HELLA GUTMANN

mega macs X

The innovative diagnostic solution –

always individual, always flexible

Future is today –
and it fits your demands

The mega macs X is a completely revised product and revolutionizes the methods of operation and communication with the vehicle. The so far most flexible diagnostic solution by Hella Gutmann is technically in the lead and as handy as never before. And the top of the line: It adapts to any workshop size.

A DIAGNOSTIC DEVICE COMPLETELY RE-INVENTED

Successful future organization requires comprehensive rethinking and explore new technological fields. In this way it was able to turn simple mobile phones into clever smartphones accompanying us through life Today the automobile industry is a similar situation. Provided that the system is fully interconnected its only a question of how apps and assistance systems are configured so that the vehicle can manage various functions besides the plain driving. Every driver takes his or her own decisions. Installations are made semi-automatic and their use is self-explanatory.

FREEDOM OF CHOICE AT ALL LEVELS

As it is the situation with vehicles the dialog with them changes, too. Therefore, Hella Gutmann has been entirely re-thinking the world of data and diagnostics and has developed the mega macs X. As well as the owner of a vehicle you should also be in the position to decide which functional modules and data types you need for multi-brand diagnostics and which hardware you wish to use for that. Maybe one day like this, and the next like this No problem with the mega macs - it's only a question of configuration.

DC-IN

And the X? Stands for X advantages

The well-known name mega macs stands for the tried and tested diagnostic devices of Hella Gutmann. Apart from the mega macs 56 and 77 we are currently providing the diagnostic solutions mega macs PC and ONE. And although the mega macs X has been developed from our well-known product line, it comes up with some new features. But first of all: X advantages The X is hence the indicator for any advantages which every workshop can define and configure individually.

X = COST-EFFECTIVE ENTRY-LEVEL

Thus, the X stands for a specially economic possibility to read and delete trouble codes and to perform the most important diagnostic functions over IP. With the entry level license you can enter the cross-brand diagnostic work processes without financial risks and you can e.g. cover your used car trade business. Several software updates per year ensure the high vehicle coverage for a long period of time. You just need an existing tablet, notebook or your PC as displaying device.

X = FLEXIBLE AND EASY USE

In workshops of any size and regardless of the specialization or focus on automotive field the X stands for a new way of proceeding. Just connect the mega macs X diagnostic module with the CARB interface cable to the vehicle. Operate all the necessary steps via a separate displaying device of your choice. No need to carry a heavy diagnostic device. And it's no effort in case the notebook or tablet shall be replaced one day.

X = INDIVIDUAL CONFIGURATION OF THE FUNCTIONALITY

Among others the X stands for the flexible adaptation of the scope of performances and hence for utmost investment reliability. Should you wish to start with the minimum functions reading and deleting trouble codes then select the entry-level license. Future upgrades to different license models are possible any time. Release processes over the air let your mega macs X grow flexibly according your demands up to the latest diagnostic level of the mega macs 77 SDI with guided measurements and new functions such as data types about advanced driver assistance systems and lighting systems or e-mobility. For motorcycle

diagnostics we will offer two versions: The X-Bike version is intended for plain bike workshops. Workshops which want to offer bike diagnostics as well can book the Bike-X Add-on license additionally.

X = FAST AND SEMI-AUTOMATIC INITIAL SETUP

The mega macs X has been designed following the "Plug & Play" principle. This applies especially to the browser-based initial setup with a freely chosen displaying device. The SDI setup will start automatically after having scanned a QR code or having made manual entries. You are of course guided through the installation and the connection to the mega macs X with the displaying device.

