



USB-LIN Converter

Model No: LIN-USB-520



Product Description

We provide alternative products fully compatible with PLIN protocol, supporting LIN bus communication. LIN (Local Interconnect Network) is a low-cost serial communication protocol primarily used for communication between distributed control units in automotive body electronic systems.

Features

- USB Interface: Supports USB full speed mode, compatible with USB 1.1, USB 2.0, USB 3.0
- LIN Protocol: Supports LIN 1.3, LIN 2.0, LIN 2.1, LIN 2.2 specifications Baud Rate Adjustment: Supports standard LIN baud rates Compatibility: Fully compatible with PLIN API
- Electrical Isolation: Provides electrical isolation protection
- Time Stamping: High-precision time stamp recording
- Bus Monitoring: Supports bus load measurement and error frame detection.

Technical Specification

Parameter	
Product	LIN-USB Adapter
PC Interface	USB (Full-Speed), compatible with USB 1.1, USB 2.0 & USB 3.0
LIN Standard	ISO 17987
LIN Specification Version	Supports all LIN specifications up to Version 2.2
Operating Mode	Master or Slave
Bit Rate	1 kbit/s to 20 kbit/s
Master Task Resolution	1 ms
Protocol Support	Automatic bit rate, frame length, and checksum type recognition
Scheduling Support	Supports autonomous scheduling for conditional, event-based, and sporadic frames

Connector Type	D-Sub 9-pin (DB9)
Connector Protection	Short-circuit protection to prevent power supply and grounding faults
LIN Transceiver	NXP TJA1028T or TI TLIN1028D
Electrical Isolation	Up to 500 V on LIN connection
Status Indicator	Interface Status LED
USB Power Supply	5 V DC
Transceiver Power Supply	6-28 V DC via D-Sub Pin 9
LDF Support	Supports LDF Scheduling Table
Connector Finish	Gold-plated solid connector

System Requirements

Available USB interface on computer (USB 1.1, USB 2.0, or USB 3.0) or self-powered USB hub connected to computer

Operating Systems:

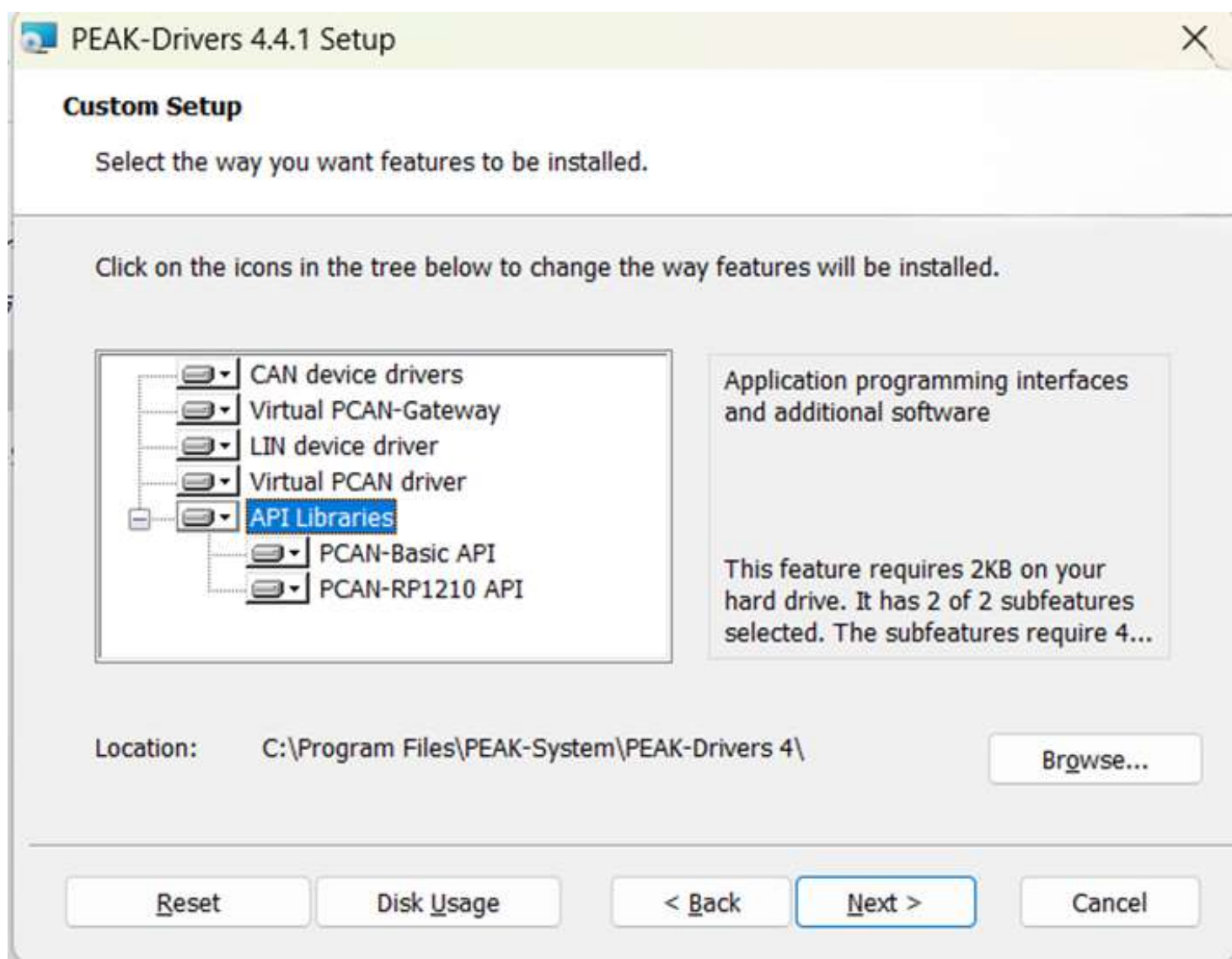
Windows 11, Windows 10, 8.1, 7 (32/64-bit)

