AUTOMOTIVE SOLUTIONS
ADVANCED ANALOG

With more than 25 years of delivering superior, high-performance mixed-signal electronics to the automotive industry, NXP's robust portfolio of automotive-compliant products includes over 700 devices and solutions that help enable breakthrough automotive designs.

LCD DRIVERS
- Instrument clusters
- Climate controls
- Tachographs
- Car radios
- Key fobs

REAL-TIME CLOCKS
- Tachographs
- Black boxes
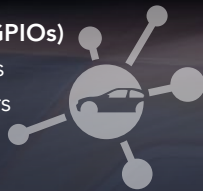- Battery management units
- Navigation systems
- Car radios

LED CONTROLLERS
- Instrument clusters
- dashboards
- Gauges/tell-tales
- Car radios
- Climate controls

I/O EXPANDERS (GPIOs)
- Body control units
- Instrument clusters
- Car radios

LEVEL TRANSLATORS
- Processor to peripherals in infotainment systems

3.3 V
1.8 V

NXP

LCD DISPLAY SEGMENT DRIVERS

Products	Description	Size	V_DD1 (Min – Max) (V)	V_LCD (Min – Max) (V)	IDD [typ] (µA)	Interface	Temperature (Min – Max) (°C)	Package Version
PCA85132	LCD driver for low multiplex rates	4 x 160	1.8 to 5.5	1.8 to 8	60 (max)	I²C	-40 to +95	bare die
PCA85133	LCD driver for low multiplex rates	4 x 80	1.8 to 5.5	2.5 to 8	16	I²C	-40 to +95	bare die
PCA85134	LCD driver for multiplex rates up to 1:4	4 x 60	1.8 to 5.5	2.5 to 8	24	I²C	-40 to +95	LQFP80
PCA85162	LCD driver for low multiplex rates	4 x 32	1.8 to 5.5	2.5 to 8	2.7	I²C	-40 to +95	TSSOP48
PCA85176	LCD driver for low multiplex rates	4 x 40	1.8 to 5.5	2.5 to 8	3.5	I²C	-40 to +95	TQFP64, TSSOP56
PCA85232	LCD driver for low multiplex rates	4 x 160	1.8 to 5.5	1.8 to 8	80 (max)	I²C	-40 to +95	bare die
PCA85233	LCD driver for low multiplex rates	4 x 80	1.8 to 5.5	2.5 to 8	3	I²C	-40 to +105	bare die
PCA85262	LCD driver for low multiplex rates	4 x 32	1.8 to 5.5	2.5 to 8	6	I²C	-40 to +105	TSSOP48
PCA85276	LCD driver	4 x 40	1.8 to 5.5	2.5 to 8	2.7	I²C	-40 to +105	TSSOP56
PCA8534	LCD driver for low multiplex rates	4 x 60	1.8 to 5.5	2.5 to 6.5	8	I²C	-40 to +85	LQFP80
PCA8536	LCD driver for low multiplex rates including a 6-channel PWM generator	8 x 40	1.8 to 5.5	2.5 to 9	30	I²C/SPI	-40 to +95	TSSOP56
PCA8537	LCD driver for multiplex rates up to 1:8	8 x 44	1.8 to 5.5	2.5 to 9	290	I²C	-40 to +95	TQFP64
PCA8546	LCD driver	4 x 44	1.8 to 5.5	2.5 to 9	85	I²C/SPI	-40 to +95	TSSOP56
PCA8547	LCD driver with integrated charge pump	4 x 44	1.8 to 5.5	2.5 to 9	290	I²C	-40 to +95	TQFP64
PCA8551	LCD driver	4 x 36	1.8 to 5.5	1.8 to 5.5	0.6	I²C/SPI	-40 to +105	TSSOP48
PCA8553	LCD driver	4 x 40	1.8 to 5.5	1.8 to 5.5	0.6	I²C/SPI	-40 to +105	TSSOP56
PCA8561	LCD driver	4 x 18	1.8 to 5.5	1.8 to 5.5	0.6	I²C/SPI	-40 to +105	HVQFN32
PCA9620	LCD high-drive segment driver	8 x 60	2.5 to 5.5	2.5 to 9	100	I²C	-40 to +105	LQFP80, bare die

REAL-TIME CLOCKS

Products	Description	V_DD (interface)	V_DD (clock)	I_DD (nA) typical	Watchdog Timer	Programmable Alarm	Temperature Compensation	Interface	Temperature (Min – Max) (°C)	Package Version
PCA85073A	Tiny real-time clock/calendar with alarm function and I²C-bus	1.8 to 5.5	0.9 to 5.5	250	N	Y	N	I²C	-40 to +105	TSSOP8
PCA8565	High-temperature real-time clock/calendar with I²C-bus	1.8 to 5.5	0.9 to 5.5	600	Y	Y	N	I²C	-40 to +125	TSSOP8
PCA21125	SPI-bus real-time clock and calendar	1.6 to 5.5	1.3 to 5.5	820	N	Y	N	SPI	-40 to +125	TSSOP14
PCA2131	Very-low-power accurate real-time clock with integrated quartz crystal	1.2 to 5.5	1.2 to 5.5	106	Y	Y	Y	I²C/SPI	-40 to +105	HLSON16 (3.5 x 4.5 x 1.4 mm)

