



Elektrobit

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# Intelligent HMI development with EB GUIDE



# Build an industry-best Human Machine Interface with EB GUIDE

Use **EB GUIDE** as an **all-in-one product** for executable specification, modeling, rapid prototyping, simulation and target deployment of Human Machine Interface (HMI) for in-vehicle head units, instrument clusters, and head-up displays (HUD) as well as industry applications.

**EB GUIDE** supports you in mastering the challenges of developing **state-of-the-art HMIs** which occur while

- ▶ Implementing car connectivity concepts
- ▶ Handling different control logic
- ▶ Integrating sophisticated applications into the HMI
- ▶ Displaying complex graphical effects like 3D and animations
- ▶ Transferring your design into a running application
- ▶ Translating your HMI
- ▶ And many more challenges...

EB GUIDE -  
enable an exceptional  
customer experience.  
**Make your customer  
love your HMI.**



# EB GUIDE 6



# Build a better user experience

Deliver a more consistent and effective UX by using **model-based** development. Create the **workflow** and **controls** for all interface modes and see how they'll really look on the target device.

## A single toolchain for all modalities

EB GUIDE Studio gives you one tool that you can use to develop speech, touch, and graphic HMIs. With EB GUIDE, you can take a holistic view of the user experience. So, whichever method your customers use to interact, you can provide a consistent and high-quality user interface (UI).

## One tool for the whole HMI team

Your team only needs to learn and use one development tool, EB GUIDE, to create multimodal UIs including controls and the workflow. EB GUIDE provides the latest in graphics such as vector-based and 3D graphics with effects and animations. It also includes the latest in speech technology, multi-touch, and gesture support.

## What you see is what you get

Use EB GUIDE's target frameworks to test your UI on target devices during development. Then, revise the HMI in the model. You never have to touch a single line of code. With EB GUIDE, designers and developers can get closer to the user experience, seeing how the UI will actually look and work on the final device. That lets you troubleshoot problems, develop in an agile manner, and create a superior user experience.

EB GUIDE Studio 6 is free to try through the EB GUIDE Community Edition. Experience model-based development yourself. You can download EB GUIDE 6 at [www.eb-guide.com](http://www.eb-guide.com).



# Build a stellar user experience for every interaction mode

You want to create a **great experience** whether your customers are speaking, touching, or using devices to interact. With EB GUIDE, you can think holistically and design a **consistent, multimodal UI** via **a single HMI development tool**.

## Graphics

- ▶ Appealing look-and-feel with graphic effects and animations.
- ▶ State-of-the-art HMIs with both vector-based and 3D graphics.

## Haptics

- ▶ Multi-touch enables smartphone-like usability.
- ▶ Path gestures enable system operation with short cut commands (e.g. draw a ▲ to navigate home).
- ▶ Support of key and knob usage.
- ▶ Proximity sensors (VW Golf VII ) and air gestures.

## Speech

- ▶ EB GUIDE offers a fully integrated out-of-the-box solution for key use cases.
- ▶ Natural language understanding (NLU) provides easy-to-use speech control.
- ▶ Connected recognition complements the fix installed vocabulary.





## Faster, easier development and deployment

A development tool **designed for use by teams**, EB GUIDE provides a faster way to develop HMIs and a simple way to deploy them on target devices. Plus, it's built to give you **greater efficiencies** on subsequent projects.

### Multiple users

Great HMIs are usually a team effort. That's why we designed EB GUIDE to support multiple users working on the same HMI model. EB GUIDE Studio makes it easy to branch software models and then merge them later. Even if your team is dispersed in different locations, they can use EB GUIDE to work together to create an HMI.

### Model-based HMI development

Our model-based development lets you prototype and test HMIs more quickly, without having to change code every time you make a change to the design. And our new user interface makes development easy for both designers and programmers. If you have multiple models or brand variants, you can manage versions and variants. And you can create and share re-usable components across projects, ensuring consistency and letting you get a jump start on the next HMI project.

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# Create compelling HMIs in the look-and-feel of your brand

EB GUIDE is a flexible HMI tool that can be used to build a wide variety of interfaces for many **different devices and industries**. With EB GUIDE, you can think about where and how you want to interact with your users, not what has to happen behind the scenes to make your UI work.

## Improve operational efficiency with these features and benefits including:

### For head units:

- ▶ EB GUIDE's strength is its menu and interaction logic.
- ▶ Illustrated state charts, compound states and diagrams help control large scale projects (~1.500 views).
- ▶ International and skin support for world-wide solutions.
- ▶ Supports team collaboration on one HMI model.

### For dashboards and clusters:

- ▶ EB GUIDE is a scalable solution for instrument clusters.
- ▶ 3D support for reconfigurable clusters.
- ▶ Native OpenVG to support cost effective hardware.
- ▶ Seamless pop-up concept from EB GUIDE Studio to EB GUIDE GTF.
- ▶ ASIL / ISO 26262 expertise.

### For industry customers:

- ▶ EB GUIDE delivers all functions expected from a state-of-the-art user interface solution.
- ▶ Manages your HMI instead of just coding it.
- ▶ Benefit from the menu logic, state charts and other automotive features to create an easy-to-use HMI.
- ▶ Successful projects outside of the automotive sector e.g. Mettler Toledo titrator Easy Plus™.





# Experience model-based HMI development

**EB GUIDE** is a powerful tool chain for **intelligent multi-modal HMI** product development. It enables the development of advanced user interfaces with **3D** support, **animations** and **effects**, as well as **scripting**.

EB GUIDE Studio includes the EB GUIDE Graphics Target Framework (GTF). With this combination, developers can work and simulate on a desktop environment and later deploy the same model to the target using a platform specific GTF.

