

# System management I<sup>2</sup>C selector guide 2016

A broad catalog of interface components  
for all your design needs

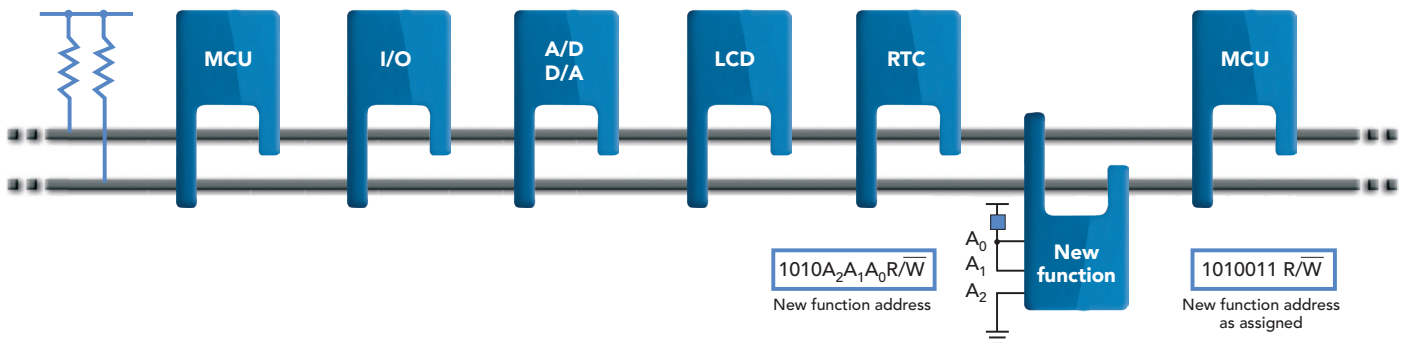
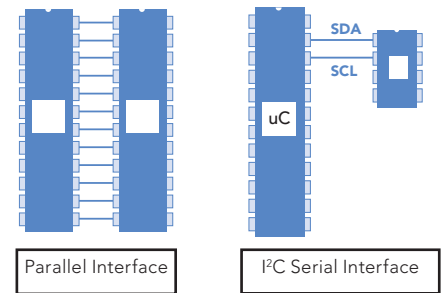


# I<sup>2</sup>C-bus: The serial revolution

By replacing complex parallel interfaces with a straightforward yet powerful serial structure, the I<sup>2</sup>C-bus revolutionized chip-to-chip communications.

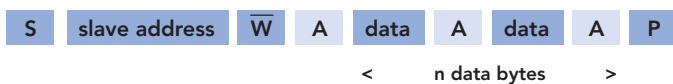
Invented by NXP (Philips) more than 30 years ago, the I<sup>2</sup>C-bus uses a simple two-wire format to carry data one bit at a time. It performs inter-chip addressing, selection, control, and data transfer. Speeds are up to 400 kHz (Fast-mode), 1 MHz (Fast-mode Plus), 3.4 MHz (High Speed-mode), or 5 MHz (Ultra Fast-mode).

The I<sup>2</sup>C-bus shrinks the IC footprint and leads to lower IC costs. Plus, since far fewer copper traces are needed, it enables a smaller PCB, reduces design complexity, and lowers system cost.

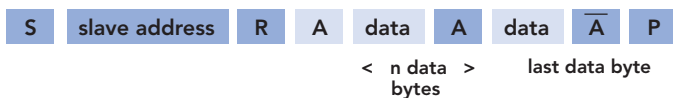


I<sup>2</sup>C-bus devices are available in a wide range of functions. Each slave device has its own I<sup>2</sup>C-bus address, selectable using address pins set high (1) or low (0). Information is transmitted byte by byte, and each byte is acknowledged by the receiver. There can be multiple devices on the same bus, and more than one IC can act as master. The master role is typically played by a microcontroller.