X = SOFTTOUCH HOUSING, DESIGNED FOR A LONG SERVICE LIFE

The best repair is the one that never shall take place: High-quality material and a robust, shock-reducing TPE element protect your mega macs X as well as your customer vehicles from scratches and damages. Should one day nevertheless battery power decrease or a CARB plug should be damaged, we have made provisions. In order to keep repair times and costs at minimum, we have already considered the repair-friendliness of the new device by using a split housing. Both the OBD cable and the battery can be replaced separately.
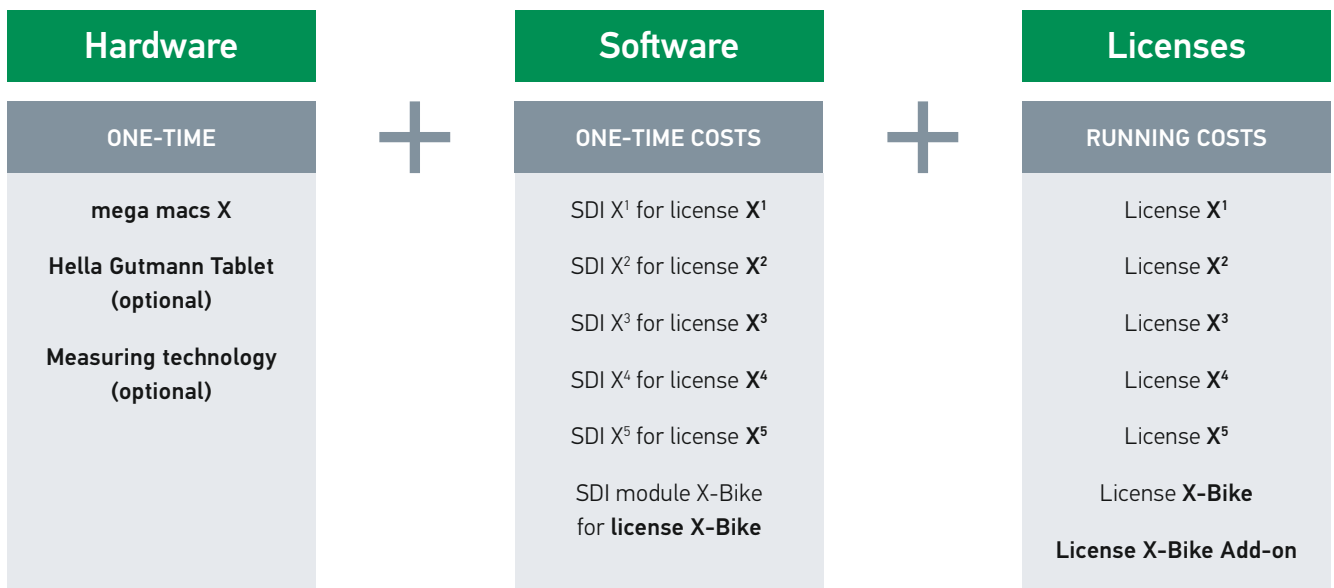
DC-IN

Variation for maximum independence

THE CHOICE IS YOURS: THIS APPLIES TO THE HARDWARE ...

The mega macs X provides utmost flexibility and a vast number of options regarding the hardware and software configurations. The choice is yours whether you wish to combine your existing tablet or your PC with the mega macs X or the Hella Gutmann Tablet: The mega macs X is fully flexible here. Should your requirements change then just change your mega macs X setup.

... AND TO THE SOFTWARE

The mega macs X, however, is not only flexible in its hardware: Thanks to the different software modules you can access the full scope of services, which fits best to your situation in the workshop. Should the situation change, you can easily change your software module. Operate the mega macs X as mobile tool and extend it as you need. Everything is possible

Hardware		Software		Licenses
ONE-TIME		**ONE-TIME COSTS**		**RUNNING COSTS**
mega macs X		SDI X^1 for license X^1		License X^1
Hella Gutmann Tablet (optional)		SDI X^2 for license X^2		License X^2
		SDI X^3 for license X^3		License X^3
Measuring technology (optional)		SDI X^4 for license X^4		License X^4
		SDI X^5 for license X^5		License X^5
		SDI module X-Bike for **license X-Bike**		License **X-Bike**
				License X-Bike Add-on

Software modules and licenses may vary depending on the country.

Elegant Design, Smart Functions

Decentralization is also possible in the design of the device: In case of the mega macs X, we have packed the entire logic or also called the "brain" into a small and compact housing. The very sensitive touch screen, however, is separated. This makes sense in case there should be a defect in your displaying device once.

