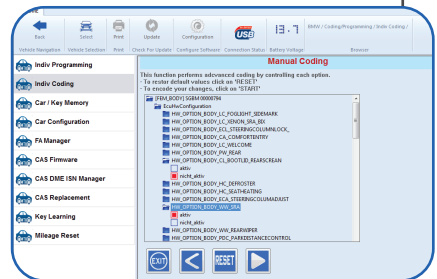


## Indvidual coding

**AutoHexII** can perform BMW ECU coding individually by selecting the desired ECU to encode, this function is used to configure a specific control with respect to the car configuration (VEHICLE ORDER).

1. Configure ECU based on FA stored in car
2. Match VIN for used ECU
3. Code ECU to default stored parameters.

## Manual coding

It is an advanced function available in both

E and F series for manually editing varies parameters stored inside ECU.

1. Activate hidden features
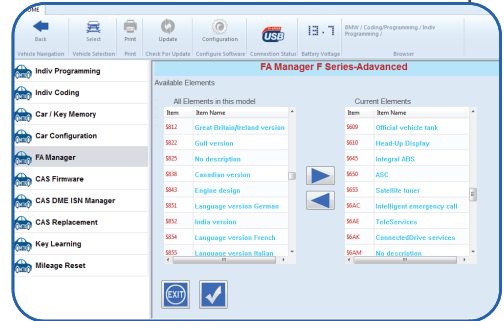2. disbale unwanted functions
3. configure retrofits

# Vehicle Order FA

vehicle order stores all data of car configurations like Model name, production date, engine type etc.
FA modification is required while doing retrofit operations in the car.

In the advanced option of Autohex FA manager allows to add or remove FA stored in car to desired values.
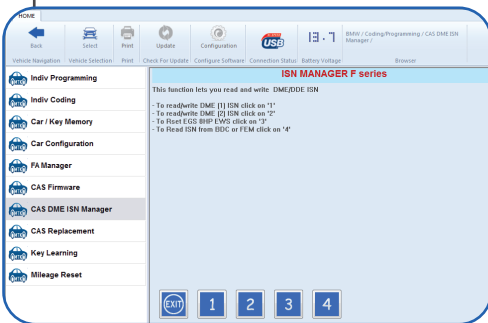Vehicle order (FA) is stored in various ECU's depending upon your chassis type. In autohex software it is possible to Restore FA from backup ECU also the vice versa.There are options also to load FA manually using a file.



# ISN Manager

ISN (Identification Serial Number) is a unique internal security number stored in all major ecus of BMW models for avoiding mishandling.
The electronic units with ISN number are Engine control unit (DME/DDE), CAS (Car Access System), FEM (Front Electronic Module) and Transmission control unit (EGS).
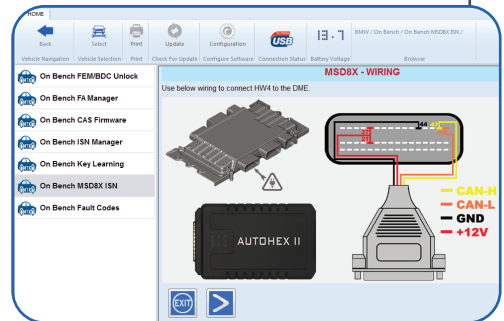


Every car has its own unique ISN number which restricts swapping controls from one to another.
The ISN Manager option allows to read isn from DME, cas and make it aligned each other.
In this way its possible to replace used compatible ECU from car to another.



- READ ISN from a wide range of DME/DDE by OBD
- Read and Edit CAS 1,2,3,3+,4+ ISN OBD
- Read EGS 6HP ISN in E series
- FEM/BDC ISN read/write suppoted
- Read and chaneg ISN for latest Continetel DME's MSV90,MSD87 and MSD85 in F series

## Tricore ISN Boot mode

ISN boot mode allows to read and edit ISN, save eeprom, Reset working hours and change VIN for TRicore DME/DDE in both E and F series.

