Bus Transceiver Overview

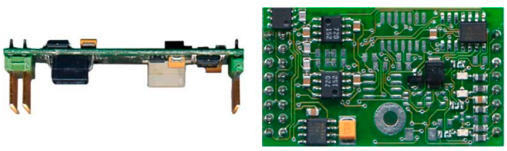
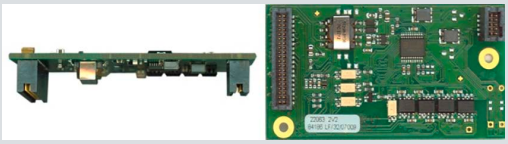
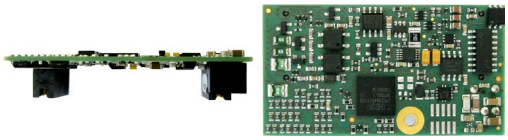
Bus Transceivers for Vector CAN (FD), LIN, FlexRay, Sensor and J1708 Interfaces

CANpiggy	Transceiver	Baud rate (max.)	Pin assignement D-Sub	Preferred area of application	Design[1]	Special feature
1057Gcap	TJA1057G	2 Mbit/s high-speed 8 Mbit/s CAN FD	2 = CAN_L 3 = GND 5 = Shield 7 = CAN_H	Automobile technology (powertrain bus, CAN FD), automation, air and space flight, nautical transportation	E	Galvanically isolated. Bus-side power supply is provided internally. Suitable for 2 Mbit/s CAN.[2] Suitable for CAN FD up to 8 Mbit/s
1051cap	TJA1051	2 Mbit/s high-speed 8 Mbit/s CAN FD	2 = CAN_L 3 = GND 5 = Shield 7 = CAN_H	Automobile technology (powertrain bus, CAN FD), automation, air and space flight, nautical transportation	E	Galvanically isolated. Bus-side power supply is provided internally. Suitable for 2 Mbit/s CAN.[2] Suitable for CAN FD up to 8 Mbit/s
1050mag	TJA1050	1 Mbit/s high-speed	2 = CAN_L 3 = VB- 5 = Shield 7 = CAN_H	Automobile technology (powertrain bus), automation, air and space flight, nautical transportation	E	Galvanically isolated. Bus-side power supply is provided internally. [2]
1041Amag	TJA1041A	1 Mbit/s high-speed	2 = CAN_L 3 = VB- 4 = Split 5 = Shield 7 = CAN_H 9 = VB+	Automobile technology (powertrain bus), automation, air and space flight, nautical transportation	E	Galvanically isolated. Wake-up-capable, bus-side power supply optionally internal or external 12-18 V.[2]
1040mag	TJA1040	1 Mbit/s high-speed	2 = CAN_L 3 = VB- 4 = Split 5 = Shield 7 = CAN_H 9 = VB+	Automobile technology (powertrain bus), automation, air and space flight, nautical transportation	E	Galvanically isolated. Useful for partially powered networks. Bus-side power supply is provided internally.[2]
251	PCA82C251	2 Mbit/s high-speed	2 = CAN_L 3 = GND 5 = Shield 7 = CAN_H	Automobile technology (powertrain bus), automation, air and space flight, nautical transportation	E	Suitable for 2 Mbit/s CAN.
1055cap	TJA1055	125 kbit/s low-speed	2 = CAN_L 3 = VB- 5 = Shield 7 = CAN_H 9 = VB+	Automobile technology (body electronics bus)	E	Galvanically isolated. Bus-side power supply opt. int. or ext. 12-18 V. Fault-tolerant.[2]
7356cap	NCV7356	100 kbit/s (HS mode) 40 kbit/s (LS mode)	3 = VB- 4 = 100 Ω (HS-Mode) 5 = Shield 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. Galvanically isolated. Bus-side power supply opt. int. or ext. 12-18 V.[2]
10011opto	B10011S	250 kbit/s	2 = CAN_L 3 = VB- 5 = Shield 7 = CAN_H 9 = VB+	Commercial vehicle technology (truck&trailer) ISO WD11992-1	E	Recommended for CAN applications in the commercial vehicle area. External voltage supply 16-32 V required.
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 = Shield 7 = LIN 9 = VB+	Automobile technology , LIN1.x, LIN2.x and SAE-J2602 applications K-Line applications	A, E	Galvanically isolated. Compliant to LIN specifications 1.3, 2.0, 2.1 and SAE-J2602. For 12V and 24V 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

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 = Shield 7 = Ch. A BP 8 = Ch. B BP	Automobile technology, safety-relevant applications (x-by-wire)	F	Galvanically isolated. 2 transceivers for parallel operation of 2 FlexRay channels
FRpiggyC 1082cap	2x TJA1082 (Channel A & B)	10 Mbit/s	1 = Trigger out 2 = Ch. A BM 3 = GND 4 = Ch. B BM 5 = Shield 7 = Ch. A BP 8 = Ch. B BP	Automobile technology, safety-relevant applications (x-by-wire)	E	Galvanically isolated. 2 transceivers for parallel operation of 2 FlexRay channels
Miscellea–neous 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	Galvanically isolated. Used for generation and measurement of analog and digital signals.
SENSORpiggy SENT	–	64,9 kbit/s	3 = VB- 7 = SENT 9 = VB+	Automobile and commercial vehicle technology, SENT buses	E	Galvanically isolated. Sensor voltage supply 5 V/50 mA.
J1708 65176opto	SN65176B	9.6 kbit/s	2 = A 3 = GND 5 = Shield 7 = B	Commercial vehicle technology (powerbus, body electronics bus)	E	Galvanically isolated. Bus-side power supply is provided internally.

VB+, VB- = supply voltage at galvanically isolation.
V_Batt = ±12 V related to GND.
[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")	VN1600, VN7572, VN7600, VN8900, VT6x04, CANcaseXL log, CANboardXL	 Dimensions 45 x 25 x 13 mm
FRpiggyC	VN7572, VN8972, VX1131	
F FRpiggy (plug-in board "Piggyback")	VN3300 VN3600 VN7600 VN8970 VT6204	 Dimensions 71 x 38 x 13 mm
G IOpiggy (plug-in board "Piggyback")	VN7572 VN8950 VN8970 VN8972	 Dimensions 56 x 30 x 13 mm

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