AN ENTIRELY NEW DESIGN

Already its pure appearance states a clear difference from previous diagnostic solutions - as it has neither a display nor a keypad. At a first glance the wired OBD plug with integrated LED lighting appears like a modern neatly designed oversized VCI it is, however, the future-oriented and utmost flexible diagnostic solution so far developed by Hella Gutmann.

INNOVATIVE DETAILS FOR YOUR SUPPORT

The well-thought concept of the mega macs X comprises sophisticated details such as a circumferential cable duct and a magnetic surface, which fixes the OBD plug in the right position at the housing. The mega macs X hence turns into a compact unit which can be placed easily on the charging tray when not in use. A green LED progress bar on the front and back of the device indicates active vehicle communication when performing diagnostic work. Other functions are indicated by the partial lighting of the so-called Swoosh.

The rugged housing of the mega macs X includes the entire logic, i.e. the processor, the diagnostic software and the integrated diagnostic protocols – among others the CAN FD and DoIP for new vehicle models such as Skoda Octavia, Volvo XC 90 and Golf 8 of Volkswagen. It's down to you which displaying and operating device you want to use for vehicle diagnostics: No matter if it is a tablet, a notebook or a PC with one of the common operating systems (Windows, Android, Apple IOS, Linux).

A bracket integrated in the mega macs X enables you to attach the device to the side window of the vehicle and and thus ensures a stable wireless connection to the operating/displaying device at any time also on vehicle glass treated with chrome vapor.

Just like a smartphone the mega macs X also has an integrated flashlight and a smart search function: A click to the button ‚find my mega macs' on the user interface helps you finding the dedicated device.

Start off right now!

Start into diagnostic work is especially easy with the optional Hella Gutmann tablet. The modern Android tablet comes with a docking station, which includes various interfaces (HDMI, Ethernet etc.). We have selected this tablet carefully while paying special attention to promptness, reliability and sturdiness and it is geared to the diagnostic processes with the mega macs X.

Hella Gutmann Tablet with docking station

**START OFF WORKING
WITH THE TAILOR-MADE HELLA GUTMANN TABLET**

And even if you have never had a tablet in your hands before, you are on the safe side with this package. Thanks to the integrated Setup Wizard the tablet and the mega macs X are connected automatically and you can start working instantly.

Here the software contents of the tablet are limited to the essential functions: The interaction with the mega macs X for diagnostic work and the use of the e-mail function and the web browser. The download of Apps from the Internet to the Hella Gutmann Tablet intentionally blocked to ensure fast working of your operating/displaying device in the long run.

By the way: Should you have any questions you can of course rely on the support by Hella Gutmann.

Some more features?

Trouble code reading and viewing system parameters are some intelligent features for quick troubleshooting. There are, however, some cases in which electric measurements are essential. As an elegant alternative to the separate multimeter and oscilloscope the measurement module of the mega macs X is fully involved in the diagnostic process.

THE EXTERNAL MODULE
FOR PROFESSIONAL MEASUREMENTS

After having connected the mega macs X via USB cable with the optional measurement module MT-USB, the SDI screen of the operating and displaying device will automatically show the Measurements menu. Provided that you have the corresponding license your diagnostic device is going to turn out a practical two-channel multimeter for voltage measurements up to 60 Volt as well as for current and resistance measurements. Just use the operating device for taking all the necessary settings.

EXTRA COMFORT

Highly professional and even more convenient is the measurement process with the measurement module MT-X which is connected via Bluetooth. We will provide this module as an alternative at a later point of time. Depending on the release type you will receive with the MT-X a two-channel oscilloscope, a pressure measurement unit and the guided measurements function which is well-known from the mega macs 77. Comprehensive guided high-voltage measurement functions are of course included as well.

i

SOON TO COME: BLUETOOTH PREMIUM MEASURING TECHNOLOGY FOR HIGH-VOLTAGE COMPONENTS WITH 2-CHANNEL OSCILLOSCOPE

Measurement module MT-USB

Services at a Glance

All about the mega macs X

Every mega macs X is as powerful as it has been defined during its configuration. The included functions and scope of data is at your choice. You can easily maximize your "brain potential" of your mega macs X later on depending on your demands, e.g. by adding the world of data regarding ADAS & lighting or e-mobility, which are by the way included in the premium license.

