Emsys meets pressing client needs using Ellisys analyzers

Client

emsys Embedded Systems GmbH
Ilmenau, Germany
USB protocol developers
www.emsys.de

Challenge

To equip an expanding staff with the tools needed to provide just-in-time USB protocol support.

Solution

emsys chose to outfit each engineer with either the Ellisys USB Explorer 200 PRO or USB Explorer 260.

Benefits

Engineers each have their own powerful, feature-complete and cost-effective USB analyzers that enable them to provide class-leading USB protocol integration to emsys clients around the world.

Quote

"We are satisfied with the support we receive from Ellisys. If somebody asks me about analyzers, I recommend Ellisys."

Ralf Oberländer,
Senior Software Engineer
emsys

From its headquarters in Ilmenau, Germany, emsys Embedded Systems GmbH enables its customers' devices to conform to popular data communication protocols such as USB, FireWire and TCP/IP, as well as higher level protocols such as RNDIS, OBEX, MTP, and PictBridge.

emsys serves major mobile phone and portable multimedia player manufacturers. Faced with an ever-accelerating and extraordinary environment of innovation, these companies continually bring streams of new products to market. Typically, new products feature cutting-edge capabilities that themselves emerge and evolve at a quickening pace. The manufacturers rely on emsys for timely and quick implementation of USB solutions to help enable the star features in their products.

Fast-moving customers demand fast-acting suppliers

"Once mobile device manufacturers start to develop products, our part must often be ready two weeks later," emsys senior software engineer Ralf Oberländer explained.

To meet its customers demanding timelines, emsys has hired more engineers, each of whom need their own analyzers to make the most productive use of their working hours. Faced with the dual challenges of sustaining its own expansion and continuing to support customer product development schedules, emsys has chosen to equip each of its engineers with Ellisys USB protocol analyzers.

emsys furnishes its customers with a variety of value-added products and services. emsys can engineer individual, certified and standards-compliant components as well as complete products, along with the software packages that facilitate their customers' emulation and development efforts. Certain customers engage emsys for training and consulting during hardware and software development, as well as the conception of intellectual property crucial to their product plans.

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.

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The remarkable range of services emsys offers is one reason why the company's client roster counts well-known mobile phone and music player vendors, many of which are household names in the global electronics industry.

Every client also trusts emsys to deliver just-in-time support. The USB protocol solution provider helps its customers reduce development time and ensure quality products as they maintain a strenuous rate of innovation to match the market's seemingly insatiable thirst for new features.

To serve its customers properly, emsys takes ownership of the challenges its customers face. So emsys engineers must each have access to a complete set of tools in order to meet the deadlines its customers set.

The Ellisys Device Compliance Testing software, included with the USB Explorer 260 Generator, automatically verifies the compliance of devices against the USB specification and classes specifications such as HID and Mass Storage.

Developing new protocols and products according to customer specifications is rather straightforward, according to Oberländer. He and his team face their greatest challenges when they integrate their work with their customers' products.

The integration challenge

"Sometimes the protocol doesn't work after the tenth connection," said Oberländer, giving an example of the debugging process common to all such integration projects. "We need to reproduce the problem, and that can be a bit of work. You have to connect or disconnect manually, choose various options on a mobile and perform other repetitive tasks. You must find the trigger point." As an additional challenge for emsys engineers, different customers use different software development kits.

Such complexities make timesaving debugging tools absolutely indispensible to engineers who provide just-in-time support.

Having integrated, tested and debugged emsys solutions for many of their customers' products,

emsys has experimented with analyzers from several different companies. Thus armed with substantial working knowledge of different analyzers, emsys evaluated the Ellisys USB Explorer 200 PRO and USB Explorer 260.

"I am very interested in usability," said Oberländer. "My other analyzer is a very large box with an external power supply. It isn't as easy to handle as the Ellisys, which has only one USB cable to connect - and that's it."

"The software is also easier to handle," Oberländer continued. "It better enables straightforward recording. It automatically performs USB class decoding and higher level decoding."

Trigger points may take time to find, so the Ellisys USB analyzer enables engineers to record to a hard disk. "You can start from a command line and record for as long as you want," said Oberländer. "After recording for an hour, you have a lot of data. If you cannot define a specific trigger condition, you can just record and look through the file afterwards"

Finding trigger points around the world

Engineers must often perform quality assurance work away from emsys headquarters so that they can work more closely with its customers to effectively overcome specific issues.
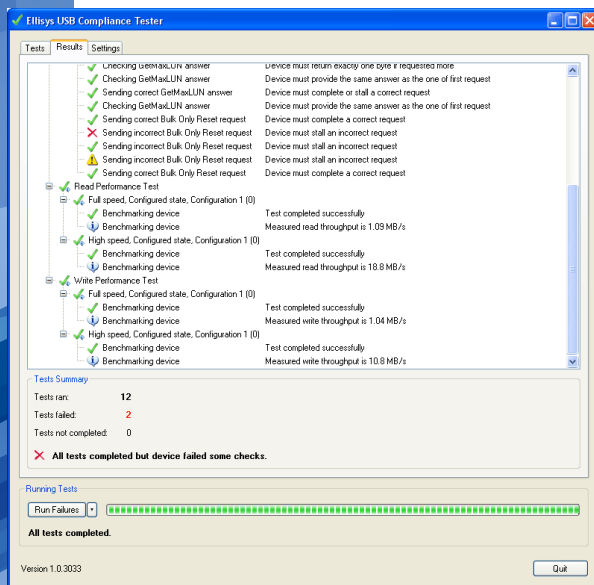
Serving customers scattered around the globe entails a demanding travel schedule. At about the size of a typical desktop computer loudspeaker, the Ellisys analyzer packs quickly into carry-on luggage for easy transportation wherever an emsys engineer's work takes him.

While smaller dimensions and lighter weight makes the Ellisys analyzer ideal for use in the field, many engineers also appreciate how quietly they operate compared to analyzers from other companies.

Ellisys products have proven ideal from a cost perspective as well. The analyzers perform to the same standards as more expensive products while providing all the tools that emsys engineers need to effectively serve their customers. Meanwhile, emsys management can prudently manage the expenses the company incurs as it grows to meet increasing demand for its services.

emsys reacts quickly to customer requirements, so when the company expresses its needs, it can appreciate the same high degree of responsiveness from Ellisys. "We have described problems we had with the software and we have outlined our needs for future functionality," said Oberländer. "In subsequent software releases, our needs are always met."

"We are satisfied with the support we receive from Ellisys," Oberländer said. "If somebody asks me about analyzers, I recommend Ellisys."