## Write data

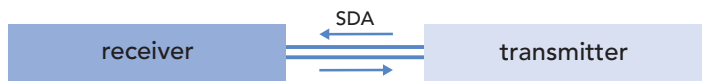


## Read data



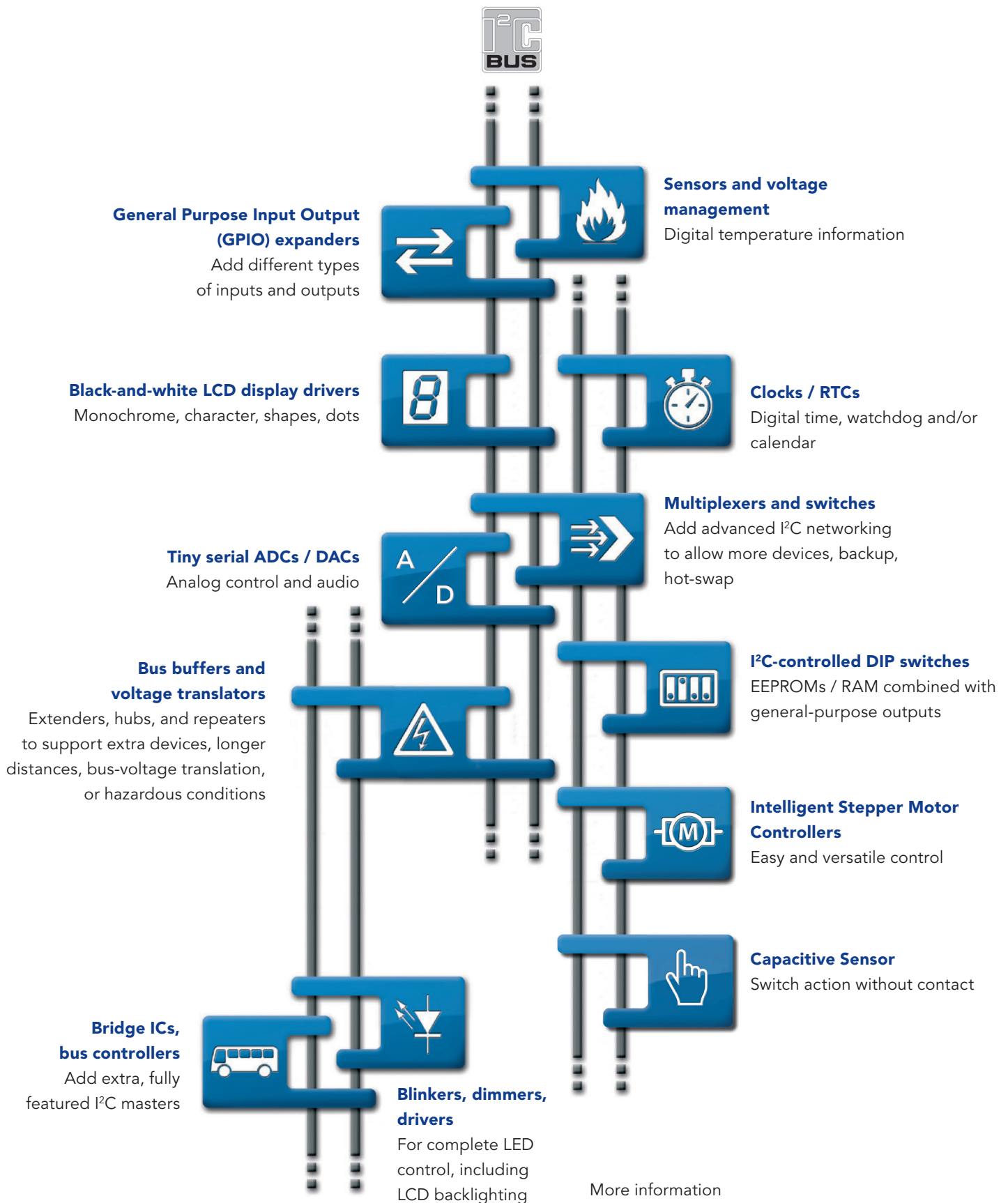
S = Start condition     $\overline{R/W}$  = read/write  
A = Acknowledge     $\overline{A}$  = Not acknowledge    P = Stop condition

## Master





The master always sends the clock


NXP's I<sup>2</sup>C peripherals portfolio is grouped into twelve families, one for each of the most common, everyday design concerns.





