Cypress uses Ellisys analyzer to support customers every step of the way

Client

Cypress Semiconductor
Paris, France
Semiconductor manufacturer/distributor
www.cypress.com

Challenge

To provide timely pre-sales and post-sales technical support to customers using Cypress USB components.

Solution

Cypress France selected an Ellisys Explorer 200 Professional Edition protocol analyzer for its quick setup and clear presentation.

Benefits

Application engineers from Cypress France now provide better training, on-site troubleshooting, and field application notes that support customers at every step.

Quote

"The ease-of-use and hierarchical display make the Ellisys analyzer an excellent tool for hardware design, as well as system-level integration. We have chosen Ellisys and I'm happy with that."

Philippe Larcher, Application Engineer, Cypress France

Ellisys is a leading supplier of cutting-edge USB, Wireless USB and Ultrawideband Protocol Analyzers. The company's products help hardware, software and test engineers save development effort, improve quality, and accelerate time to market. Ellisys protocol analyzers range from simple and cost-effective tools to high-end fully-featured equipment.

When you sell electronic components, you need to support your customers every step of the way, from pre-sales training to after-sales support.

That's why Cypress Semiconductor France, a subsidiary of the worldwide component supplier, relies on an Ellisys USB Explorer 200 Professional protocol analyzer.

The two companies came together when Ellisys was sourcing components several years ago. Today Ellisys uses the FX2LP USB microcontroller and other components from Cypress in its units, while Cypress France uses one of the protocol analyzers to support its customers.

Cypress EZ-USB FX2LP

Quick setup and clear displays for training

Philippe Larcher is an Application Engineer with Cypress France who's extremely knowledgeable about USB. He gives regular seminars explaining the protocol, sometimes on request for engineers at a customer's site.

No matter the location or the audience, Larcher needs a quick setup and a clear presentation to help describe the intricate details of his subject.

"I show customers—who are sometimes beginners in USB—how the protocol works," he says. "I was initially drawing the waveforms by hand for my presentations. Now I use the analyzer and display the transactions on the PC. That way, people can very easily understand and read the USB transactions."

What's more, Larcher has a standard setup he can readily transport and hook up. "The Ellisys analyzer is very easy to set up. You just take it out of the box and plug in the USB, and it works. You just need two minutes, so even someone who's not used to it can learn it very easily."

Philippe Larcher
Application Engineer
Cypress France

> "The Ellisys analyzer is very easy to set up. You just take it out of the box and plug in the USB, and it works."

The menu structure is designed to be simple to follow, while it enables drilling down to deeper levels of any transaction. All in all, Larcher says the ease of use and clarity of the display add a whole new dimension to his training seminars.
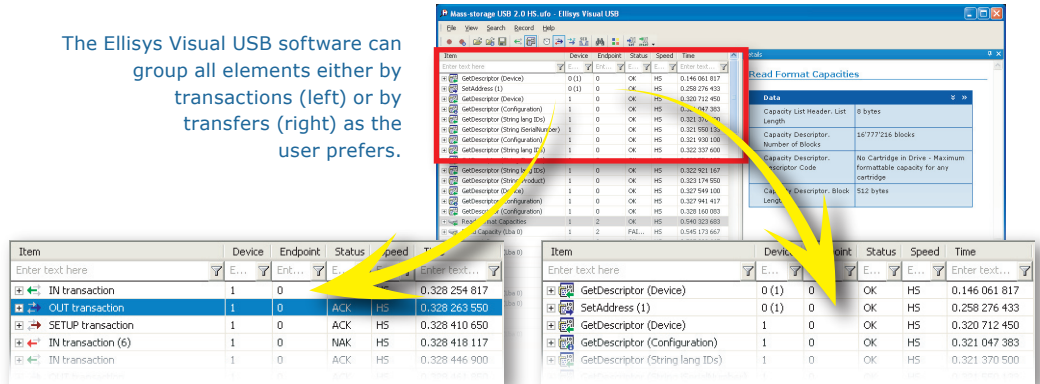
Saving time troubleshooting

After they've selected components, engineers may need help finishing a USB design. Larcher sometimes goes on-site to help track down any issues. He brings along a USB evaluation board holding a Cypress FX2 controller and companion chips, plus the Ellisys analyzer.

Transfer grouping shows higher level information for debugging specialized software, such as the embedded software for a SCSI CD-ROM or flash drive. In this case, transfer grouping gives an application-specific interpretation of the requests on the USB bus that a SCSI engineer can understand—even if they aren't expert in USB.

Larcher also likes filtering a transaction for a single peripheral. That way, instead of seeing every USB request on the bus, he sees only the ones targeted to a specific peripheral that he's working with.

The Ellisys Visual USB software can group all elements either by transactions (left) or by transfers (right) as the user prefers.

"The analyzer does not need any power supply, it's powered directly from USB, so it's very practical," he says. "You don't even need to read the manual, because it's very intuitive. You just click one button and it's ready to record all the USB traffic.

"At a customer site, we can download the embedded software inside the FX2 very easily, and then use the board as a prototype for the application," says Larcher. "When we need the analyzer, we just insert it on the bus. Then we can watch the USB link, either on the same PC as the app, or if possible on a separate PC.

"Usually I record the USB traffic, then I analyze it offline, using the different screens to go lower in the transactions. The main screen for me is usually the overview display," says Larcher.

The Visual USB software from Ellisys can group all elements either by transactions or by transfers. Transaction grouping orders the elements by time to show everything happening on the bus on a low level. This is the preferred view for component manufacturers like Cypress, because it relates directly to what a chip is doing at any given point.

An extraordinary tool that saves time

"The Ellisys analyzer is an extraordinary tool," says Larcher. "Sometimes a customer can spend days on a problem, but when they can't see exactly what's on the bus, they can't solve it. With an analyzer, we can go directly to the problem."

Without the protocol analyzer to help, he says, "I would spend a lot more time to do that same troubleshooting. It would be a lot more difficult to debug problems."

On top of training and troubleshooting, Larcher finds a third good use for the Ellisys analyzer: It helps him write application notes.

"As field engineers, we sometimes write application notes or develop reference designs. Whenever I do one for USB, I use the analyzer to help me." He says this makes creating any field notes or reference designs faster and easier than it would be otherwise.

In all these ways, the Ellisys equipment is just what a busy components supplier like Cypress France needs to take care of its customers, every step of the way. •⟵⟶