Linux (32/64-bit) MacOS

Driver Installation

Installation Steps

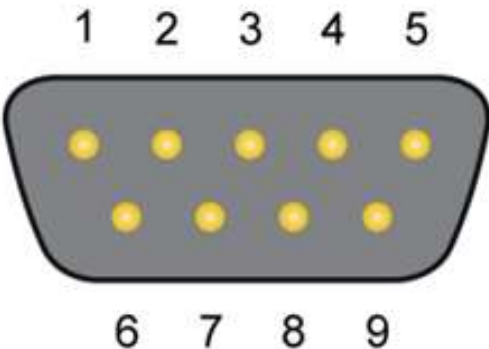
1. Extract PEAK-System _ Driver-Setup.zip obtained from supplier
2. Double-click "PeakOemDrv.exe" to install
3. Follow driver installation prompts. During interface selection in installation process, select LIN device driver. If CAN devices are present, CAN port can also be selected simultaneously.



Pin Definition

9-Pin D-Sub Interface Pin Assignment

Pin	Function
4	LIN Bus
5	GND
6	GND
9	Auxiliary Power 6-28V

Pin	Assignment	D-Sub plug on LIN interface
1	None	
2	None	
3	None	
4	LIN	
5	LIN_GND	
6	LIN_GND	
7	None	
8	None	
9	LIN_V _{Bat}	

Device Connection

After connecting USB-LIN to PC, LIN connection requires power in addition to LIN line.

Connection Instructions

LIN Bus: Connect to pin 4

Ground: Common ground for pins 5 and 6

Auxiliary Power: Pin 9 connects to 6-28V auxiliary power

Precautions

Generally 12V power supply is sufficient, recommended not to exceed 18V

If USB-LIN and the LIN nodes connected use different power supplies, common ground is required for proper communication

Status Indicator

After installing driver and connecting USB-LIN device to computer, device LED indicator status is as follows:

LED Status	Status Meaning
Green light constanton	Device connected to system driver
Green light slowflashing	LIN interface initialized with valid baud rate; software connected toLIN interface
Green light fastflashing	Data transmission on LIN bus