

## Benefits:

### Efficient Code

DeepScreen produces graphics code that is small yet high in performance.

### Complete Code

Code generated through DeepScreen is complete; it creates not only the framework but also the actual drawing and rendering commands.

### Complex GUIs

With DeepScreen code generation, users can design systems with extremely complex graphical user interfaces without writing complex graphics code.

### Sophisticated Display Animations

Today's displays typically use animations and moving images that are a step beyond static text and graphics. DeepScreen easily handles the code behind these images.

### High-fidelity Graphics

DeepScreen's code brings high-quality graphics to any display, regardless of the level of sophistication.

### Time-Saving

Substitute weeks of hand coding for a few hours with DeepScreen. DeepScreen takes care of the graphics code, allowing users to focus on the application code.



DeepScreen is Altia's graphics code generator for embedded, realtime displays. It provides a solution for the embedded systems programmer who faces the time-consuming task of writing graphics code. When a project requires small code for complex, high quality graphics appearing on a display, DeepScreen meets that need. Users simply create their graphics in Altia Design and then run them through DeepScreen to automatically generate complete code for their target system. Not only does DeepScreen meet or exceed a project's technical requirements, it also helps companies minimize development costs.

# How DeepScreen Generates Code

1

## Build the graphics with Altia Design



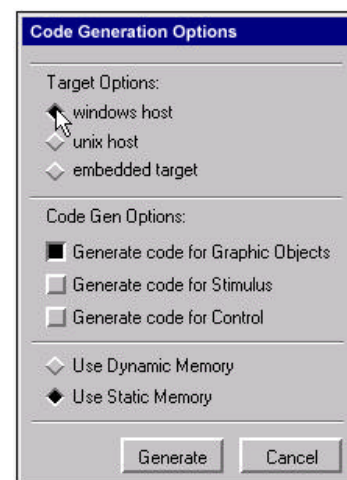
Altia Design is an easy-to-use graphics design environment. It allows you to create prototype interface components, such as knobs and buttons, as well as the **screen graphics** which will later be deployed into the final product.

The Graphics Editor gives you three ways to build graphics quickly—without writing code. Draw your own custom components, import bitmap graphics, or insert interactive, prebuilt components from Altia's huge selection of available Libraries.

2

## Generate graphics code for the host

After you finish your design in the Graphics Editor, you are ready to generate your graphics code for the screen portion of the design. Simply choose your options and then let DeepScreen generate the C code for your interface. It writes only the code needed to support the objects in your interface.



3

### Integrate and test graphics code on the host



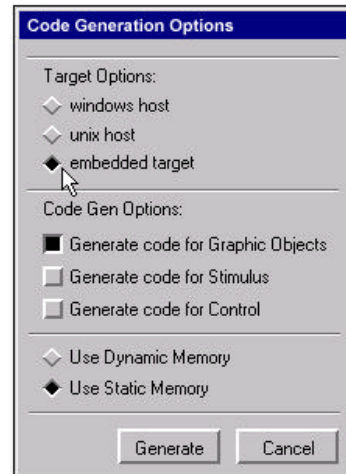
Integrate DeepScreen's generated C code with your logic and control code to test and refine the product's specifications. By running the actual code on the host, you get the kinks out before you involve your target.

4

### Generate graphics code for the target

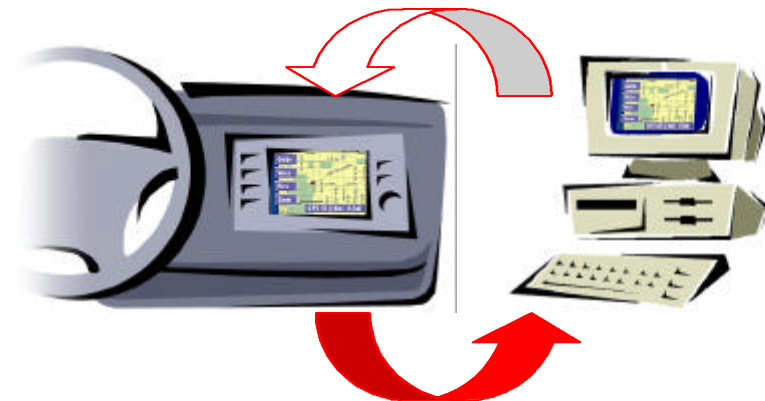
When you are satisfied with the behavior of the integrated code on the host, DeepScreen makes regenerating for the target easy.

