



**SENSYLINK**

# Product Selection Guide

2024Q1

# Contents

- I2C/SMBus GPIO Expander ..... 1
- I2C/SMBus Switch/Multiplexer/Master Selector ..... 2
- I2C/SMBus Repeater & Hot Swap Buffer ..... 3
- Bus Voltage Level Translator ..... 3
- Digital Temperature Sensor (Local Only) ..... 4
- Digital Temperature Sensor (Local+Remote) ..... 6
- Analog Temperature Sensor ..... 7
- Temperature Switch ..... 7
- Temperature/ Fan Measure and Control ..... 8
- System Temperature/ Voltage/ FanSpeed Monitor ..... 9
- Thermocouple IC ..... 9
- Humidity Sensor ..... 10
- General ADC ..... 11
- High Precision ADC with Voltage, Current, Power Monitor ..... 11



## I2C/SMBus GPIO Expander

Device	VCC (V)	I/O	Supply	Reset	INT	Address	I2C Address	Description	Package
CA9536	1.65 to 5.5	4bit	1	no	no	1	1000001 <sub>R/W</sub>	I2C/SMBus I/O Expander	SOP-8 MSOP-8
CA9534Y	1.65 to 5.5	8bit	1	no	yes	8	0100A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output	TSSOP-16 QFN4x4-16
CA9534AY	1.65 to 5.5	8bit	1	no	yes	8	0111A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output	TSSOP-16 QFN4x4-16
CA9538	1.65 to 5.5	8bit	1	yes	yes	4	11100A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output, Reset	TSSOP-16
CA9554Y	1.65 to 5.5	8bit	1	no	yes	8	0100A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output, Input I/O with internal pull-up	TSSOP-16 QFN4x4-16 QFN3x3-16
CA9554AY	1.65 to 5.5	8bit	1	no	yes	8	0111A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output, Input I/O with internal pull-up	TSSOP-16 QFN4x4-16 QFN3x3-16
CA9557	2.3 to 5.5	8bit	1	yes	no	8	0011A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Reset	TSSOP-16 SOP-16 QFN-4x4-16
CA9535Y	1.65 to 5.5	16bit	1	no	yes	8	0100A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output	TSSOP-24 QFN4x4-24
CA9539Y	1.65 to 5.5	16bit	1	yes	yes	4	11101A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output, Reset	TSSOP-24 QFN4x4-24
CA9555Y	1.65 to 5.5	16bit	1	no	yes	8	0100A2A1A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output, Input I/O with internal pull-up	TSSOP-24 QFN4x4-24
CA6408	1.65 to 5.5	8bit	2	yes	yes	2	010000A0 <sub>R/W</sub>	I2C/SMBus I/O Expander with Interrupt Output, Reset, Voltage-Level Translation	TSSOP-16 QFN3x3-16



## I2C/SMBus Switch/Multiplexer/Master Selector

Device	VCC (V)	M:S	Reset	INT	I <sub>standby</sub>	Address	I2C Address	Description	Package
<b>CA9641Y</b>	2.3 to 3.6	2:1	1	3	100uA	112	A6A5A4A3A2A1A0 <sub>R/W</sub>	2-to-1 I2C/SMBus Master Selector with an Arbiter Function	TSSOP-16
<b>CA9542</b>	1.65 to 5.5	1:2	0	3	1.5uA	8	1110A2A1A0 <sub>R/W</sub>	Bidirectional 2-Channel I2C/SMBus Multiplexer with Interrupt	SOP-14 TSSOP-14
<b>CA9543</b>	1.65 to 5.5	1:2	1	3	1.5uA	4	11100A1A0 <sub>R/W</sub>	Bidirectional 2-Channel I2C/SMBus Switch with Interrupt and Reset	SOP-14 TSSOP-14
<b>CA9544Y</b>	1.65 to 5.5	1:4	0	5	1.5uA	8	1110A2A1A0 <sub>R/W</sub>	Bidirectional 4-Channel I2C/SMBus Multiplexer with Interrupt	SOP-20 TSSOP-20 QFN3x3-20 QFN5x5-20
<b>CA9545Y</b>	1.65 to 5.5	1:4	1	5	1.5uA	4	11100A1A0 <sub>R/W</sub>	Bidirectional 4-Channel I2C/SMBus Switch with Interrupt and Reset	SOP-20 TSSOP-20
<b>CA9546Y</b>	1.65 to 5.5	1:4	1	0	1.5uA	8	11100A1A0 <sub>R/W</sub>	Bidirectional 4-Channel I2C/SMBus Switch with Reset	SOP-16 TSSOP-16 QFN4x4 -16
<b>CA9547</b>	1.65 to 5.5	1:8	1	0	1.5uA	8	11100A1A0 <sub>R/W</sub>	Bidirectional 8-Channel I2C/SMBus Multiplexer with Reset	TSSOP-24 QFN4x4 -24
<b>CA9548Y</b>	1.65 to 5.5	1:8	1	0	1.5uA	8	11100A1A0 <sub>R/W</sub>	Bidirectional 8-Channel I2C/SMBus Switch with Reset	TSSOP-24 QFN4x4 -24