LED CONTROLLERS

Products	Description	LED Supply Maximum Voltage	Maximum Current per LED Output	Operating Voltage (VDC)	No. of Addresses	Interface	Temperature (Min – Max) (°C)	Package Version
PCA9635	16-bit Fm+ I²C-bus LED driver	5 V	25 mA	2.3 to 5.5	126	I²C 1000 kHz	40 to +85	TSSOP28
PCA9685	16-channel, 12-bit PWM Fm+ I²C-bus LED controller	5 V	25 mA	2.3 to 5.5	126	I²C 1000 kHz	40 to +85	TSSOP28
PCA9745B	16-channel SPI 20 V CS LED controller	20 V	57 mA	3 to 5.5	n/a	4-wire SPI	-40 to +105	HTSSOP28
PCA9955B	16-channel Fm+ I²C-bus 20 V CS LED controller	20 V	57 mA	3 to 5.5	8	I²C 1000 kHz	-40 to +85	HTSSOP28
PCA9955	16-channel I²C Fm+ HV CS LED controller without OE	40 V	57 mA	3 to 5.5	16	I²C 1000 kHz	-40 to +85	HTSS0P28
PCA9952	16-channel I²C Fm+ HV CS LED controller with OE	40 V	57 mA	3 to 5.5	8	I²C 1000 kHz	-40 to +105	HTSSOP28
PCA9958*	24-channel SPI 5V CS LED controller	5 V	63 mA	2.7 to 5.5	n/a	4-wire SPI	-40 to +125	HVQFN40 wettable flanks

GPIO EXPANDERS

Products	Description	No. of Bits	VCC Range	No. of Addresses	Output Mode	Interface	Temperature (Min – Max) (°C)	Package Version
PCA9538	8-bit I²C-bus and SMBus low-power I/O port with interrupt and reset	8	2.3 to 5.5	4	Totem Pole	I²C 400 kHz	-40 to +85	TSSOP16
PCA9704	8-bit, 18 V tolerant SPI GPI with maskable INT	8	4.5 to 5.5	n/a	Open Drain	SPI	-40 to +125	TSSOP16
PCA9539	16-bit I²C-bus and SMBus low-power I/O port with interrupt and reset	16	2.3 to 5.5	4	Totem Pole	I²C 400 kHz	-40 to +85	TSSOP24
PCA9539R	16-bit I²C-bus and SMBus low-power I/O port with interrupt and reset that only resets the I²C state machine/interface and not the IO Port registers so control of the output signals are not affected if the device is hardware reset should the I²C bus hang	16	2.3 to 5.5	4	Totem Pole	I²C 400 kHz	-40 to +85	TSSOP24
PCA9703	16-bit, 18 V tolerant SPI GPI with maskable INT	16	4.5 to 5.5	n/a	Open Drain	SPI	-40 to +125	TSSOP24
PCAL9714*	Ultra low-voltage translating 14-bit SPI I/O expander with Agile I/O features, interrupt output and reset	14	1.1 to 5.5	n/a	Totem Pole and Open Drain	SPI	-40 to +125	HVQFN24 wettable flanks
PCAL9722*	Ultra low-voltage translating 22-bit SPI I/O expander with Agile I/O features, interrupt output and reset	22	1.1 to 5.5	n/a	Totem Pole and Open Drain	SPI	-40 to +125	HVQFN32 wettable flanks

LEVEL TRANSLATORS

Products	Description	Number of Bits	VCCA Range	VCCB Range	Data Rate (typ) Mb/s	One Shot	Buffer	Temperature (Min – Max) (°C)	Package Version
NTB0102	Dual-supply translating transceiver; auto direction sensing; 3-state	2	1.2 to 3.6	1.65 to 5.5	100	No	Yes	-40 to +125	TSSOP8
NTB0104	Dual-supply translating transceiver; auto direction sensing; 3-state	4	1.2 to 3.6	1.65 to 5.5	100	No	Yes	-40 to +125	WLCSP12, DHVQFN14
NTS0102	Dual-supply translating transceiver; open drain; rise time accelerator	2	1.65 to 3.6	2.3 to 5.5	50	Yes	No	-40 to +125	TSSOP8, XSON8
NTS0104	Dual-supply translating transceiver; open drain; rise time accelerator	4	1.65 to 3.6	2.3 to 5.5	50	Yes	No	-40 to +125	DHVQFN14, TSSOP14

ANALOG SWITCH/MUX/BRIDG

Products	Description	Voltage Range	Interface	Temperature (Min – Max) (°C)	Package Version
NX3DV2567HR-Q100	four-pole double-throw analog switch	1.4 to 4.3	Analog Switch	-40 to +125	HXQFN16(U)
NX3L4051PW-Q100	single-pole, octal-throw analog switch	1.4 to 4.3	Analog Switch	-40 to +125	TSSOP16
NX3L4053PW-Q100	triple single-pole, double-throw analog switch	1.4 to 4.3	Analog Switch	-40 to +125	TSSOP16
PCA9540BDP/Q900	2 channel I2C-bus multiplexer	2.3 to 5.5	I²C 400 kHz	-40 to +105	TSSOP8
SC16IS740IPW/Q900	Single UART with I2C-bus/SPI interface, 64 bytes of transmit and receive FIFOs, IrDA SIR built-in support	2.3 to 3.6	UART to I²C 400 kHz or SPI 4 Mbit/s	-40 to +95	TSSOP16

* In development with release planned 4Q 2022