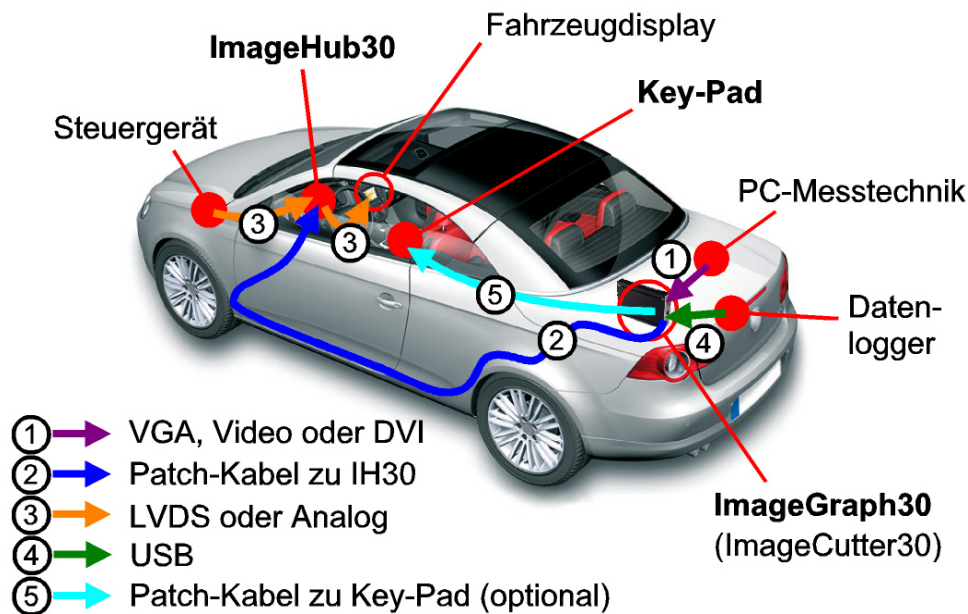


**IPETRONIK Offers Complete Solution for Visualization of Measurement Data on Integrated Vehicle or Navigation Device Displays**



April 15, 2009 – IPETRONIK, the world’s leading manufacturer of mobile measurement technology in the automotive industry, complements its business field “measurement service” with an innovative offer. The Baden-Baden-based company has entered into an exclusive cooperation agreement with the Augsburg-located Nickl Elektronik-Entwicklung GmbH, one of the leading vendors of premium class TFT displays for automotive research and development, and now offers for its mobile measurement systems a complete solution for measurement and visualization of measurement data on integrated vehicle or navigation device displays.

In automotive research, development and particularly in the field of testing it is often necessary to visualize measurement data such as numerical values, diagrams, threshold values, status signals or combinations out of this data inside the vehicle. By doing so the measurement data, for instance, can be analysed rapidly and the findings can be programmed immediately in a control unit. If the test vehicle already has a high

resolution display in the dash board or a navigation device, it is obvious to use that display to visualize data. In order to realize this, IPETRONIK now offers its logger systems, which serves as central measurement technology gateway in a vehicle, in combination with Nickl's ImageGraph30 as an exclusive complete solution, which can be integrated in a vehicle seamlessly and almost invisibly.

The ImageGraph30 is a compact module which combines Nickl's outstanding good display control and the M-VIEWgraph control unit within one device. Thus the measurement data of an IPETRONIK M-LOG or S-LOG data logger can be visualized pixel accurate and directly on the test vehicle's integrated in-car display or navigation device display. This allows not only to show PC and video signals on in-dash monitors but also to display and handle all M-VIEWgraph functions of the logger. With an optional key pad, different layout pages can be selected, acoustic alerts can be sounded, and statuses can be indicated via LEDs. The remote control can be done either by Terminal 15, key pad or steering wheel pushbuttons or via the data logger's WakeOnCAN feature.