## I2C/SMBus Repeater & Hot Swap Buffer

Device	VCCA (V)	VCCB (V)	Freq (Hz)	CH	Enable	Description	Package
CA9511Y	2.3 to 5.5	/	1M	2	1	Hot-swappable FM+ I2C/SMBus Buffer	SOP-8 MSOP-8
CA9512	2.3 to 5.5	2.3 to 5.5	1M	2	0	Hot-swappable FM+ I2C/SMBus Buffer with Level Shifting	MSOP-8
CA9617Y	0.8 to 5.5	2.2 to 5.5	1M	2	1	Level Translating Fm+ I2C-bus Repeater	SOP-8 MSOP-8 DFN2X3-8

## Bus Voltage Level Translator

Device	VCCA (V)	VCCB(V)	DIR Ctrl	CH	Description	Package
CAG92102FY	0 to 5	0 to 5	AUTO	2bit	2-Bit Bidirectional Voltage-Level Translator with Auto-Direction Sensing for Open-Drain and Push-Pull Applications	MSOP-8 DFN3X4-8 VSSOP-8
CAG94204F	0 to 5	0 to 5	AUTO	4bit	2-Bit Bidirectional Voltage-Level Translator with Auto-Direction Sensing for Open-Drain and Push-Pull Applications	TSSOP-14 QFN2X1.7-12
CAG98108F	0 to 5	0 to 5	AUTO	8bit	2-Bit Bidirectional Voltage-Level Translator with Auto-Direction Sensing for Open-Drain and Push-Pull Applications	TSSOP-20
CAG94104S	1.65 to 3.6	2.3 to 5.5	AUTO	4bit	4-Bit Bidirectional Voltage-Level Translator with Auto-Direction Sensing for Open-Drain and Push-Pull Applications	TSSOP-14
CAG94014GY	3 to 3.6	0.5 to VCC/2	DIR	4bit	4-bit LVTTTL to GTL transceiver	TSSOP-14
CA9306Y	1.2 to 3.3	1.8 to 5.5	AUTO	2bit	Dual Bidirectional I2C Bus and SMBus Voltage-Level Translator	MSOP-8 VSSOP-8

## Digital Temperature Sensor (Local Only)

### High Accuracy

Device	VCC (V)	Interface	Accuracy (°C)	Slave Address	Package
CT1801	1.8 to 5.5	Single-Wire	±0.1	/	CSP-4
CT1711	1.8 to 5.5	S-Wire	±0.1	/	MCLGA 3x3-4
CT7112X	1.4 to 5.5	I2C/SMBus	±0.15	A~H address versions (7)	CSP-4
CT7117	1.4 to 5.5	I2C/SMBus	±0.1	A~H address versions (7)	CSP-4

