Data center technologies

A new-generation network storage unit combines high-bandwidth server technology with automotive requirements to enable raw data recording

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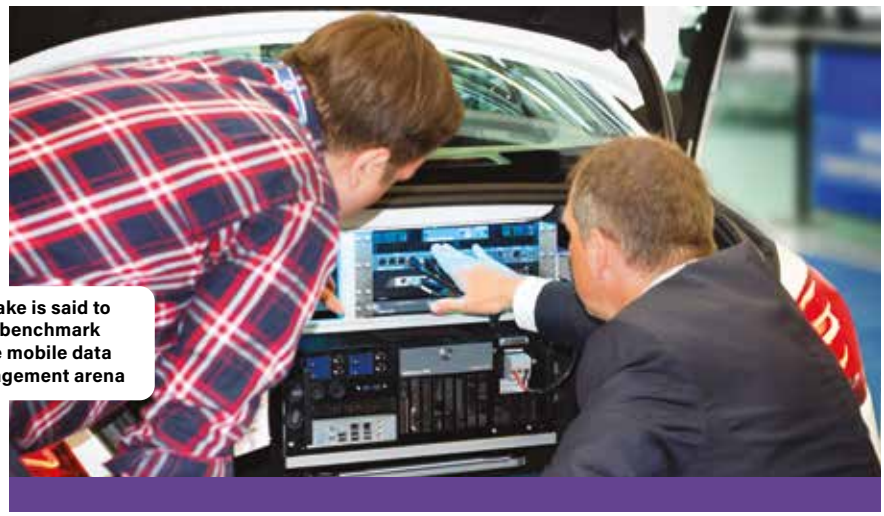

MDLake is said to set a benchmark in the mobile data management arena

To meet the rapidly increasing requirements for the recording and especially storage of large amounts of data, b-plus has expanded its portfolio. The new storage area network (SAN) solution offers a write rate of up to 128Gb/s and a powerful next-generation server for artificial intelligence and algorithm development.

The SAN solution – which aims to improve on existing storage solutions – is a mobile data lake (MDLake) with a 2x64Gb/s write rate and a capacity of up to 60TB. In addition, the system is designed to work seamlessly with the complete b-plus automotive validation toolchain solution Aveto, which consists of both hardware and software modules.

MDLake enables central data storage of several data recorders and vehicle loggers. The storage unit offers sensor developers, measurement technology managers and research engineers the possibility to connect recorders via 2x100Gb/s QSFP28 Ethernet interfaces.

Multiple recorders can integrate to MDLake via standard RoCE compatible NICs and connect directly via host chaining. A bandwidth of 1x80Gb/s or up to 2x64Gb/s enables use of more demanding recording applications – as required for Level 4 and Level 5 automated driving – as well as enabling fast transfer to the data center. For the first time, this data center technology is available in a robust design for vehicle application.

Server platform

For extremely processor-intensive applications, such as algorithm development or artificial intelligence, b-plus has launched a new 19in car server. The DATALynx ATX4 is the latest addition to the DATALynx product family and takes the existing performance class to a higher level. Equipped with a newly developed, powerful automotive power supply and liquid-cooled processors, the new car server enables high-end CPU and graphic performance in environmental temperatures up to 60°C (140°F).

With its higher CPU performance and the added external connections, the DATALynx ATX4 was designed to provide additional benefits to every developer. Fitted with an extended liquid cooling system, the cooling concept enables the use of AMD EPYC 2, 7002 series or alternatively second-generation Intel Xeon scalable processors as well as the use of up to five graphics cards, offering a considerable increase in the total performance of the platform. Extensions and adaptations to respective project requirements can be realized flexibly via PCIe slots.

Reliable, time-synchronous recording and visualization tools, which were specifically designed for large amounts of raw data in the vehicle, are used for a wide variety of test drives. The raw data that is recorded and stored here is used for simulations and further developments. With that in mind, b-plus offers a toolchain with flexible building blocks for this application, starting with the decoupling of the measurement data and the use of vehicle recorders in hardware and software, up to the injection of the measurement data into the cloud. ❮

b-plus's technology offers holistic in-vehicle storage

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