Try & Buy IP
Navigator

Quote & Compare
MPW Explorer

eSilicon®
STAR

Quote & Compare
GDSII Explorer

Track WIP
Tracker

Find the best IP for your project: The ultimate guide to eSilicon Navigator

It can be quite challenging and time consuming to find the right semiconductor IP for your project. You've got to find IP that does not consume too much power, meets your performance target, has the lowest leakage when your product goes on standby, and last but not least, IP that occupies the least amount of expensive real estate on your chip. How can you accomplish such a task without having to navigate through complex documentation or engage in time-consuming evaluations?

eSilicon Introduces On-Demand IP

People are more connected than ever. The Internet offers fantastic opportunities for global collaboration and partnership. On-demand services are weaving their way into our lives on so many levels. Why not take advantage of the Internet to improve how you design your chip?

As an IP provider, eSilicon is delivering more than just IP and a datasheet. eSilicon's Navigator tool allows you to quickly search, compare, evaluate and purchase all of eSilicon's standard, off-the-shelf IP in a secure online environment, providing you with immediate access to an extensive portfolio of IP for your project. The online tool allows real-time power, performance and area (PPA) data generation of your chosen IP and features, which is an excellent starting point for conducting a self-review at any time.

After you browse ChipEstimate.com and find some eSilicon IP that looks like it might be a fit for your chip, Navigator gives you a single point of entry for diving deeper and exploring your IP solutions 24/7, bringing new levels of flexibility and ease of use.

Once you've identified the best IP for your chip, Navigator allows you to go one step further. You can upload a purchase order and procure the IP completely online. With the latest enhancements to Navigator, the long process of searching, requesting information, evaluating and procuring IP can now be reduced from weeks to days.

Navigator is a paradigm shift that's changing the way we select and purchase IP. If you're new to Navigator and feel overwhelmed with all the features, here are six easy steps to get you started.
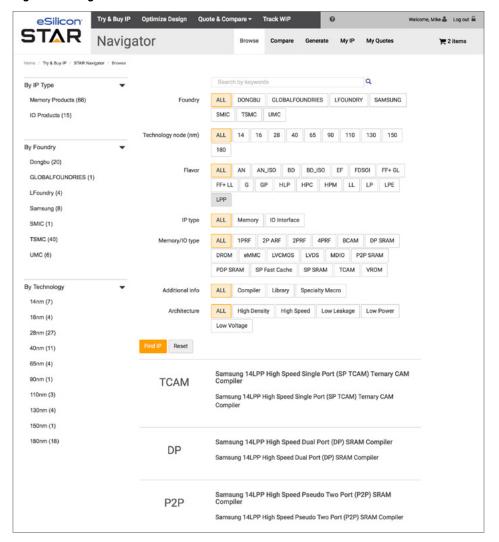
Step 1: Browse
There are three ways to navigate through our IP portfolio on Navigator. Go to the "Browse" tab and you can search for IP by foundry, technology and architecture using the left menu. You can also search for IP by using keywords in the keyword search box if you know exactly what you need, for example, "TCAM" or "high-speed four port." Lastly, you can fine-tune your IP selection by using the buttons in the center of the page to choose foundry, technology, flavor, etc. (See Figure 1.)

Step 2: Compare
Now that you have a better idea of what's available in our portfolio and may have shortlisted a few IPs, the next question is

Figure 1: Navigator "Browse" Window

whether these IPs will meet your requirements. Do you need a low-power or a high-speed architecture? Will the high-speed IP consume too much power? If you select the low-power architecture, will it run fast enough? The "Compare" page is the best place to start your analysis. You can select a specific pre-defined memory configuration or a range of configurations and options for comparison. Once you have selected your instances, you can view the PPA (power, performance, area) comparison in a graphical chart. The Y- and X-axes of the chart are fully configurable to display area, power, leakage or performance. You can also download the data into a CSV file for further evaluation. (See Figures 2 and 3.)

Step 3: Generate
While the Compare page gives you a pretty good idea of the IP that meets your needs, the "Generate" step allows you to generate front-end views of the IP with your unique configuration and options for further evaluation. In this step, you can upload a memory list (up to 200 instances) with unique configurations and options for your project and generate a complete PPA list of your memory subsystem. This gives you an opportunity to analyze the total power and area of the complete memory subsystem as well as identify specific instances that do not meet desired requirements.

Step 4: Download
If you've made it this far, you now have your very own IP library on Navigator. This unique list of front-end views will be listed on the "My IP" page. This list is unique to your personal account and will not be accessible to other users. Your memory subsystem attributes and data are completely private. (See Figure 4.)

Step 5: Quote
Now that you've downloaded and explored different sets of front-end views and found the perfect memory instance combination for your chip, it's time to purchase the back-end views. You can choose to purchase a memory compiler if you have multiple instances generated from the same compiler or simply purchase a single memory instance, at a lower cost, if that's all you need. Memory compilers can be added to the shopping cart from the 'Browse' page and memory instances can be added from the 'My IP' page. An executable quotation from eSilicon can be generated directly from the shopping cart instantly. (See Figure 5.)

Step 6: Purchase
Once you're ready to complete the purchase, simply upload a signed quote and purchase order to Navigator. Back-end views of your IP will be generated, packaged and delivered via secure FTP when ready. (See Figure 6.)

Welcome to the new era of semiconductor IP selection, evaluation and purchasing.

