RP1210 API

Running Applications on CAN, SAE J1939, ISO15765 and SAE J1708/J1587 Networks

What is RP1210 API?

The RP1210 API is an open interface between Windows-based applications and in-vehicle communication networks. This interface offers functionality for bus systems as well as for higher layer protocols. Its areas of use are very diverse and depend on the implemented application.
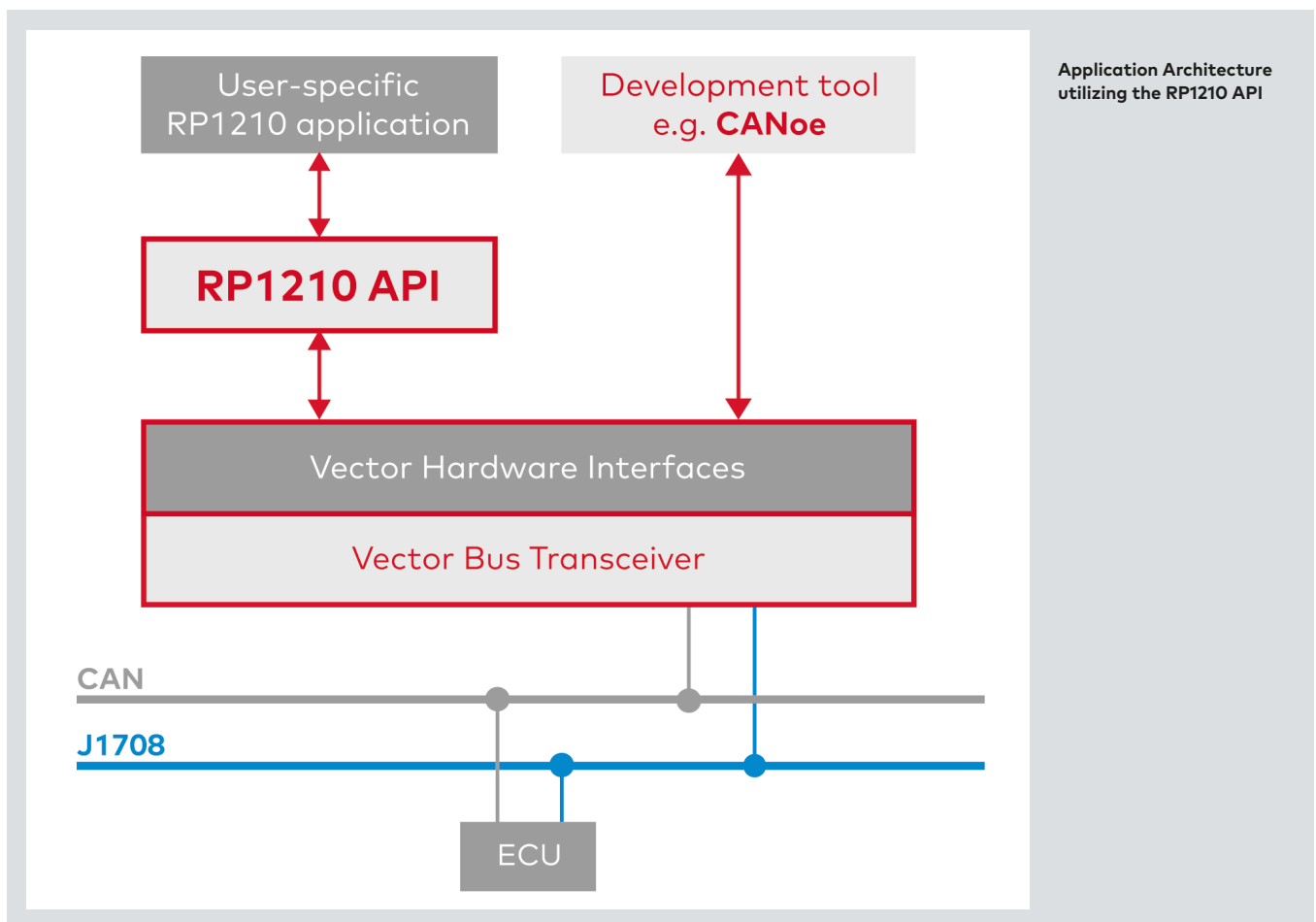
Typical RP1210 applications involve diagnostic tools in the heavy-duty vehicle field, such as those used in the service area. Vector's RP1210 API can be used to operate these tools during development, including with Vector interface hardware.

The RP1210 specification was developed as a "Recommended Engineering and Maintenance Practice" by the Technology & Maintenance Council (TMC) of the American Trucking Association (ATA). Especially in the USA, voluntary conformance to this recommended practice has gained the support of commercial trucking companies, OEMs and suppliers.

Overview of Advantages

> Comfortable channel mapping enabled by full integration in the configuration dialog of the Vector hardware interfaces
> Multiple clients per channel
> Full multithreading capability including different optional wait modes, e.g. waiting for tx indications of messages or completion of higher layer protocol transactions.
> Compatibility to RP1210-0, RP1210-A,RP1210-B and RP1210-C

Application Architecture utilizing the RP1210 API

Functions for CAN (extract)
> Standard (11-bit identifier) & extended (29-bit identifier) format
> Hardware based CAN-ID filtering
> Concurrent cyclic Broadcast Message delivery option

Functions for SAE J1939 (extract)
> Data Link Layer: Parameter Group (PG-) Data & Transport Protocol Handling (BAM & CMDT)
> Network Layer: Dynamic address management (claiming/protection of address)
> Various filtering possibilities (e.g. PGN, source and destination address)
> Concurrent cyclic Broadcast PG delivery option

Functions for ISO15765 (extract)
> Support ISO15765 (CAN based diagnostic transport protocol)

> **Functions for SAE J1708/J1587 (extract)**
> Optional checksum generation & error validation
> Message Identifier filtering possibilities
> Concurrent cyclic Broadcast Message delivery option

Hardware Interfaces
The RP1210 API can be used together with Vector Interface hardware and the related bus transceivers.

System Requirements
Windows 2000/XP/Vista/7/8/8.1/10

All about RP1210 API: www.vector.com/RP1210_API