Functions

As a flexible and cross-brand diagnostic device the mega macs X is indispensable for the daily work. The quick change between functions and data saves valuable time. Multiple entries are not longer necessary and fault sources are minimized.

Besides the obligatory functions of reading and deleting trouble codes the mega macs X convinces with its comprehensive additional extras. Service resets, automatic request of kilometer/mileage reading and indicating the system parameters are essential features of the device. Depending on your individual configuration your mega macs X will support you with active actuations of actuators (actuator test), basic settings, codings and calibrations. And its pretty satisfying if automatic proposed solutions are the ultimate troubleshooter.

NEW FUNCTION: CYBER SECURITY MANAGEMENT

The various manufacturer-specific unlocking procedures for the security systems of existing and future vehicle generations obstructs competitive working and shall therefore be handled in the best possible way.

In the mega macs X this process will be done with the Hella Gutmann Cyber Security Management. Once activated you can start off working on vehicles with security lock by exploiting the entire diagnostic scope.

Measuring technology

Trouble code reading, viewing system parameters or specific actuator test not always lead to the solution of the problem. A conventional electric measurement can then provide the necessary facts. This measurement is quite easy with the mega macs X as it seems to be with regard to the complex electronic systems of modern vehicles.

With a measurement module your diagnostic device can be turned into a practicable two-channel multimeter if requested. The multimeter enables voltage measurements of up to 60 Volt as well as current and resistance measurements. Just use the operating device for taking all the necessary settings. Your mega macs X provides you with the necessary instructions.

NEW MEASURING TECHNOLOGY: GUIDED HIGH-VOLTAGE MEASUREMENTS

The number of vehicles with multi-voltage and high-voltage vehicle electrical systems is increasing rapidly. Your mega macs X will be of valuable support also with this challenge provided that you have the qualification for working on high-voltage vehicles. In compliance with all the safety precautions your diagnostic device will assist you in high-voltage measurements on hybrid and electric vehicles. Exact notices, clearly arranged depictions of the measuring results as well as nominal and actual value analyses are pretty useful.

Technical Data

Even the best technician is sometimes stranded without the right data at the right time and place. We therefore take a lot of trouble to provide our customers with technical data - in the ideal way in OEM quality. Numerous links to the corresponding databases are realized unnoticed in the background while the mega macs X is operated.

However, not every workshop requires the same scope of data. Therefore, you decide which scope of functions are best suitable for your demands. Depending on your personal license configuration you have all the necessary data sets directly at hand. The content and model coverage of these data records are being continuously adapted and expanded with each version.

NEW DATA TYPES:
ADAS & LIGHTING AND E-MOBILITY

Working on vehicles with state-of-the-art driver assistance and lighting systems as well as high-voltage systems require the full concentration and a lot of additional data. The subject ADAS & Lighting is owed to the variety and complexity of the advanced driver assistance systems (ADAS) as well as the number of manufacturer- and model-specific versions. The data and functional module E-Mobility provides all the information which is necessary for working on electric and hybrid vehicles.

Technical Help Line

How would the daily work in workshops look like as a "lone fighter"? It would likely be hard. However, as a Hella Gutmann customer you will never be left alone. Our colleagues of the Technical Help Line at Hella Gutmann in case you should have troubles with a customer vehicle.

Be it a chat out of the mega macs X or a telephone call to the Technical Help Line: Our team of experts will help even with the trickiest issue. The long-time experience and the up-to-date manufacturer-specific information level we are able to assist numerous workshops in troubleshooting and repairing faults on customer vehicles.

NEUER SERVICE:
CALL FLAT INCLUDED

Time is money. Provided that your license includes the VIP service of a "Call Flat" you do not need to check whether your Call Card still has credit. This means e.g. that also your employees have the right to benefit from the technical assistance, too. This saves time and does not cause extra costs.

Please regard that the functional scope of our technical support may vary depending on the country.

License to Diagnose

Our clearly structured license models give a quick overview of the individual performance scope of every license. You have the option to change the license package at any time, always in accordance with your demands. Finally, flexibility means to be able to response to modified conditions. Our new license concept provides this flexibility.

