# TECHNICAL PRODUCT INFORMATION

Xoraya N4000

The Xoraya N4000, successor to the Xoraya Z7, is based on the Zynq® Ultra-Scale+™ quad-core ARM® Cortex®-A53. It is intended for automotive applications and able to record multiple bus systems simultaneously. Compared to its predecessor, it has significantly more powerful hardware, which records data with up to 3 Gbit/s. In addition, the logger is now equipped with an SFP+ interface (for 10GBase-T) and a hermetically sealed, active cooling system.

Each logger also comes with 20x HS-CAN/CAN FD, 8x RS-232, 1x Dual-FlexRay and 8x Gigabit Ethernet interfaces. Furthermore, the Xoraya N4000 has three slots for plug-in cards, which allow a flexible configuration of the data logger. For example, the device may be assembled or retrofitted according to customer requirements. As a result, the data logger can be quickly and efficiently adapted to changing conditions and can develop continuously with your projects.

The following modules are currently supported: LS-CAN, HS-CAN, CAN FD, FlexRay, RS-232, LIN, Ethernet, 100/1000Base-T1 (OABR), PSI5 and analog signals; support of further bus systems is possible.

All data is logged based on a precise, central timestamp with 100 ns resolution and either saved on the internal SSD or transferred to an external computer system via Ethernet. Optionally, the log data can also be stored on the additional device Xoraya External Storage Unit. A built-in supercapacitor unit is able to bridge power fluctuations and to shut the data logger down safely in case of power failures.

The data logger supports X2E's own DLN (Distributed Logging Network) as well as the Probe Logger Protocol (PLP) to adapt different probes to the logger.
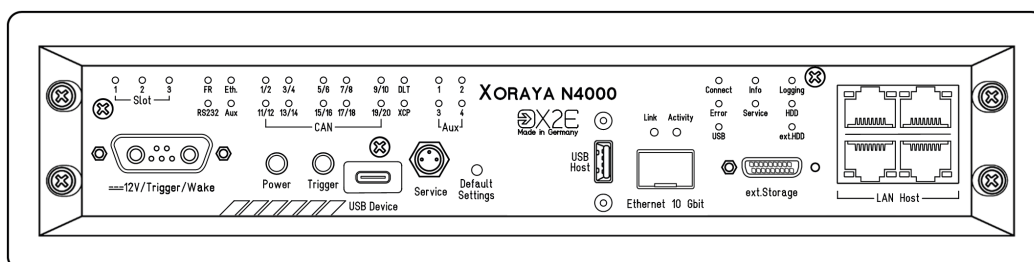
Specifications
– Central 100 ns timestamp
  for all interfaces
– Data rate
  up to 3 Gbit/s
– Dimensions (H x W x D)
  55 x 250 x 205 mm
  (without impact protection)
– Temperature range
  -40 °C to +60 °C
– External operating voltage
  6 V to 32 V
– Current consumption
  (standard configuration)
  tbd
– Current consumption (standby)
  tbd
– Automatic sleep mode
  wake up by CAN, FlexRay,
  RS-232, LIN, PSI5,
  wakeline or trigger
– Supercap unit
– Battery-buffered real-time clock

Record Modes
– On internal SSD and/or on
  Xoraya External Storage Unit
– Via Ethernet to PC

Software
– Logger OS: Embedded Linux
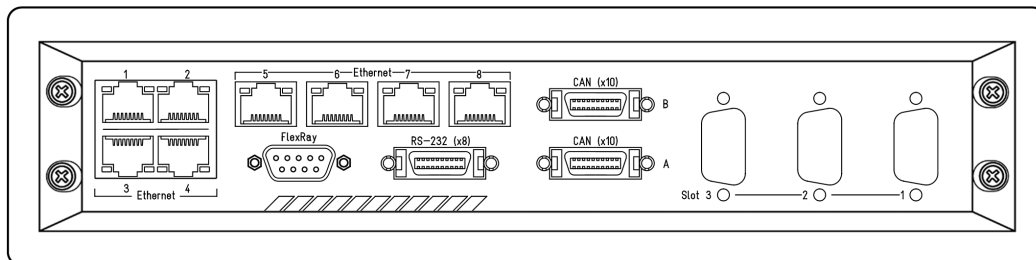– XorayaSuite and XorayaSDK
  for Microsoft Windows

