

Vector Controller VC

Communication ECUs for Small Series Productions, Evaluation and Development

What are Vector Controllers?

Vector Controllers are ECUs for communication purposes in vehicles and support various bus systems, networks and architectures. They are perfectly suited for fast development of functional models and use in small production runs.

The ECUs cover a wide range of communication interfaces and protocols. You receive the optimal solution for your application thanks to the scaled product family and the availability of reduced or alternative PCB population.

Available Software

In combination with the Vector embedded software portfolio and wide-ranging firmware, applications can be quickly realized for a wide range of vehicle networks.

Accessories

- > The Breakout Box enables easy access to all pins of the ECUs for measurement and testing purposes.
- > The JTAG adapter allows connection of debuggers or programming tools. In addition, it enables connection of the VX1000 measurement and calibration hardware for high-performance ECU connection.
- > A connector set is available for assembling a customized cable set.

Benefits at a Glance

- > Proven standard technologies from the automotive industry that can be used in small production runs and for functional models
- > Shorter development cycles with less risk through the use of existing proven hardware
- > The ECUs are already qualified for use in series production
- > Powerful and flexible solution thanks to the scaled product family
- > Fast functional development in connection with the VX1000 measurement and calibration hardware
- > High degree of flexibility through availability of alternative PCB population
- > Reduced PCB population options enable cost-optimized series production
- > Perfectly tuned solution: ECU hardware, embedded software, and development tools from one source
- > License-based business model - cost-effective through reuse

More Information: www.vector.com/VC-Controller



Three ECUs from the VC family: VC121-12, VC54S-12 and VC36-12

Technical Data:

	VC121-12	VC54S-12	VC36B-12	VC36PLC-24
Main CPU	SPC56EC64	SPC564B64	TC297TA	SPC564B64
Safety CPU	STM8AF62	n/a	n/a	n/a
CAN interfaces	5 x high-speed 1 x partial networking	6 x high-speed	1 x high-speed CAN 3 x CAN FD & Partial NW	3 x high-speed
LIN interfaces	2	2	1	n/a
100BASE-T1/ BroadR-Reach	1	n/a	5 (Broadcom BCM89531)	n/a
100BASE-TX	n/a	n/a	1	n/a
FlexRay	1 x Dual Channel	1	n/a	n/a
PSI/SENT	n/a	8/1	n/a	n/a
PLC	n/a	n/a	n/a	1 (PE, CP, PP)
Digital & frequency inputs	20 x 0...U _{BAT} 8 x 0...U _{BAT} max. 20 kHz	4 x 0...U _{BAT} max. 20 kHz	4 x 0...U _{BAT} 20kHz	1 x 0...U _{BAT} 1 x Terminal 15 Wake-up
Analog inputs	14 x 0...5 V, 12 bit 8 x 0...U _{BAT} 12 bit	4 x 0...5 V, 12 bit	n/a	3 x for PT1000 1 x 0...12 V, 12 bit
Digital & PWM outputs	2 x 6 A 14 x 2,5 A 16 x 1 A 8 x 200 mA	4 x 1 A	4 x 1 A	1 x 5 A 3 x 200 mA 3 x 20 mA LED
H-bridge	n/a	n/a	n/a	max. 5 A / 12 V
Real-Time Clock	n/a	n/a	yes	yes
Sensor supply	2 x 5 V, 100 mA	1 x 5 V, 70 mA	n/a	1 x 5 V, 70 mA
Operating voltage	8...16 V DC	8...16 V DC	8...16 V DC	10...32 V DC
Total current draw (with load)	max. 42 A	4,7 A	< 3,5 A	< 12 A
Operating temperature	-40 °C...+85 °C	-40 °C...+80 °C	-40 °C...+80 °C	-40 °C...+85 °C
Dimensions (L / W / H)	220 mm x 120 mm x 40 mm	193 mm x 101 mm x 31 mm	156 mm x 148 mm x 39 mm	156 mm x 148 mm x 39 mm
Housing degree of protection	IP67	IP50	IP6K6K / IP6K7 / IP6K9K (ISO 20653)	IP6K6K / IP6K7 / IP6K9K (ISO 20653)
Plug connector	Tyco 1473244 (81-polig) and Tyco 1473252 (40-polig)	Tyco 185683-1 and Tyco 185683-2 and Tyco 1-963539-1	Molex CMC 36 Header	Molex CMC 36 Header
EMC / ESD	OEM-harmonized requirements			CISPR 25, ISO 7637, ISO 11452, ISO 10605
Environmental compatibility	ISO 16750 / LV 124			ISO 16750