Bus Transceiver Overview

for CAN/CAN FD, CAN SIC, CAN SIC XL, LIN, FlexRay and Sensor Buses

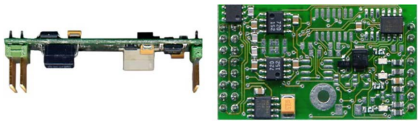
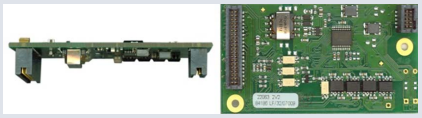
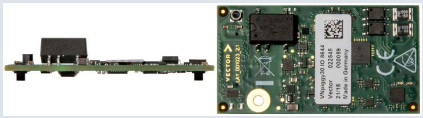
CANpiggy	Transceiver	Baud rate (acc. manuf.)	Pin assignement D-Sub*	Preferred area of application	Design[1]	Special feature
1057Gcap	TJA1057G	1 Mbit/s high-speed 5 Mbit/s CAN FD	2 = CAN_L 3 = GND 5 = n.c./Schirm 7 = CAN_H	Automobile technology (powertrain bus, CAN FD), automation, air and space flight, nautical transportation	E	Suitable for 2 Mbit/s CAN. Suitable for CAN FD up to 8 Mbit/s. Electrically isolated. Bus-side power supply is provided internally.[2]
1462BT	TJA1462BT	1 Mbit/s high-speed 5 Mbit/s CAN SIC (complex network) 8 Mbit/s CAN SIC (peer-to-peer	2 = CAN_L 3 = GND 5 = n.c./Schirm 7 = CAN_H	Automobile technology (powertrain bus, CAN FD), automation, air and space flight, nautical transportation	E	Signal Improvement Capability: Ringing Suppression erlaubt höhere Datenraten in komplexen Netzwerken aufgrund verbesserter Bit-Timing-Symmetrie. > More than 5 Mbit/s CAN FD in networks with long stubs and many nodes > More than 8 Mbit/s CAN FD peer-to-peer > Up to 2 Mbit/s CAN 2.0 - depending on topology > Electrically isolated. Bus-side power supply is provided internally.[2]
ALBI02	ALBI02	1 Mbit/s high-speed 5 Mbit/s CAN SIC (complex network) 8 Mbit/s (peer-to-peer) 16 Mbit/s CAN SIC XL (complex networks) 20 Mbit/s (peer-to-peer)	2 = CAN_L 3 = GND 5 = n.c./Schirm 7 = CAN_H	Automobile technology (powertrain bus, CAN FD), automation, air and space flight, nautical transportation	E	> CAN SIC like CANpiggy 1462BT: See above, ringing suppression allows for higher data rates CAN SIC XL: > Allows payloads up to 2048 byte > Dataphase with up to 16 Mbit/s using the Fast TX Mode in networks with long stubs and many nodes > Up to 20 Mbit/s Fast TX Mode in peer-to-peer networks [2]
1041Amag	TJA1041A	1 Mbit/s high-speed	2 = CAN_L 3 = VB- 4 = Split 5 = n.c./Schirm 7 = CAN_H 9 = VB+	Automobile technology (powertrain bus), automation, air and space flight, nautical transportation	E	Wake-up-capable. Split termination possible. Electrically isolated. Bus-side power supply optionally internal or external 12-18 V.[2]
1055cap	TJA1055	125 kbit/s low-speed	2 = CAN_L 3 = VB- 5 = n.c./Schirm 7 = CAN_H 9 = VB+	Automobile technology (body electronics bus)	E	Fault-tolerant CAN. Electrically isolated. Bus-side power supply opt. int. or ext. 12-18 V.[2]
7356cap	NCV7356	100 kbit/s (HS mode) 40 kbit/s (LS mode)	3 = VB- 4 = 100 Ω (HS-Mode) 5 = n.c./Schirm 7 = CAN_H 9 = VB+	Automobile technology: Single Wire CAN (SWC; body electronics bus)	E	100 Ω resistance can be activated automatically upon switching over to high-speed mode. Electrically isolated. Bus-side power supply opt. int. or ext. 12-18 V.[2]
LINpiggy	**Transceiver**	Baud rate (max.)	Pin assignement D-Sub*	Preferred area of application	Design[1]	Special feature
7269mag	TLE7269	20 kbit/s (normal) 115 kbit/s (flash)	3 = VB- 4 = Pdis* 5 = n.c./Shield 7 = LIN 9 = VB+ * VN1530/VN1531 Pdis on PIN 2	Automobile technology , LIN1.x, LIN2.x and SAE-J2602 applications K-Line applications	E	Electrically isolated. Compliant to LIN specifications 1.3, 2.0, 2.1 and SAE-J2602. For 12 V and 24 V LIN applications. Dominant / recessive stress functionality. Normal mode: 20 kbit/s Flash mode: 115 kbit/s*. * depending on the bus physic the maximum data rate can be up to 330 kbit/s
7259	TLE7259-3GE	20 kbit/s (normal) 115 kbit/s (flash)	2 = Pdis 3 = VB- 5 = n.c./Shield 7 = LIN 9 = VB+	Automobile technology , LIN1.x, LIN2.x and SAE-J2602 applications K-Line applications	E	Electrically isolated. Compliant to LIN specifications 1.3, 2.0, 2.1, 2.2A and SAE-J2602. For 12 V and 24 V LIN applications. Dominant / recessive stress functionality. Normal mode: 20 kbit/s Flash mode: 115 kbit/s*. * depending on the bus physic the maximum data rate can be up to 280 kbit/s