# I<sup>2</sup>C-bus product summary


GPIO Expander	
4-bit	PCA9536 4-bit I <sup>2</sup> C Fm TP GPIO with PU
	PCA9537 4-bit I <sup>2</sup> C Fm TP GPIO with INT and RST
	PCA9570 4-bit 1 MHz LV TP GPO
8-bit	PCA8574 8-bit I <sup>2</sup> C Sm QB GPIO with INT and PU
	PCF8574 8-bit I <sup>2</sup> C Fm QB GPIO with INT and PU
	PCA8574A 8-bit I <sup>2</sup> C Fm QB GPIO with INT and PU (Alternate address)
	PCF8574A 8-bit I <sup>2</sup> C Sm QB GPIO with INT and PU (Alternate address)
	PCA9500 8-bit I <sup>2</sup> C Fm QB GPIO with PU and 2-K EEPROM
	PCA9501 8-bit I <sup>2</sup> C Fm QB GPIO with INT, PU and 2-K EEPROM
	PCA9502 8-bit I <sup>2</sup> C Fm/SPI TP GPIO with INT and RST
	PCA9534 8-bit I <sup>2</sup> C Fm TP GPIO with INT
	+ PCA9538 8-bit I <sup>2</sup> C Fm TP GPIO with INT and RST
	PCA9538A 8-bit I <sup>2</sup> C Fm LV TP GPIO with INT and RST
	PCAL9538A 8-bit I <sup>2</sup> C Fm LV TP/OD GPIO with INT, RST, latch and PU/PD
	PCA6408A 8-bit I <sup>2</sup> C Fm LV VLT TP GPIO with INT and RST
	PCAL6408A 8-bit I <sup>2</sup> C Fm LV VLT TP/OD GPIO with INT, RST, latch and PU/PD
	PCA9554 8-bit I <sup>2</sup> C Fm TP GPIO with INT and PU
	PCA9554A 8-bit I <sup>2</sup> C Fm TP GPIO with INT and PU (alternate address for PCA9554)
	PCA9554B 8-bit I <sup>2</sup> C Fm LV TP GPIO with INT and PU
	PCAL9554B 8-bit I <sup>2</sup> C Fm LV TP/OD GPIO with INT, latch and PU/PD (PU default)
	PCA9554C 8-bit I <sup>2</sup> C Fm LV TP GPIO with INT and PU (alternate address for PCA9554B)
	PCAL9554C 8-bit I <sup>2</sup> C Fm LV TP/OD GPIO with INT, latch and PU/PD (PU default) (alternate address for PCAL9554B)
	PCA9557 8-bit I <sup>2</sup> C Fm TP GPIO with RST
	PCA9571 8-bit 1 MHz LV TP GPO
	PCA9574 8-bit I <sup>2</sup> C Fm LV VLT TP/OD GPIO with INT, RST, latch and PU/PD
	PCA9670 8-bit I <sup>2</sup> C Fm+ QB GPIO with RST and PU
	PCA9672 8-bit I <sup>2</sup> C Fm+ QB GPIO with INT, RST and PU
	PCA9674 8-bit I <sup>2</sup> C Fm+ QB GPIO with INT and PU
	PCA9674A 8-bit I <sup>2</sup> C Fm+ QB GPIO with INT and PU (Alternate address)
	PCA9701 8-bit SPI 18V GPI with INT
	PCA9703 8-bit SPI 18V GPI with maskable INT
16-bit	PCA8575 16-bit I <sup>2</sup> C Fm QB GPIO with INT and PU
	PCF8575 16-bit I <sup>2</sup> C Fm QB GPIO with INT and PU
	PCF8575C 16-bit I <sup>2</sup> C Fm OD GPIO with INT
	PCA9535 16-bit I <sup>2</sup> C Fm TP GPIO with INT
	PCA9535C 16-bit I <sup>2</sup> C Fm OD GPIO with INT
	PCA9535A 16-bit I <sup>2</sup> C Fm LV TP GPIO with INT
	PCAL9535A 16-bit I <sup>2</sup> C Fm LV TP/OD GPIO with INT, latch and PU/PD
	+ PCA9539 16-bit I <sup>2</sup> C Fm TP GPIO with INT and RST
	PCA9539R 16-bit I <sup>2</sup> C Fm TP GPIO with INT and RST (state machine only)
	PCA9539A 16-bit I <sup>2</sup> C Fm LV TP GPIO with INT and RST
	PCAL9539A 16-bit I <sup>2</sup> C Fm LV TP/OD GPIO with INT, RST, latch and PU/PD
	PCA6416A 16-bit I <sup>2</sup> C Fm LV VLT TP GPIO with INT and RST
	PCAL6416A 16-bit I <sup>2</sup> C Fm LV VLT TP/OD GPIO with INT, RST, latch and PU/PD
	PCA9555 16-bit I <sup>2</sup> C Fm TP GPIO with INT and PU
	PCA9555A 16-bit I <sup>2</sup> C Fm LV TP GPIO with INT and PU
	PCAL9555A 16-bit I <sup>2</sup> C Fm LV TP/OD GPIO with INT, latch and PU/PD (PU default)
	PCA9575 16-bit I <sup>2</sup> C Fm LV VLT TP/OD GPIO with INT, RST, latch and PU/PD
	PCA9671 16-bit I <sup>2</sup> C Fm+ QB GPIO with RST and PU
	PCA9673 16-bit I <sup>2</sup> C Fm+ QB GPIO with INT, RST and PU
	PCA9675 16-bit I <sup>2</sup> C Fm+ QB GPIO with INT and PU
	PCA9702 16-bit SPI 18V GPI with INT
	PCA9704 16-bit SPI 18V GPI with maskable INT
24-bit	PCA6524 24-bit ULV GPIO with Agile I/O Plus Features
40-bit	PCA9505 40-bit I <sup>2</sup> C Fm TP GPIO with INT, RST, OE and PU
	PCA9506 40-bit I <sup>2</sup> C Fm TP GPIO with INT, RST and OE
	PCA9698 40-bit I <sup>2</sup> C Fm+ TP/OD GPIO with INT, RST, OE and PU

Stepper Motor Controller	
1 motor controller	PCA9629A Improved I <sup>2</sup> C Fm+ Stepper Motor Controller with TP GPIO with INT and RST


Capacitive Sensor	
1-channel touch switch	PCA8883 I <sup>2</sup> C Fm+ Touch / Proximity Sensor for one switch
2-channel touch switch	PCA8886 I <sup>2</sup> C Fm+ Touch / Proximity Sensor for two switches
8-channel touch switch	+ PCA/PCF8885 I <sup>2</sup> C Fm+ Touch / Proximity Sensor for up to 28 keys

Temp sensors	
Local	LM75B I <sup>2</sup> C Fm TS local with $\pm 2$ °C accuracy and SMBus time-out
	SE95 I <sup>2</sup> C Fm TS local with $\pm 1$ °C accuracy (NRND)
	SE98A I <sup>2</sup> C FmDDR TS, no SPD, +/- 1°C accuracy and SMBus time-out
	PCT2075 I <sup>2</sup> C Fm+ TS with +/- 1°C accuracy and SMBus time-out
	PCT2202 I <sup>2</sup> C HSm TS, 1.8 V, +/- 1°C accuracy and SMBus time-out
Local and EEPROM	SE97B I <sup>2</sup> C Fm DDR TS local with $\pm 1$ °C accuracy, 2K SPD and SMBus time-out
Local and remote	NE1617A I <sup>2</sup> C Fm TS local with $\pm 2$ °C accuracy and remote with $\pm 3$ °C accuracy
	SA56004 I <sup>2</sup> C Fm TS local with $\pm 2$ °C accuracy and remote with $\pm 1$ °C accuracy