This procedure is done on bench using our tricore ISN boot mode cable which can be also used read CAS and DME on bench.
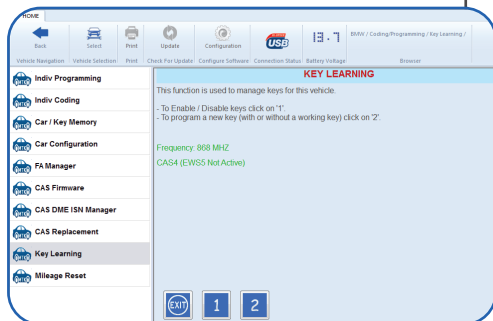
## ISN FACTORY MODE

Earlier it was necessary to open the ECU cover for reading or editing ISN mainly for F series DME/DDE in BMW.

Once the factory mode option released in Autohex you can read and edit the ISN stored Inside ECU On bench without opening ECU cover or making any holes on it.

By connecting some wires using our Tricore cable based on the connection diagram available on software itself you can read ISN and change It

(When replacing with used control).



working hours from ecu can be also changed on this mode.

Wide range of ECUs from BMW E,F and G series like MGD1, MEVD1724, MEV1726, ...etc. are supported on the list in factory mode.

## CAS4/4+ OBD unlock

CAS4/4+ used in BMW F series chassis mainly used in models like F10,F01,...etc can be unlocked OBD with Autohex II to do works like Key programming, ISN editing, VIN change and mileage rest etc.

This can be accomplished On board itself by breaking the CAS security using DME ISN. So there is no need to solder wires to CAS or get it EEPROM/D-flash for programming keys.
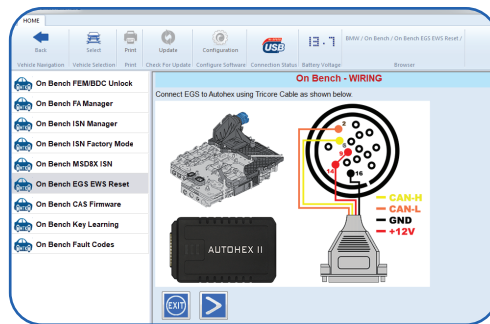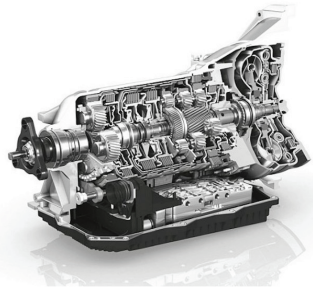
Using Autohex II the whole procedure is done in a faster and safer way without any risks of damaging the CAS4.During the process of unlocking itself Autohex will restore CAS to its Original state without any further procedures.

