

DATASHEET

ILaS SNIFFER

General description

The ILaS Sniffer is a specialized capture module for monitoring and analyzing ILaS (ISELED Light and Sensor) network traffic, along with one 10BASE-T1S Ethernet link. It is designed to tap into live automotive communication networks without disrupting their topology, allowing simultaneous capture of up to four ILaS links and one 10BASE-T1S line. By timestamping all captured data and encapsulating it using the open TECMP logging protocol, it ensures a detailed and accurate trace of network behavior.

Standardized logging protocol

Captured traffic is encapsulated in Ethernet frames with a TECMP header, which includes critical metadata such as source hardware timestamp, interface ID, counters, and more. This standardization enables consistent interpretation and integration with existing analysis tools.

Scalable setups

The ILaS Sniffer supports network time synchronization using 802.1AS (gPTP automotive profile), functioning as Grandmaster, Master, or Slave. This allows multiple devices to operate in synchronized setups, extending analysis to larger and more complex network configurations.

Application Areas

The ILaS Sniffer is designed to be used in various environments such as in the car, on a development desk, or in testbenches. To best support these scenarios, the device allows continuous operation and supports a wide input voltage range, making it suitable for demanding automotive environments.

Optimized logging

Startup time is crucial in an in-vehicle-network. Therefore, the ILaS Sniffer is developed to provide an optimized startup time to be ready to log before the ECUs are up and send data. In addition to that, the Capture Module is equipped with an internal buffer to store the first frames (sent from the ECUs), even if the data sink is not yet ready. As soon as the data sink is up and ready to receive data, all the stored data will be sent out. With the packetization and output traffic shaping feature the Capture Module can adjust the size of the logging frames and have the possibility to maintain a consistent data flow (to the logger or the test PC). This way it actively prevents forwarding of bursts. The combination of these features ensures that no frames are lost.

Configuration

The ILaS Sniffer offers a flexible and user-friendly configuration through its built-in web server. The device webpage can be easily accessed via a standard web browser. In addition, the possibility to import/export a configuration makes it even more convenient.



ILaS Sniffer

Technical Data

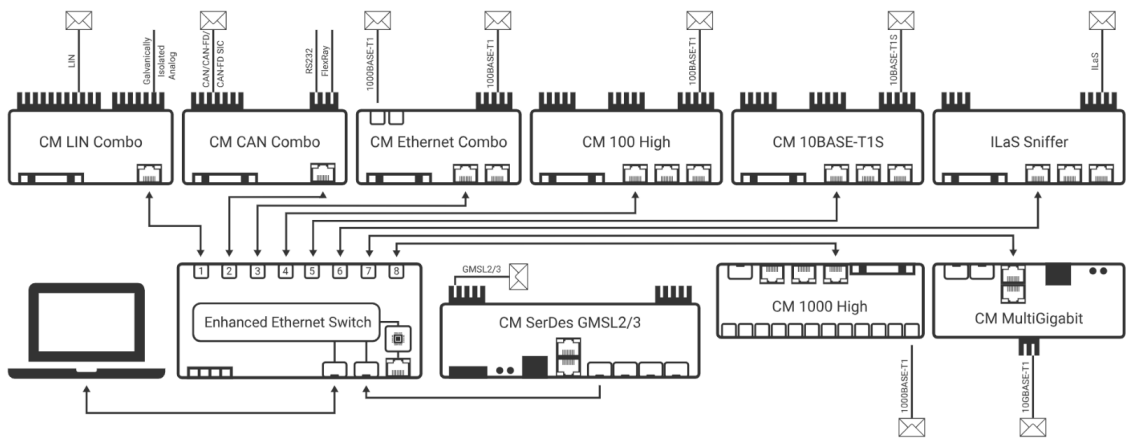
Operating temperature	-40 °C to +85 °C
Supply Voltage	6.5 V to 32 V DC (typ. 12 V)
Power consumption	5 to 7 Watt
IP Protection Class	IP 20
Housing Dimensions	166.5 mm (W) x 130 mm (L) x 36 mm (H)
Weight	0.7 kg (approx.)
Interfaces	1x 10BASE-T1S (MQS) 4x ILaS (MQS) 3x 1000BASE-T (RJ-45) for Config, Logging, Sync 1x 100BASE-T1 (MQS) for Config, Logging, Sync 1x 100BASE-T1 (MQS) for Config 2x Wake in/out (MQS)
Phy (vehicle-side)	INLT220Q (Inova) LAN8670 (Microchip)

Features of ILaS Sniffer

Device Features	Configuration Webpage
	Wake-/Sleep
	Import-/Export of Configurations
	Status LEDs
	TECMP
	Status Messages
	Manual IP Configuration via Rotary Switch
	Optimized Startup + Startup Buffer
	Cascading
	Hardware Timestamping
	Time Synchronization (gPTP/802.1AS-2011 AVnu profile or PTPv2 subset)
	Packetization
	Output Traffic Shaping
	Advanced Filtering
	Sync Events
10BASE-T1S Injection*	10BASE-T1S Event Logging (captures and timestamps key network occurrences, including physical layer errors and significant PLCA cycle events).
	Inject 10BASE-T1S traffic filtered by MAC or IP source, enabling extended test scenarios for device validation

* License needs to be ordered separately

Use case



Order Information

Name	Article Number	Article number cable set*	10BASE-T1S Injection*
ILaS Sniffer	TE-1180	KS-1180	FT-1180

* Needs to be ordered separately