LED controllers	
Dimmer (2 PWM, 25 mA / 5 V)	PCA9530 2-channel I <sup>2</sup> C Fm OD LED dimmer with RST
	PCA9531 8-channel I <sup>2</sup> C Fm OD LED dimmer with RST
	PCA9532 16-channel I <sup>2</sup> C Fm OD LED dimmer with RST
	PCA9533 4-channel I <sup>2</sup> C Fm OD LED dimmer
Blinker (2 PWM, 25 mA / 5 V)	PCA9550 2-channel I <sup>2</sup> C Fm OD LED blinker with RST
	PCA9551 8-channel I <sup>2</sup> C Fm OD LED blinker with RST
	PCA9552 16-channel I <sup>2</sup> C Fm OD LED blinker with RST
	PCA9553 4-channel I <sup>2</sup> C Fm OD LED blinker
Controller (PWM / Ch, 25 mA / 5 V)	PCA9632 4-channel I <sup>2</sup> C Fm+ low-power TP LED controller
	PCA9633 4-channel I <sup>2</sup> C Fm+ TP LED controller with OE
	PCA9634 8-channel I <sup>2</sup> C Fm+ TP LED controller with OE
	+ PCA9635 16-channel I <sup>2</sup> C Fm+ TP LED controller with OE
	+ PCA9685 16-channel I <sup>2</sup> C Fm+ TP LED controller with 12-bit PWMs and OE
Controller (PWM/Ch, 57 mA / 20 V)	+ PCA9955B 16-channel I <sup>2</sup> C Fm+ 20 V CS LED controller
	+ PCA9745B 16-channel SPI 20 V CS LED Controller
	PCA9956B 24-channel I <sup>2</sup> C Fm+ 20 V CS LED controller
Controller (PWM / Ch, 57 mA / 40 V)	+ PCA9952 16-channel I <sup>2</sup> C Fm+ HV CS LED controller with OE
	+ PCA9955 16-channel I <sup>2</sup> C Fm+ HV CS LED controller
Controller (PWM / Ch, 100 mA / 20 V)	PCA9655A 16-channel I <sup>2</sup> C Fm+ 20 V OD LED Controller
Controller (PWM / Ch, 100 mA / 40 V)	PCA9624 8-channel I <sup>2</sup> C Fm+ HV OD LED controller with OE
	PCA9622 16-channel I <sup>2</sup> C Fm+ HV OD LED controller with OE
	PCA9626 24-channel I <sup>2</sup> C Fm+ HV OD LED controller with OE

Real-time clocks		
Low-power	PCF85063	I <sup>2</sup> C Fm / Tiny RTC with 30s, 60s interrupt
	PCF85063A	I <sup>2</sup> C Fm / Tiny RTC with Alarm and 30s, 60s interrupt
	PCF85263A	I <sup>2</sup> C Fm / Tiny RTC with Alarms, time stamp and battery back-up switch
	PCF85363A	I <sup>2</sup> C Fm / Tiny RTC with Alarms, time stamp and battery back-up switch + 64Byte RAM
	PCF8523	I <sup>2</sup> C Fm+ Ultra low-power RTC with loss of main power detection and automatic battery back-up
	PCF8563	I <sup>2</sup> C Fm low-power clock/calendar
Automotive High temperature	+PCA85063A	I <sup>2</sup> C Fm / Tiny RTC with Alarm and 30s, 60s interrupt -40°C...+105°C
	+PCA8565	I <sup>2</sup> C Fm High temperature clock/calendar -40°C...+125°C
	+PCA2129	I <sup>2</sup> C Fm High-accuracy, low voltage RTC with time stamp -40°C...+85°C
Temperature compensated high accuracy	PCF2127(A)	I <sup>2</sup> C Fm High-accuracy, low-voltage RTC with time stamp and 512 x 8 RAM
	PCF2129(A)	I <sup>2</sup> C Fm High-accuracy, low voltage RTC with time stamp

Muxes and switches		
2-channel	PCA9540B	2-channel I <sup>2</sup> C Fm mux
	PCA9542A	2-channel I <sup>2</sup> C Fm mux with INT
	PCA9543A/B	2-channel I <sup>2</sup> C Fm switch with INT and RST
2-to-1 demux	PCA9541A/01	2 to 1 I <sup>2</sup> C Fm demux with INT and RST (channel 0 default)
	PCA9541A/03	2 to 1 I <sup>2</sup> C Fm demux with INT and RST (no channel default)
4-channel	PCA9544A	4-channel I <sup>2</sup> C Fm mux with INT
	PCA9545A/B/C	4-channel I <sup>2</sup> C Fm switch with INT and RST (B alternate address)
	PCA9546A	4-channel I <sup>2</sup> C Fm switch with RST
	PCA9846	ULV 4-channel switch with RST, two power supplies
	PCA9849	ULV 4-channel mux with RST, two power supplies
8-channel	PCA9547	8-channel I <sup>2</sup> C Fm mux with RST (channel 0 default)
	PCA9847	ULV 8-channel mux with RST, two power supplies
	PCA9548A	8-channel I <sup>2</sup> C Fm switch with RST
	PCA9848	ULV 8-channel switch with RST, two power supplies
Arbiter	PCA9641	2 masters to shared slave I <sup>2</sup> C Fm+ arbiter with INT and RST (no channels selected at default)