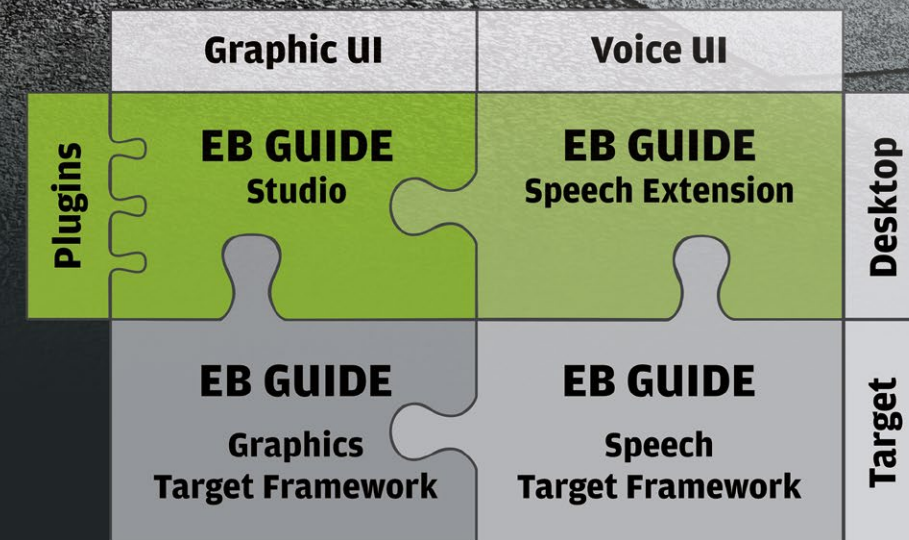
EB GUIDE Speech Extension together with the EB GUIDE Speech Target Framework, (STF) enhances EB GUIDE with the capability to model multi-modal HMIs with both graphical- and voice user interface.

## EB GUIDE components:

- ▶ **EB GUIDE Studio**  
Tool for graphical HMI modeling
- ▶ **EB GUIDE Speech Extension**  
Tool add-on for speech-enabled user interface design
- ▶ **EB GUIDE Graphics Target Framework (GTF)** Runtime for the graphical user interface
- ▶ **EB GUIDE Speech Target Framework (STF)** Runtime environment for enabling speech dialog

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## Bring the cloud to your HMI with reloadable user interfaces

Take **the best of two worlds**: reliable and safe **core HMI** controls for all basic functionalities, and the latest services in **HTML5** format from the cloud when and where it makes sense.

EB's vision of how to enrich the infotainment system with the latest services and apps from the cloud is based on a rock solid core HMI built with EB GUIDE. The **core HMI** has the responsibility to reduce driver distraction by deciding when and where HTML5 content is shown to the driver.

**Drivers** have a trusted zone in their car designed for good usability and low distraction. At the same time, the latest information, apps and services are well integrated into the overall system to ensure save travel.

**Car manufacturers** benefit from the ability to update HMI content in a car which is already on the road. With HTML5, standard technology is utilized to integrate apps and services in the fleet. This connection on the backend will be a key factor to new services and long-term customer satisfaction.





# Use EB Automotive's professional services for building your HMI

EB offers a **complete range of services**, and provides **integrated solutions** tailor-made for your individual objectives and requirements. Solutions range from: a single EB engineer providing **consulting** on specific aspects of HMI development, a small team for **porting** and **usability tests**, to a large team for **complete HMI development**.

## Consulting

Our consultants have top-notch skills in software development, software architecture and usability aspects, as well as expertise in process based infrastructure. Use this unique combination of software development experience with architecture and interface knowledge to improve your development process.

## Porting of target frameworks

We port our versatile target frameworks EB GUIDE GTF and EB GUIDE STF to your target platform and adopt them to your platform specific interfaces. We do have the skills and the experience to closely monitor and fulfill your performance and quality requirements for all established embedded operating systems, CPUs and GPUs.

## Complete execution of your HMI development

EB Automotive is your partner for the development of your HMI for all in-car screens. We know how to cover multiple car models, all regional variants, multiple model years, from entry level to high-end variants and all state-of-the art features. EB brings over 10 years of experience in large HMI programs, with completion of more than 15 successful mass production projects.



# Lay the groundwork for successful HMI development

Our highly motivated and professional product development team uses **agile development methods** and a **continuous improvement process**. At EB, we use EB GUIDE for HMI development of our own products as well as for customers and have a **closed feedback loop** between developers and users of our tool. Additionally, our close contact with OEMs and TIER1s guarantees we are aware of **upcoming HMI trends** and are able to address them at an early stage.

## Our Partners:

- ▶ Freescale
- ▶ Mathworks
- ▶ QNX
- ▶ Renesas
- ▶ Wind River

## EB GUIDE is designed for:

- ▶ HMI specialists,
- ▶ GUI designers,
- ▶ Speech dialog experts,
- ▶ Embedded software engineers,
- ▶ Application developers.

## EB GUIDE advantages:

- ▶ Easy to manage complex user interfaces.
- ▶ Specifies graphics and speech dialog in a single tool.
- ▶ Saves cost and time by optimizing the development process.
- ▶ Keeps control - model views and states for your system.
- ▶ Customizes the tool chain with plugins.





# Contact us

USA

Finland

Germany

France

Austria

Romania

China

Japan

EB is a global company with branch offices all over the world.

## About EB Automotive

Elektrobit (EB) Automotive is an industry leading supplier of automotive software and has a proven record in embedded software development for over two decades. EB provides technologies and flexible software platforms, tools, and services to help automotive manufacturers like BMW, Daimler, and the Volkswagen Group to deliver the best products and services in order to meet the needs of drivers. EB is cooperating with a community of industry leading partners like IBM, Microsoft and QNX to build the next generation of smart, flexible and cost efficient automotive software solutions.



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