As the in-vehicle display interfaces are very specific, the solution consists of a main unit, the ImageGraph30, and an easy integrable vehicle specific module, the ImageHub30. ImageGraph30 executes the data pre-processing. This means that the module converts the video signals into the necessary timing to fit the needs of the vehicle display. For this purpose the input signal optionally can be zoomed, shrunk, cropped or expanded to the target resolution. For example, a PC XGA signal of 1024x768 dots can be cropped to 800x480 dots thus achieving a pixel-by-pixel mapping.

With a legacy patch cable known from the network technique, the adapted video signal along with power supply and control lines is being transmitted to the ImageHub30 which is responsible for the physical adoption to LVDS or analogue signal types. This is done via AC coupling technique allowing DC isolation of the ground nodes.

The ImageHub30 can be inserted between the control unit and the dashboard display. This configuration allows switching between the logger visualization and the original vehicle image. This makes it possible, for example, to display safety information when needed. The compact dimension of the ImageHub30 allows easy mounting near the dashboard display.

The ImageGraph30 is housed in a robust aluminium case. Overview of the key features:

- Visualizing data from IPETRONIK M-LOG- and S-LOG
- Proper pixel accurate control via ImageGraph30 and ImageHub30 for best readability

- Robust construction for test vehicles
- Generates output timings for each type of vehicle
- Input up to SXGA@85 Hz, analogue, DVI, or video
- Wide supply range of 9..36V<sub>DC</sub> with active polarity protection
- Adoption to car interface with specific ImageHub30
- Interface for multifunctional key pad for layout selection, acoustic alerts, and status LEDs
- Switching of original display/original control unit

“With this smart solution from Nickl our measurement systems can be integrated seamlessly, for the user almost invisible and optimally controllable in vehicles. Thanks to the easy handling via steering wheel pushbuttons and the fade-in of the measurement data in the vehicle display, the safety of road tests increases significantly”, said Thomas Hartmann, head of testing lab, IPETRONIK. “The concept is suited for various different types of displays. Therefore a visualization solution for new vehicles can be realized very fast.”

At IPETRONIK several fully equipped experimental vehicles are available for demonstrations at interested customers.

### **About Nickl Elektronik-Entwicklung GmbH**

As long-time partner in the area of research and development of reputable automotive manufacturers and suppliers, Nickl Elektronik-Entwicklung GmbH develops and manufactures innovative display technologies for mobile applications. The know-how and expertise in the fields of electronics, optics and mechanics is being brought together already in the development of products. Nickl manufactures premium display technologies in small batches at their own specialised production line at its Augsburg site. Users are excited of the optimal readability, robustness, the compact dimensions and the special features of the firmware. For more than 14 years, these products have proved themselves at rough deployment in extreme winter and summer vehicle tests. As expert for display technologies, Nickl furthermore works on new additional applications in the defense and aviation industry.

### **About IPETRONIK**

Since its founding in 1983, IPETRONIK GmbH & Co.KG has had a significant technological impact in the automotive mobile measurement field. Today IPETRONIK is one of the world’s leading companies in this sector. For years, car manufacturers have relied on the high dependability, precision, and availability of IPETRONIK products and services. The comprehensive portfolio of measurement modules, data loggers, sensors and software are not matched by other companies in this field.

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IPETRONIK is known for high precision modular measuring equipment, and expertise in analog measurement technology. This expertise includes in depth knowledge of automotive data busses, automotive data bus communication protocols, and automotive control units. IPETRONIK is the technology partner of the automotive industry, through continuous expansion of the Consulting/Engineering division for vehicle test equipment. This includes general testing and on, as well as, off road test runs, with an emphasis on vehicle air-conditioning and thermal management. At the Baden-Baden headquarters, about 100 employees are dedicated to develop innovative solutions that are produced in Germany. IPETRONIK backs up its claim of global sales and support with local customer care through its own subsidiaries and branch offices in France, Sweden and the USA, and with a growing, worldwide distribution network.

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