Bus buffers		
Incremental Offset	PCA9510A	I <sup>2</sup> C Fm Incremental Offset hot-swap bus buffer (no RTA)
	PCA9511A	I <sup>2</sup> C Fm Incremental Offset hot-swap-bus buffer
	PCA9512A	I <sup>2</sup> C Fm Incremental Offset VLT hot swap bus buffer
	PCA9513A	I <sup>2</sup> C Fm Incremental Offset hot-swap bus buffer (92 µA CS)
	PCA9514A	I <sup>2</sup> C Fm Incremental Offset hot-swap bus buffer (0.8 V offset)
Differential Driver with Static Offset (1 side)	PCA9614	I <sup>2</sup> C Fm+ VLT differential (4 wire) bus buffer
	PCA9615	I <sup>2</sup> C Fm+ VLT differential (4 wire) hot-swap bus buffer
	PCA9616	I <sup>2</sup> C Fm+ 0.8V LV VLT differential (4 wire) hot-swap bus buffer with INT (2 wire)
Amplifier	P82B715	I <sup>2</sup> C Fm HV bus extender
No Offset	PCA9646	4-channel I <sup>2</sup> C Fm+ No Offset buffer / switch with RST
Static Offset (1 side)	P82B96	I <sup>2</sup> C Fm HV bus buffer
	PCA9507	I <sup>2</sup> C Fm VLT DDC buffer with accelerator
	PCA9508	I <sup>2</sup> C Fm VLT hot-swap bus repeater
	PCA9509	I <sup>2</sup> C Fm 1.0V LV VLT bus buffer with current source
	PCA9509A	I <sup>2</sup> C Fm 0.8V LV VLT bus buffer with current source
	PCA9509P	I <sup>2</sup> C Fm 0.8V LV VLT bus buffer
	PCA9517A	I <sup>2</sup> C Fm 0.9V LV VLT bus repeater
	PCA9519	4-channel version of PCA9509
	PCA9527	I <sup>2</sup> C Fm DDC VLT buffer with accelerator and CEC
	PCA9600	I <sup>2</sup> C Fm+ HV bus buffer
	PCA9601	I <sup>2</sup> C Fm+ HV bus buffer with stronger 15 mA local side drive to support multiple Fm+ slaves
	PCA9617A	I <sup>2</sup> C Fm+ 0.8 V LV VLT bus repeater
	PCA9515A	I <sup>2</sup> C Fm bus repeater
	PCA9516A	I <sup>2</sup> C Fm 5-channel hub
Static Offset (All sides)	PCA9518A	I <sup>2</sup> C Fm expandable 5-channel hub
	GTL2000	22-bit I <sup>2</sup> C Fm+ VLT
	GTL2002	2-bit I <sup>2</sup> C Fm+ VLT
	GTL2003	8-bit I <sup>2</sup> C Fm+ VLT
	GTL2010	10-bit I <sup>2</sup> C Fm+ VLT
	PCA9306	Dual I <sup>2</sup> C/SMBus Fm+ VLT
	NVT2001	1-bit I <sup>2</sup> C Fm+ VLT
	NVT2002	2-bit I <sup>2</sup> C Fm+ VLT for I <sup>2</sup> C/SMBus applications
	NVT2003	3-bit I <sup>2</sup> C Fm+ VLT for two power supply applications
	NVT2006	6-bit I <sup>2</sup> C Fm+ VLT
	NVT2008	8-bit I <sup>2</sup> C Fm+ VLT
	NVT2010	10-bit I <sup>2</sup> C Fm+ VLT
Voltage translator (doesn't isolate capacitance)		


## Decode table

Code	Description
Sm	100 kHz Standard-mode I <sup>2</sup> C-bus
Fm	400 kHz Fast-mode I <sup>2</sup> C-bus
Fm+	1 MHz Fast-mode Plus I <sup>2</sup> C-bus
HSm	3.4 MHz High Speed-mode I <sup>2</sup> C-bus
UFm	5 MHz Ultra Fast-mode I <sup>2</sup> C-bus
+	AEC-Q100 compliance
GPIO	General Purpose I/O Expander
TS	Thermal Sensor
RTC	Real Time Clock
LCD	Liquid Crystal Display


Code	Description
DAC	Digital Analog Converter
ADC	Analog Digital Converter
LV	Supply voltage < 2.3 V
VLV	Supply voltage < 1.65 V
ULV	Supply voltage < 1.0 V
HV	Outputs >10 V
VLT	Voltage Level Translator – 2 Supplies
TP	Totem-pole (push-pull)
QB	Quasi-bidirectional
OD	Open drain

Code	Description
CS	Current source
INT	Interrupt
RST	Reset
OE	Output enable
Latch	Input latch
PU	Pull-up resistors
PU/PD	Pull-up/pull-down resistors
COG	Chip on Glass