UPDATES INCLUDED

Our new license model does not need any update licenses. Updates and software amendments are easily managed by the basis software. Troubles with update fees for omitted updates are definitely a thing of the past. Instead of that we offer maximum cost transparency – and a software package that is always up to date.

SOFTWARE MODULES			
SDI module X[1]	SDI module X[2]	SDI module X[3]	SDI module X[4]

LICENSES*			
License X[1]	License X[2]	License X[3]	License X[4]

FUNCTIONS			
• Reading/deleting trouble codes (without global check) • DoiP technology	• Reading/deleting trouble codes • DoiP technology • Service reset • Basic setting • Parameters • Codings • Actuator test • Test function • Cyber Security Management • Automated retrieval of kilometer/mileade reading	• Reading/deleting trouble codes • DoiP technology • Service reset • Basic setting • Parameters • Codings • Actuator test • Test function • Proposed online solutions based on trouble codes • Cyber Security Management • Automated retrieval of kilometer/mileade reading	• Reading/deleting trouble codes • DoiP technology • Service reset • Basic setting • Parameters • Codings • Actuator test • Test function • Proposed online solutions based on trouble codes • Cyber Security Management • Automated retrieval of kilometer/mileade reading

MEASURING TECHNOLOGY**			
		• Multimeter • 2-channel oscilloscope	• Multimeter • 2-channel oscilloscope • Guided measurements • Pressure measurements • Guided high-voltage measurements*

DATA			
		• Component test values • Component location • Timing belt data • Wiring diagrams • Cabin air filter • Fuses/relays • Flat rate units • Service data • HGS Data • Battery management	• Component test values • Component location • Timing belt data • Wiring diagrams • Cabin air filter • Fuses/relays • Flat rate units • Service data • HGS Data • Battery management • PIN data • Service information • Diesel information • Interactive wiring diagrams • Symptom-based solutions

SERVICES			
	• Call Flat (Technical Help Line)	• Call Flat (Technical Help Line)	• Call Flat (Technical Help Line)

NEW FUNCTIONS AND DATA TYPES			
			• ADAS & LIGHTING • E-mobility

For motorcycle diagnostics we will offer two versions: The X-Bike version is intended for plain bike workshops. Workshops which want to offer bike diagnostics as well can book the Bike-X Add-on license additionally.

*appropriate software module necessary
**appropriate accessories necessary

mega macs X – Utmost Flexibility

Regarding Your Finances

AN EXAMPLE
John Smith has passed the examination for the master's certificate and wants to go into automotive business for himself. Initially he will hire two mechanics. They are aware that vehicle diagnostics plays an important role in the workshop business. The decisive questions are the scope of inspection and the long-term prospects.

So far the market offers a wide variety of diagnostic devices (premium, medium, mobile). However, the decision for a version determined the future work. Finding the appropriate device was quite tricky - especially with view to the investment over a long period of time.

John Smith discovers the mega macs X with its new license model and recognizes that he only needs to come to one decision: utmost flexibility.

HARDWARE
The mega macs X – one hardware - numerous possibilities

> **Cost price of hardware (once): €X,XXX**

FLEXIBLE UNIT
Flexibility starts here: He decides whether he wants to use his own tablet (Android, Apple or Windows) or the new powerful Hella Gutmann Tablet.

> **Cost price of the Hella Gutmann Tablet (optional): €X,XXX**

FLEXIBLE SDI SOFTWARE MODULE
The SDI software is the heart of the new diagnostic concept. There are different software module at choice depending on the workshop, user or functional needs respectively. At the beginning John Smith wants to use the full scope of diagnostic functions, but not necessarily all the provided data types and not the premium measuring technology. Therefore, he opts for the SDI module X3:

> **Cost price of the SDI software module (once): €X,XXX**

FLEXIBLE LICENSE MODEL
The world of licenses for the mega macs X has been completely redefined: There are not longer costs for missed or coming updates and therefore the update license is not longer existing. The licenses refer to the prevailing SDI software module.

> **Costs for the selected license X3: €X,XXX per year, means €XXX per month**

CONCLUSION:
Investment in the 1st year:
only €X,XXX + €X,XXX + €X,XXX = €X,XXX.
With a monthly investment of €XXX John Smith can equip his workshop with a top class diagnostic device.