Whether your RTOS is off-the-shelf or roll-your-own, the code generated by DeepScreen can be deployed.



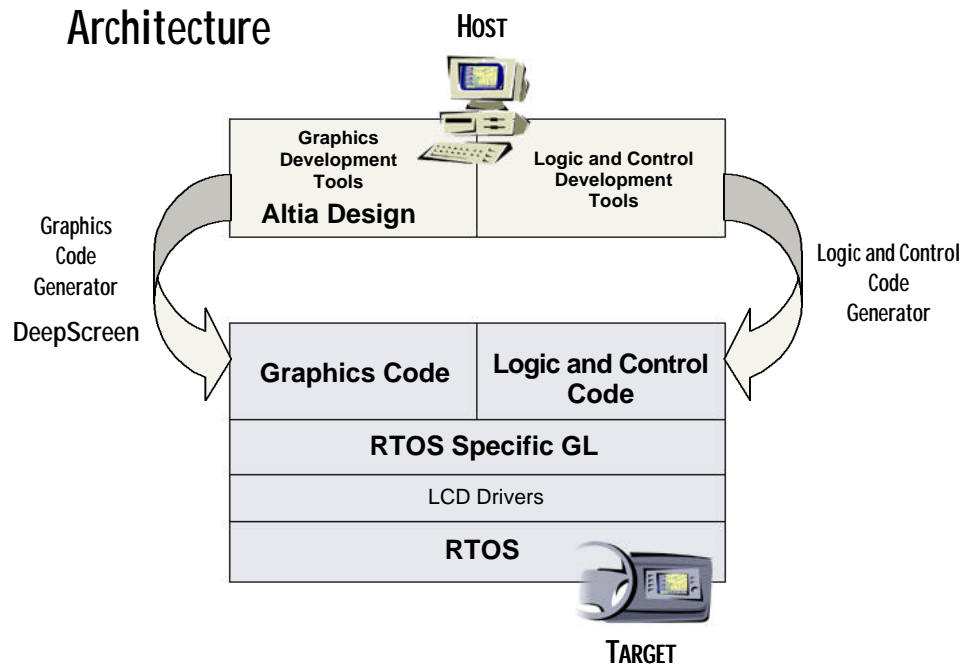
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### Integrate and test graphics code on the target



Your target code is now ready to download standalone on the target.

To aid in debugging, it can also run on both host and target simultaneously. This allows events generated on the host to trigger responses on the target and vice versa.



## Target Systems

DeepScreen can generate code for a variety of target RTOSs and processors. Since it generates straight C code, users can modify the code to work on any target system, including “home grown,” proprietary RTOSs. To further speed development, Altia will provide specific code generators for popular processors that require no modifications. Currently, DeepScreen directly supports the Windows, Windows CE, QNX, VxWorks, and embedded Linux operating systems and the x86, StrongARM, Hitachi, and MIPS processors. Other target operating systems and hardware platforms will be directly supported over time as driven by customer demand.

Possible host/target configurations include running only on the host, only on the target, or on both simultaneously to aid in the debugging process.

## Generated Code

DeepScreen generates C code. The size varies, depending upon the type of graphics being created, but it is usually small, efficient, and high performance. Users can generate code for anything drawn in Altia Design.

## For more information contact:

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## Integrating Code

The code is easily integrated. If the user's logic and control code is already Altia-enabled using Altia's API calls, then all they need to do to connect to generated code is compile that code with a different library.