LCD drivers		
Segment driver	PCA8561A/B	I <sup>2</sup> C Fm 72-segment low-power LCD driver in HVQFN32 package
	PCF8566	I <sup>2</sup> C Fm 96-segment low-power LCD driver in VSO40 package
	PCA/PCF85162	I <sup>2</sup> C Fm 128-segment LCD driver in TSSOP48 package
	PCA85262	I <sup>2</sup> C Fm 128-segment LCD driver with higher frame frequency in TSSOP48 package
	PCA/PCF8551A/B	I <sup>2</sup> C Fm 144-segment low-power LCD driver with programmable frame frequency in TSSOP48 package
	PCA/PCE/PCF85176	I <sup>2</sup> C Fm 160-segment LCD driver in TSSOP56 or TQFP64 package
	PCA85276	I <sup>2</sup> C Fm 160-segment LCD driver with higher frame frequency in TSSOP56 package
	PCA/PCF8553A/B	I <sup>2</sup> C Fm 160-segment low-power LCD driver with programmable frame frequency in TSSOP56 package
	PCA8546	I <sup>2</sup> C Fm 176-segment LCD driver with programmable frame frequency in TSSOP56 package
	PCA8547	I <sup>2</sup> C Fm 176-segment LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation in TQFP64 package
	PCA/PCF85134	I <sup>2</sup> C Fm 240-segment LCD driver in LQFP80 package
	PCA8543	I <sup>2</sup> C Fm 240-segment LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation in LQFP80 package
	PCF8545	I <sup>2</sup> C Fm 320-segment LCD driver with programmable frame frequency in TSSOP56 package
	PCA/PCF8536	I <sup>2</sup> C Fm 320-segment LCD driver with programmable frame frequency and LED backlight PWM control in TSSOP56 package
	PCA/PCF8537	I <sup>2</sup> C Fm 352-segment LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation in TQFP64 package
	PCA9620	I <sup>2</sup> C Fm 480-segment LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation in LQFP80 package
	PCA/PCF8576D/E	I <sup>2</sup> C Fm 160-segment COG LCD driver
	PCA8576F	I <sup>2</sup> C Fm 160-segment COG LCD driver with higher frame frequency and higher VLCD
	PCA/PCE/PCF85133	I <sup>2</sup> C Fm 320-segment COG LCD driver with selectable frame frequency
	PCA85233	I <sup>2</sup> C Fm 320-segment COG LCD driver with higher selectable frame frequency
Character drivers	PCA8530	I <sup>2</sup> C Fm 408-segment COG LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation
	PCA/PCF85132	I <sup>2</sup> C Fm 640-segment COG LCD driver with programmable frame frequency
	PCA85232	I <sup>2</sup> C Fm 640-segment COG LCD driver with higher programmable frame frequency
Graphic driver	PCA/PCF8538	I <sup>2</sup> C Fm 918-segment COG LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation
	PCF2119	I <sup>2</sup> C Fm 2 x 16 characters + 160-icon COG LCD driver with charge pump, VLCD temperature compensation
	PCF21219	I <sup>2</sup> C Fm 2 x 16 characters + 160-icon COG LCD driver with higher frame frequency, charge pump, VLCD temperature compensation
	PCA2117	I <sup>2</sup> C Fm 2 x 20 characters + 200-icon COG LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation
	PCA8539	I <sup>2</sup> C Fm 18 x 100-pixel COG LCD driver with programmable frame frequency, charge pump, VLCD temperature compensation
	PCF8531	I <sup>2</sup> C Fm 34 x 128-pixel COG LCD driver with charge pump, VLCD temperature compensation
	PCF8578	I <sup>2</sup> C Sm 8x32 dot matrix LCD driver
	PCF8579	I <sup>2</sup> C Sm, up to 40,960 dots when combined with 32x PCF3278


A/D-D/A converters			
8-bit ADC	PCF8591	I <sup>2</sup> C Fm 4-channel ADC and 1-channel DAC	

EEPROMs			
2-kbit	PCA9500	I <sup>2</sup> C Fm 256 x 8-bit EEPROM	
	PCA9501	I <sup>2</sup> C Fm 256 x 8-bit EEPROM	
	PCF85103C	I <sup>2</sup> C Sm 256 x 8-bit EEPROM (No programming time control output with ALT address)	
	PCF8570	I <sup>2</sup> C Sm 256 x 8-bit RAM	
4-kbit	PCF8594C	I <sup>2</sup> C Sm 1024 x 8-bit EEPROM	
8-kbit	PCA24S08A	I <sup>2</sup> C Fm 1024 x 8-bit EEPROM with access protection	
	NT3H1101W0F	I <sup>2</sup> C Fm 888 bytes EEPROM with dual interface NFC tag IC with power harvesting and field detect	
DIP switch	PCA8550	I <sup>2</sup> C Fm 4-bit 1-of-2 mux & 5-bit EEPROM	
	PCA9558	I <sup>2</sup> C Fm 5-bit MP/1-bit latch & 6-bit EEPROM with 2K EEPROM and 8-bit GPIO	
	PCA9559	I <sup>2</sup> C Fm 5-bit mux/1-bit latch & 6-bit EEPROM	
	PCA9560	I <sup>2</sup> C Fm 2 x 5-bit mux/1-bit latch & 6-bit EEPROM	
	PCA9561	I <sup>2</sup> C Fm 4 x 6-bit mux & 6-bit EEPROM	