# EGS EWS Reset

Transmission which have EWS security can't be replaced with secondhand unless it is matched with CAS or both CAS and DME. This can be achieved by few easy steps in AutoHex.
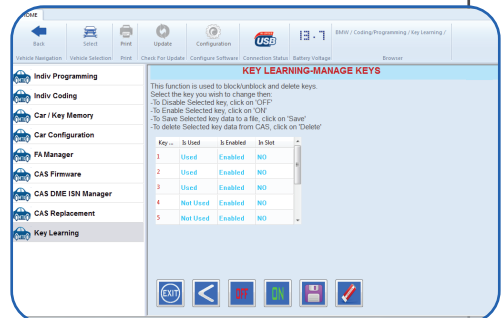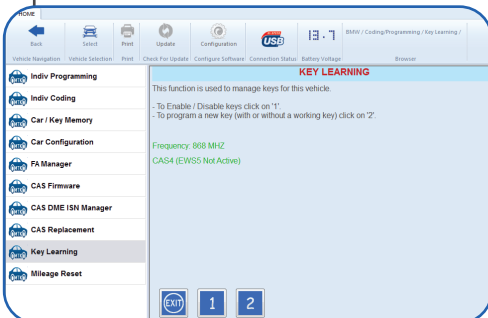
Supports **6HP E-Series** for matching with cas and dme (needed only for E70 and 71) supports **6HP/8HP F-Series** for reset All car models in **F-Series** comes with EWS security for transmission.
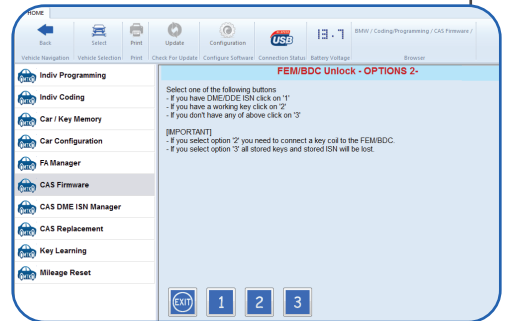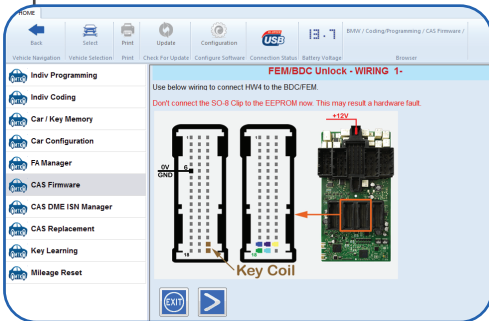
AutoHex can reset almost all **8HP** models in **F&G Series**



# Key learning

- Simple and faster procedure for programming key
- Program keys even when all keys lost
- CAS 1, 2, 3, 3+, 4, 4+ keys can progamed OBD
- CAS 4 key can be programed with the help of HEXTAG and AutoHex
- No soldering required for FEM/BDC key programing
- Disable ,Enable and delete keys.
- Transfer keys from one CAS to another on E-Series.
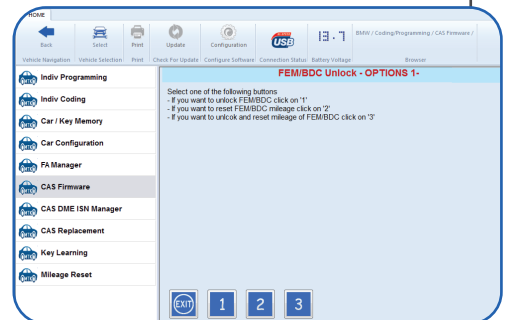- Get key cutting code for CAS 1 - 3+

# FEM / BDC unlock

Front Electronic module and Body domain control are the successors of CAS in later models of BMW. It is integrated as a single control unit which can do the functions of ZGW,CAS,FRM. Autohex allows to Unlock FEM and BDC security to do various operations in it like program keys,Edit ISN ,EDIT VIN etc.

**- Safest and fastest way of unlocking**

**- No need of any soldering or remove any components from board**

**- user friendly steps**

**- Reset mileage of FEM/BDC**

Stored mileage in the control can be reset to 0 using Autohex software which will help in replacing FEM/BDC with used one.
When you connect control back to car it will be adapt the mileage from KOMBI.



**- Unlock even when all keys and ECU lost**

Specially in cases of replacing FEM/BDC with a used one its very hard to get second-hand one with a KEY.The special function in autohex allows to break the security of it even without working key or DME ISN so that Once you get the secret file from software you just need to match the original car DME ISN and program new keys for it.

**-Manage Keys**

This allows to delete keys stored in the FEM/BDC so it can free up the space and program keys in situations where all the 10 slots are used. Also keys can disabled or enabled from this feature.

**- Repair damaged FEM/BDC**

| | |
|---|---|
| Processor | ARM Cortex M3 |
| Power supply | 8-24V |
| Power consumption | 2 W |
| Max working temperature | 50 C |
| Diagnostic socket | EOBD II 16 Pins |
| Host Interface | Full speed 12MBPS USB 2.0 |
| Operating system | Windows 7,8 and10 |