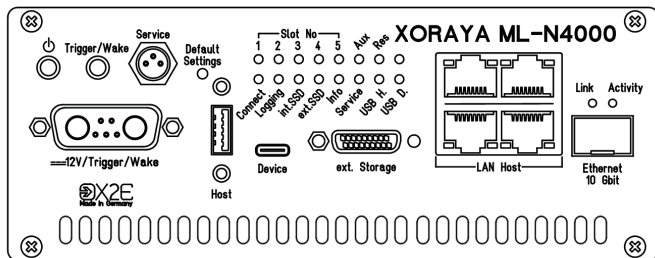**DATA LOGGER**

XORAYA ML-N4000

The latest generation Minilogger, the XORAYA ML-N4000, is a cost-effective and compact automotive data logger with 6x configurable interfaces.

PRODUCT OVERVIEW

Description

With its extensive range of individually configurable interfaces, the XORAYA ML-N4000 can be used wherever data from different bus systems must be recorded. Despite its compact dimensions, the powerful hardware enables recording rates of up to 3 Gbit/s. The data can be written on an internal or external memory and forwarded to a third system via Ethernet.

Product Highlights

- ✓ Flexible and compact automotive data logger
- ✓ Up to 3 Gbit/s recording speed
- ✓ Individual configuration of logging interfaces possible
- ✓ Ethernet, LIN,CAN, PSI5, Flex-Ray, and many more.
- ✓ 480 GB internal & 8 TB external storage

Technical Data

Further information can be found at the back of this data sheet.

Data rate	Storage capacity	Timestamp	Temperature range	Dimensions
Up to 3 Gbit/s	480 GB internal / up to 8 TB external	100 ns	-40 to +65 °C	65 x 165 x 165 mm

Data Logging Interfaces

The XORAYA ML-N4000 offers the possibility to equip the logging interfaces individually. Various plug-in modules are available for this purpose. We also provide two default configurations that can be used out-of-the-box.

Number configurable slots	6
Available interfaces	HS-CAN, CAN-FD, RS-232, FlexRay, LIN, 100/1000BASE-T1, Gbit Ethernet

Configuration*	HS-CAN / CAN-FD	RS-232	LIN	100/1000 BASE-T1	Gbit Ethernet
R8C8A6GE4B12	8	8	-	12	4
R8C4GE4	4	8	-	-	4
L7C8	8	-	7	-	-

*More configurations can be found on our website

TECHNICAL DATA

All important technical data of the XORAYA ML-N4000 at a glance:

Hardware		
	Processor	Quad ARM Cortex-A53
	Flash / RAM	128MB QSPI Flash / 8 GB RAM
	Data rate	Up to 3 Gbit/s
	Data storage	480 GB internal storage / up to 8 TB external storage (optional)
	Timestamp	100 ns
	External operating voltage	6 to 32 V
	Current consumption	Max. 16.6 A (standard) / max. 1 mA (standby)
	Temperature range	-40 to +65 °C
	Dimensions	65 x 165 x 165 mm
	Weight	2,2 kg
	Other	Thermally sealed active cooling, real-time clock, supercap unit

Software		
	Operating system	Embedded Linux
	Storage formats	X2E Native, X2E ASCII, CARMEN-Journal (V3.0), Wireshark PCAP/PCAPNG, MOST OP2, MOST IMG, Vector BLF, Vector ASCII, XAA for GNLog, DLT AUTOSAR, System Events, NMEA for GPS, Raw RS-232, CSV for Analog/CCP, CSV for Signals, Video Extractor, MATLAB Signals, MDF Signals/Buslogging
	Software protocols	CCP/XCP, PLP, XLP
	Wake up by	CAN, FlexRay, RS-232, LIN, PSI5
	Recording mode	Internal storage / external storage (ESU) / PC via Ethernet
	Configuration software	XORAYA Suite and XORAYA SDK for Windows & Linux
	Other	Automatic sleep mode

Interfaces		
	Pre-installed logging interfaces	None
	Free configurable slots	6 Slots (one interface module per slot)
		Slots 1-4: 7x LIN / 4x CAN-FD / 4x PSI5 / 8x RS-232 / 6x Analog / 2x FleyRay
		Slot 5: 2x FlexRay / 4x Gbit Ethernet
		Slot 6: 12x 100BASE-T1 (Switch) / 12x 100/1000BASE-T1
	Non-logging interfaces	1x 12V/Trigger/Wake, 1x USB Host, 4x LAN Host, 1x Device, 1x SFP+