Delivery Contents
– Xoraya N4000
– Power supply cable
– Software
– Manual
– Xoraya External Storage Unit
  (optional)
– Cable set
– Impact protection

X2E Entwicklungszentrum

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Front view (configuration example)

Xoraya N4000

⊃X2E
embedded system design

Back view (configuration example)

Available Extensions

CAN Interface
– LS-CAN: 1 channel
– HS-CAN: 4 channels per slot
– CAN FD: 4 channels per slot

FlexRay Interface
– 1 single or 1 dual channel

LIN Interface
– 24 channels

RS-232 Interface
– 8 channels
– GPS via RS-232

PSI5 Interface
– 4 channels

Analog Interface
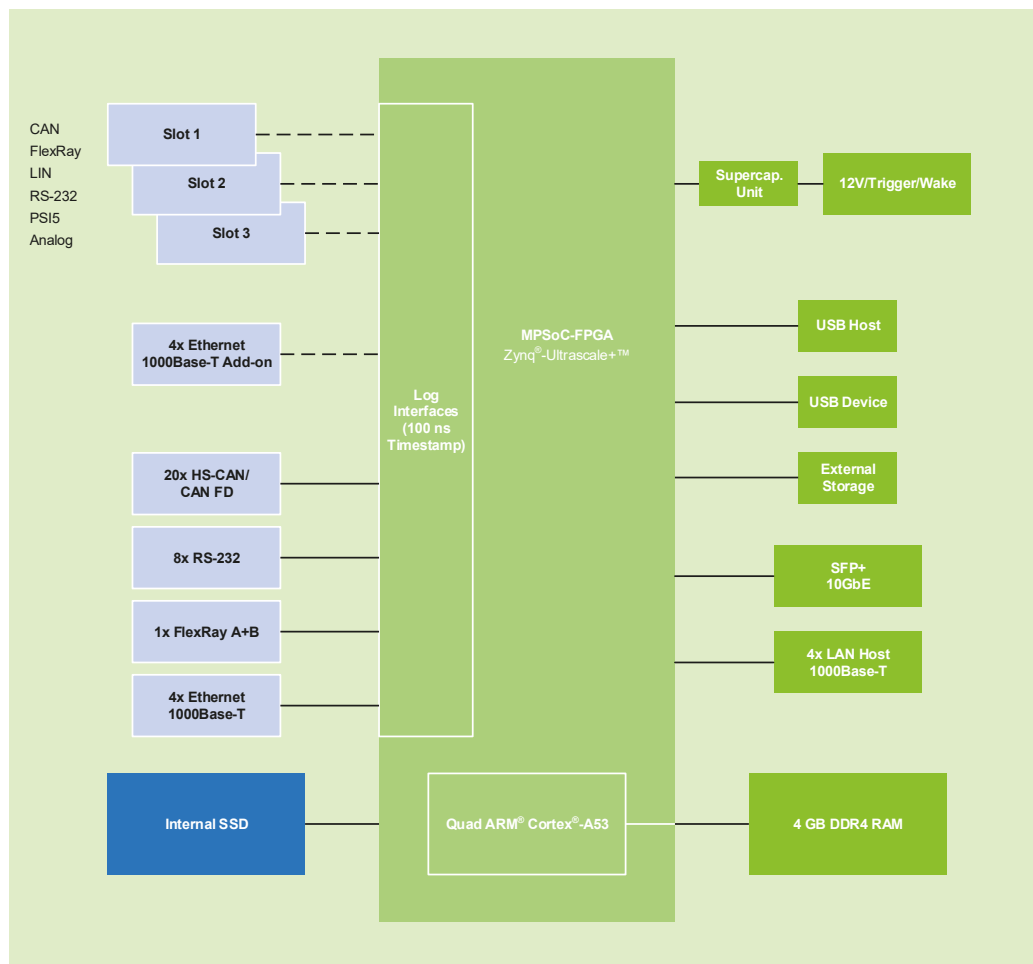– 6 channels
– 100 kHz, 12 bit

GSM/UMTS Module
– External via USB

External GPS
– Via USB

External WLAN
– Via USB

Errors and omissions excepted.

⊃XORAYA
high performance automotive platforms

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