FRpiggy	Transceiver	Baud rate (max.)	Pin assignement D-Sub*	Preferred area of application	Design[1]	Special feature
FRpiggy 1082cap	2x TJA1082 (Channel A & B)	10 Mbit/s	1 = Trigger out 2 = Ch. A BM 3 = GND 4 = Ch. B BM 5 = n.c./Shield 7 = Ch. A BP 8 = Ch. B BP	Automobile technology, safety-relevant applications (x-by-wire)	F	2 transceivers for parallel operation of 2 FlexRay channels. Electrically isolated.
FRpiggyC 1082cap	2x TJA1082 (Channel A & B)	10 Mbit/s	1 = Trigger out 2 = Ch. A BM 3 = GND 4 = Ch. B BM 5 = n.c./Shield 7 = Ch. A BP 8 = Ch. B BP	Automobile technology, safety-relevant applications (x-by-wire)	E	2 transceivers for parallel operation of 2 FlexRay channels. Electrically isolated.
SENSORpiggy	Transceiver	Baud rate (max.)	Pin assignement D-Sub*	Preferred area of application	Design[1]	Special feature
SENT	–	64,9 kbit/s	3 = VB- 5 = n.c./Shield 7 = SENT 9 = VB+	Automobile and commercial vehicle technology, SENT buses	E	Sensor voltage supply 5 V/50 mA. Electrically isolated.
UART	- / RS232 / RS485	UART: 1 Mbit/s RS232: 230 kbit/s RS485: 16 Mbit/s	2 = RX / A 3 = VB- 4 = Pdis 7 = TX / B 9 = VB+	Automobile and commercial vehicle technology, SENSOR resp. serial communication	E	UART levels 1.8 V, 3.3 V, 5 V or defined by user.
UARTоverCAN	TJA1057G	1 Mbit/s high-speed	2 = CAN_L 3 = GND 5 = n.c./Shield 7 = CAN_H	Automobile and commercial vehicle technology, SENSOR resp. serial communication	E	UART communication via CAN transceiver. Suitable for 2 Mbit/s CAN. Electrically isolated. Bus-side power supply is provided internally.[2]
Miscelleaneous Piggies	Transceiver	Baud rate (max.)	Pin assignement D-Sub*	Preferred area of application	Design[1]	Special feature
IOpiggy 8642	–	–	1 = I/O, PWM 2,9,10 = I/O 13 = DGND 3/11 = I, PhotoMOS 4/12 = I, PhotoMOS 7,14 = Analog I/O 8,15 = Analog In 6 = AGND	Automobile and commercial vehicle technology, automation technology, air and space flight technology, marine technology	G	Used for generation and measurement of analog and digital signals. Electrically isolated.
VNpiggy30 IO 8644	–	–	1,6 = DI,PhotoMOS 2,7 = DI, PhotoMOS 3,8,13 = DI/DO 12 = DI/DO,PWM 9 = DGND 11 = PWM 5,10,14,15= AI/AO 4 = AGND	Automobile and commercial vehicle technology, automation technology, air and space flight technology, marine technology	H	Used for generation and measurement of analog and digital signals. Electrically isolated.
J1708 65176opto	SN65176B	9,6 kbit/s	2 = A 3 = GND 5 = n.c./Shield 7 = B	Commercial vehicle technology (powerbus, body electronics bus)	E	Bus-side power supply is provided internally. Electrically isolated.

VB+, VB- = Supply voltage at electrically isolated pins. * Function of connection pin 5 differs depending on the device.

[1] = For design type description see table “Designs and Connectors”. [2] = No unwanted Error Frames are generated (e.g. during shutdown).

Designs

Design name	Usable for[3]	Design
E CAN/LIN/Sensor/ J1708piggy (plug-in board “Piggyback”)	VN1500, VN1600, VN7572, VN7640, VN8900, VT6x04,	
FRpiggyC	VN7572, VN8972	Dimensions. 45 x 25 x 13 mm
F FRpiggy (plug-in board “Piggyback”)	VN8970 VT6204	 Dimensions ca. 71 x 38 x 13 mm
G IOpiggy (plug-in board “Piggyback”)	VN7572 VN8970 VN8972	 Dimensions ca. 56 x 30 x 13 mm
H VNpiggy30 IO 8644 (plug-in board “Piggyback”)	VN1670	 Dimensions ca. 56 x 30 x 13 mm

[3] see http://www.vector.com/kb for a complete listing of compatibility for piggybacks.