University Research Support
eSilicon standard, off-the-shelf IP and I/Os listed in Navigator are free to universities who are creating MPWs for research purposes (no production or commercial use). You can see a list of free semiconductor IP and I/Os on the eSilicon website.

Lean More
You can learn more about the STAR online tool suite or request a free STAR account online. If you already have a STAR account, but Navigator isn't activated, email star@esilicon.com and we'll enable it for you.

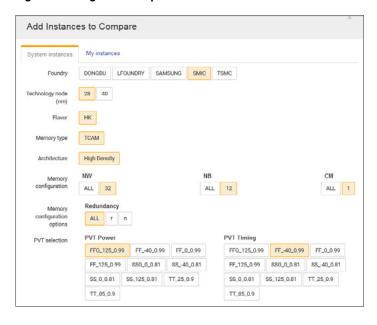**Figure 2: Navigator "Compare" Window with IP Selected**

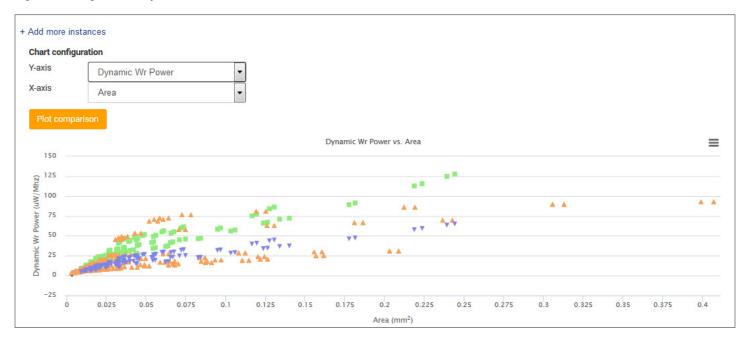**Figure 3: Navigator "Compare" Window with Power and Area Plotted**

Figure 4: Navigator "My IP" Window

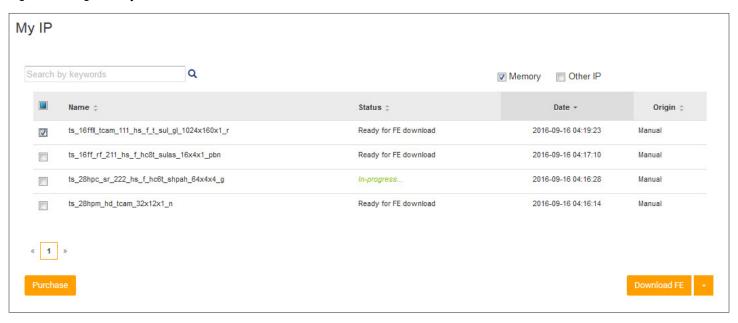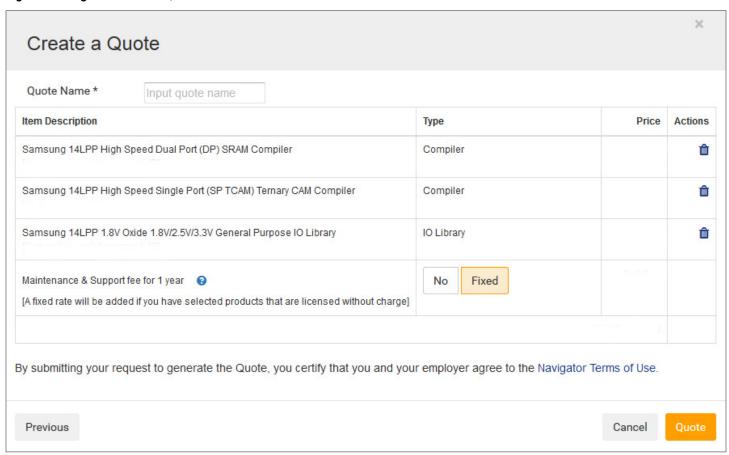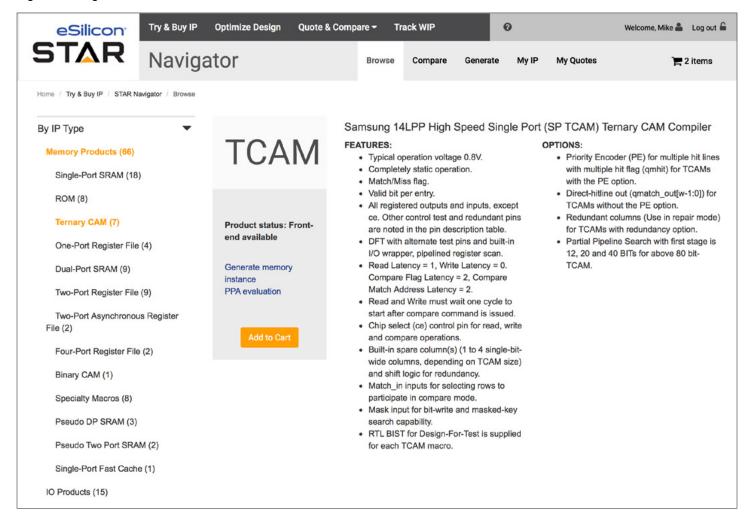**Figure 5: Navigator "Create a Quote" Window**

Figure 6: Navigator "Purchase" Window

Figure 7: Navigator IP Detail Window