Bridge and bus controllers			
Bridge	SC16IS740	I <sup>2</sup> C Fm/SPI-to-UART bridge with IrDA	
	SC16IS741	I <sup>2</sup> C Fm/SPI-to-UART bridge with IrDA	
	SC16IS750	I <sup>2</sup> C Fm/SPI-to-UART bridge with IrDA and GPIO	
	SC16IS752	I <sup>2</sup> C Fm/SPI-to-DUART bridge with IrDA and GPIO	
	SC16IS760	I <sup>2</sup> C Fm/SPI-to-UART bridge with IrDA and GPIO	
	SC16IS762	I <sup>2</sup> C Fm/SPI-to-DUART bridge with IrDA and GPIO	
	SC18IM700	UART-to-I <sup>2</sup> C Fm master bridge with GPIO	
	SC18IS600	SPI-to-I <sup>2</sup> C Fm master bridge, 4 M with GPIO	
	SC18IS602	I <sup>2</sup> C Fm slave-to-SPI master bridge	
Controller	PCF8584	I <sup>2</sup> C Sm bus controller with bus snoop	
	PCA9564	I <sup>2</sup> C Fm bus controller	
	PCA9661	1-channel I <sup>2</sup> C Fm+ bus controller with 4 K-byte buffer	
	PCA9663	3-channel I <sup>2</sup> C Fm+ bus controller with 4 K-byte buffer per channel	
	PCA9665	I <sup>2</sup> C Fm+ bus controller with 68-byte buffer	
	PCA9665A	I <sup>2</sup> C Fm+ bus controller with 68-byte buffer and restart condition fix	
	PCU9669	1-channel Fm+ and 2-channel U <sup>2</sup> C Fm bus controller with 4 K-byte buffer per channel	

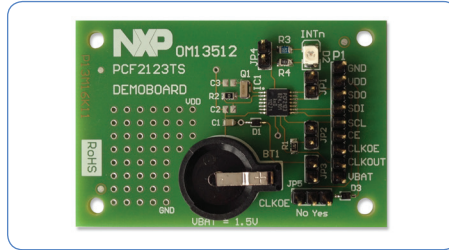
Level transceivers			
GTL to LVTTTL converters	GTL2005	4-bit GTL/GTL+ to LVTTTL/TTL bi-directional non-latched translator	
	GTL2006	13-bit GTL-/GTL/GTL+ to LVTTTL translator	
	GTL2007	12-bit GTL to LVTTTL translator	
	GTL2008	12-bit GTL to LVTTTL translator high-impedance LVTTTL and GTL outputs	
	GTL2012	2-bit LVTTTL to GTL transceiver	
	GTL2014	4-bit LVTTTL to GTL transceiver	
	GTL2018	8-bit LVTTTL to GTL transceiver	
	GTL2034	4-bit GTL to GTL buffer	
	GTL2107	12-bit GTL-/GTL/GTL+ to LVTTTL translator	

Demo boards		
Bridges	OM6270	SPI/I <sup>2</sup> C to UART Bridge demo board (SC16IS750 / SC16IS760)
	OM6271	SPI to I <sup>2</sup> C Master Bridge demo board (SC18IS600)
	OM6272	UART to I <sup>2</sup> C Master Bridge demo board (SC18IM700)
	OM6273	SPI/I <sup>2</sup> C to dual UART/IRDA/GPIO demo board (SC16IS752/SC16IS762)
	OM6274	I <sup>2</sup> C to SPI Master Bridge demo board (SC18IS602)
Fm+ universal	OM13257	Universal temperature sensor daughter card for Fm+ demo board
	OM13320	Fm+ demonstration kit, including GPIO target board, buffer board and bridge board
	OM13488	Fm+ demonstration kit universal 8-bit GPIO daughter card
	OM13489	Fm+ demonstration kit universal 16-bit GPIO daughter card
	OM13529	Fm+ demonstration kit universal 24-bit GPIO daughter card
	OM13491	Breakout board panel A VSSOP8, XQFN8, HWSON8, MSOP8
	OM13492	Breakout board panel B various 6, 8, & 10-pin packages
	OM13493	Breakout board panel C DHVQFN 24, 20, 16, 14
	OM13494	Breakout board panel D HVQFN 14, 16, 20, 24
	OM13495	Breakout board panel E TSSOP 14, 16, 20, 24
I <sup>2</sup> C-2005 board	OM13496	Breakout board panel F TSSOP28, XQFN16, QSOP16, XFBGA16
	OM13497	Breakout board panel G HTSSOP28, VFBGA24, XFBGA24
	OM6275	I <sup>2</sup> C 2005-1 evaluation board
	OM6281	PCA9698 daughter card for I <sup>2</sup> C 2005-1
LCD driver	OM6282	PCA9633 daughter card for I <sup>2</sup> C 2005-1
	OM6293	PCA9600 daughter card for I <sup>2</sup> C 2005-1
	OM6290	LCD driver evaluation board PCF8576D, PCF2119, PCF8531, PCA9633
	OM6292	PCA21125, PCF8562 demo board
	OM13500	PCA9620 demo board
	OM13500A	PCF8537 and PCA8537 demo board
	OM13501	PCF8538 and PCA8538 demo board
	OM13501A	PCF8538 and PCA8538 evaluation board
Touch and capacitive sensor	OM13502 <sup>1)</sup>	PCA2117 demo board
	OM13503 <sup>1)</sup>	PCA8539 demo board
	OM11056	2 x PCF8885 evaluation board 16-channel touch switch for design support
RTC	OM11057	PCF8885/PCF8886 capacitive sensors and PCF8536 LCD/LED driver demoboard
	OM11057A	OM11057 add-on board with high sensitivity slider
	OM11059A	PCF85063TP & PCF85063ATL evaluation board
	OM13510	PCF85263 evaluation board
	OM13511	PCF8523 evaluation board
	OM13513	PCF2127 & PCF2129AT evaluation board
	OM13514	PCF85363 evaluation board
	OM13515	PCF85063AT evaluation board