FLEXIBLE ALSO IN THE YEARS TO COME
The JS Auto Repair company forges ahead and is successfully developing so that it can hire another employee after three years. Mike Brown is a master in automobile technology and he is specialized in electronic issues of the latest vehicle models. This is because the the field of high-voltage measuring technology is also playing an important role in the automotive workshop meanwhile. In former years this would have meant to replace the entire device. Today John Smith just purchases an upgrade to SDI module X5 and changes to license X5 – and that's it!

> **SDI module upgrade X3-X5: €XXXX (once)**
> **Lizense X5: €XXXX per year, the remaining term of the active license X3 will be settled.**

In case John Smith would e.g. decide to purchase a mobile tool mega macs X with license X3 for his team, he receives a discount* on the mobile tool license.

*the discount for mobile tool may depend on the country

At a Glance: The Technical Data

MEGA MACS X

Processor	ARM dual processor 1.2 GHz RAM 2 GB DDR3 EMMC 32 GB
Interfaces	USB-C DC-In Ethernet
Supply voltage	12 V to 24 V DC
Temperature of work area Storage temperature	0°C – 45°C 10°C to 50°C
Weight	1420 g
Dimensions	210 x 193 x 80 mm (H x W x D)
Demands on an external displaying device	• Screen diagonal 25.4 cm (10") • Screen resolution at least 1024*768 Pixel • Wi-Fi corresponds to IEEE 802.11 n • Google Chrome browser at least version 81

MEASURING TECHNOLOGY MT-USB

Supply voltage	5 V ⚏ (via USB)
Power input	max. 2.5 W
Current consumption	max. 500 mA, 300 mA at average
Ambient temperature	Recommended: 10 to 35 °C Working range: 0 to 40 °C
Suitable for humid environment?	No
Altitude	max. 2000 m above sea level (Normal Height Null)
Relative air humidity	approx. 10–90 % (not condensating)
Continuous operation	Yes
Weight	approx. 490 g
Dimensions	38 x 102 x 130 mm (H x W x D)
Type of protection	IP20
Bandwidth	max. 100 kHz
Sampling rate	1 Msa/s
Amplitude resolution	12 bit
Measuring channels	2
Measured variables	• Voltage • Current (external clamp meter) • Resistance

Please visit www.hella-gutmann.com/manuals to view more detailed technical data

CHARGING TRAY FOR MEGA MACS X

Non-contact charging procedure	Inductive energy transfer according to Hella Gutmann standard (no QI charging procedure)
Supply voltage	15 VDC
Temperature of work area Storage temperature	0 °C to 45 °C 10°C to 50°C
Weight	590 g
Dimensions	164 x 164 x 37 mm (H x W x D)

HELLA GUTMANN TABLET

Software	Android 9.0
Operating temperature	−10 °C to 50 °C
Processor	Rockchip RK3399
RAM/ data storage medium	4 GB RAM 64 GB eMMC
Display	X10.1" WUXGA 1200x1920 IPS 470 nits
Audio	1 digital microphone | 2 integrated speakers
Input	10-point multi-touch, glove, with capacitive stylus, glove mode and wet-touch mode
Interfaces	• Docking station • USB 3.0 • USB 2.0 • Micro USB 2.0
Remote interfaces	• Wi-Fi IEEE 802.11 a/b/g/n/ac • Bluetooth® 4.1 • Bluetooth® 4.2
Battery charging voltage	3.7 V
Battery capacity	10,800 Ah / 40 Wh
Battery run time	up to 8.5 h
Dimensions	283.4 mm x 192 mm x 21.9 mm
Weight	1280 g

DOCKING STATION HELLA GUTMANN TABLET

Supply voltage	AC adapter 65 W (19 V / 3.42 A)
Temperature of work area Storage temperature	0°C to +45°C −10°C to +60°C
Weight	2500 g
Interfaces e.g.	• HDMI x 1 • USB 2.0 (type A) x 4 • VGA port x 1 • Display port x 1 • LAN port x 1 • Audio MIC in x 1 • Audio line out x 1 • DC-IN x 1

Display