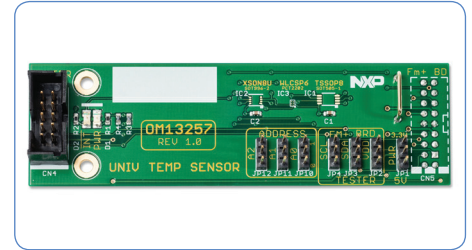
Demo boards		
USB	OM13518	USB-I <sup>2</sup> C-bus dongle
Misc	OM13285	PCA9629 I <sup>2</sup> C stepper motor demo board and kit
	OM13313	TDA5051A PLM demo board kit
	OM13314	TDA5051A Master/Slave lighting demo kit
Voltage level translator	OM13315	NVT2001GM demo board, single channel bi-directional voltage level translator
	OM13317	NVT2008PW demo board, 8-channel bi-directional voltage level translator
	OM13318	NVT2002DP demo board, dual channel bi-directional voltage level translator
	OM13319	NVT2003DP demo board, 3-channel bi-directional voltage level translator
	OM13323	NVT2006PW demo board, 6-channel bi-directional voltage level translator
LED driver	OM13324	NVT2010PW demo board, 10-channel bi-directional voltage level translator
	OM6277	PCA9564 evaluation board
	OM6282	PCA9633 LED dimmer 4-channel voltage switch demo board I <sup>2</sup> C Fm+
	OM13269	PCA9632 LED 4-channel demo board
	OM13321	PCA9956A LED dimmer 24-channel constant current demo board I <sup>2</sup> C Fm+
	OM13327	PCA9634 LED 8-channel demo board
	OM13329	PCA9952 demo board, LED dimmer 16-channel constant current demoboard I <sup>2</sup> C Fm+ (with output enable)
	OM13330	PCA9955 demo board, LED dimmer 16-channel constant current demo board I <sup>2</sup> C Fm+
	OM13332	PCA9685 demo board, 16-channel voltage source with 12-bit PWM demo board I <sup>2</sup> C Fm+
	OM13333	PCA9635 demo board, 16-channel voltage source with 8-bit PWM demo board I <sup>2</sup> C Fm+
	OM13483	PCA9955A/B 16-channel I <sup>2</sup> C Fm+ constant current LED driver demo board
	OM13528	PCA9532 16-channel LED dimmer voltage switch demo board



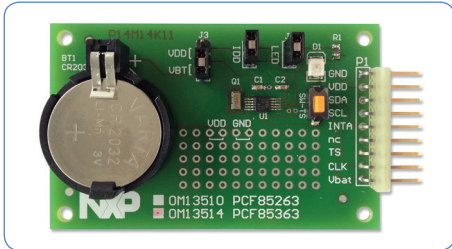
OM11058  
PCA/F8885 TFT touch demo board



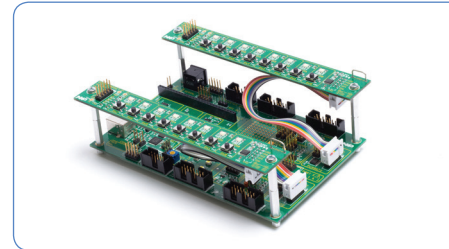
OM13512  
PCF2123 SPI-bus RTC demo board



OM13257  
Temp sensor daughter board



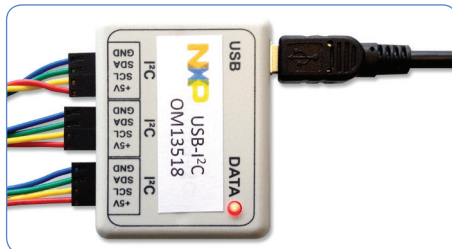
OM13514  
PCF85363A I²C-bus RTC PCF85263/363 interface



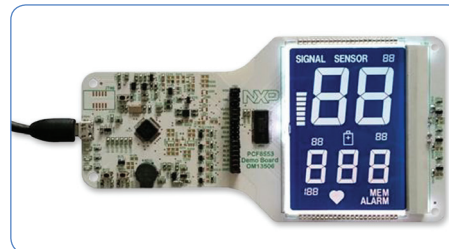
OM13320  
Fm+ development board



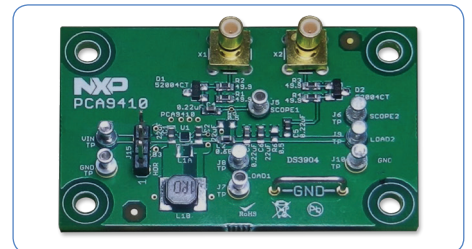
OM13501  
PCA85338 evaluation board



OM13518  
Universal USB to I²C-bus RTC interface dongle



OM13506  
LCD driver demo board



OM13570  
PCA941x evaluation board

Our I²C-bus website ([www.nxp.com/i2c](http://www.nxp.com/i2c)) is a valuable resource for device information and training programs. It gives you direct access to a comprehensive handbook, application notes, information about evaluation kits and training materials, links to application and design support, and more. The I²C Fm+ development boards and daughter cards make it easy to program new peripherals and are a quick way to learn about the I²C-bus protocol.

[www.nxp.com/i2c](http://www.nxp.com/i2c)

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