### I2C/SMBus

Device	VCC (V)	Interface	Accuracy (°C)	Slave Address	Package
CT75/-Q	1.75 to 5.5	I2C/SMBus	±0.5	by setting A0/A1/A2 pins (32)	SOP-8 MSOP-8 DFN-3x3-8 DFN-2x2-8
CT7575	3 to 5.5	I2C/SMBus	±0.4	by setting A0/A1/A2 pins (8)	SOP-8 MSOP-8 DFN-3x3-8
CT7112B	1.75 to 5.5	I2C/SMBus	±0.5	ADDR (4)	DFN-1.6x1.6-6
CT7112C/-Q	1.75 to 5.5	I2C/SMBus	±0.5	ADDR (4)	SOT563-6 SOT-23-6
CT7113	1.4 to 5.5	I2C/SMBus	±1.0	A~H address versions (8)	CSP-4 SOT-23-5
CT7118	1.4 to 5.5	I2C/SMBus	±0.75	ADDR (4)	CSP-6 SOT-23-6
CT7525	1.4 to 5.5	I2C/SMBus	±1.0	A~H address versions (8)	CSP-4

## Single-Wire

Device	VCC (V)	Interface	Accuracy (°C)	Package
CT1820	1.8 to 5.5	Single-Wire	±0.5	SOT-23 TO-92 TO-92S TO-92S-2 MSOP-8
CT1820B	1.8 to 5.5	Single-Wire	±0.5	TO-92 TO-92S-2 SOP-8 MSOP-8
CT1820S	1.8 to 5.5	Single-Wire	±0.5	TO-92
CT1830	2.1 to 5.5	Single-Wire	±0.5	TO-92, SOT-23-3

## Pulse Count

Device	VCC (V)	Interface	Accuracy (°C)	Slave Address	Package
CT1721	1.4 to 5.5	Pulse Count	±0.5	CSP-4 device has 9 slave addresses by setting AD0/AD1 pins.	SOT-23 TO-92S-2 CSP-4 DFN-1.6x0.8-2

## S-Wire

Device	VCC (V)	Interface	Accuracy (°C)	Package
CT1720	1.8 to 5.5	S-Wire*	±1.0	SOT-23 TO-92S

## I3C

Device	VCC (V)	Interface	Accuracy (°C)	Package
CT7511	1.7 to 1.98	I3C	±0.5	CSP-6

## Digital Temperature Sensor (Local+Remote)

Device	VCC (V)	Interface	Accuracy (°C)	Channel	Package
CT7318	1.75 to 5.5	I2C/SMBus	±1.0	1* Local + 1* Remote	SOP-8 MSOP-8 DFN-3x3-8
CT7319	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 1* Remote	SSOP-16
CT7451/-Q	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 1* Remote	DFN-2x2-8
CT7481	1.75 to 5.5	I2C/SMBus	±1.0	1* Local + 2* Remote	MSOP-10
CT7423	1.8 to 5.5	I2C/SMBus	±1.0	1* Local + 3* Remote	SOP-8
CT7424	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 4* Remote	QFN-3x3-16
CT7425	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 5* Remote	QFN-3x3-16
CT7426	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 6* Remote	QFN-3x3-16
CT7427	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 7* Remote	QFN-3x3-16
CT7428	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 8* Remote	QFN-3x3-16
CT7468	1.7 to 5.5	I2C/SMBus	±1.0	1* Local + 8* Remote	QFN-3x3-16
CT7431/A	2.7 to 5.5	I2C/SMBus	±1.0	1* Local + 1* Remote	MSOP-8 DFN-3x3-8
CT7432/A	2.7 to 5.5	I2C/SMBus	±1.0	1* Local + 2* Remote	MSOP-10 DFN-3x3-10
CT7433/A	2.7 to 5.5	I2C/SMBus	±1.0	1* Local + 3* Remote	MSOP-10 DFN-3x3-10
CT7453/A	2.7 to 5.5	I2C/SMBus	±1.0	1* Local + 3* Remote	MSOP-10 DFN-3x3-10

## Analog Temperature Sensor

Device	VCC (V)	Interface	Accuracy (°C)	Slope Gain (mV/°C)		Package
CT7035/-Q	1.8 to 5.5	Analog	±0.35	A	19.5	SOT-23 SC70-5
				B	10	
				C	6.25	
				D	-5.5	
				E	-8.2	
				F	-10.9	
				G	-11.77	
				H	-13.6	
				K	-5.8	

## Temperature Switch

Device	VCC (V)	Temperature	Trigger Temperature	Output Logic	Package
CT1722	1.75 to 5.5	Accuracy: ±0.5°C	Pre-Program Range: -40°C to 125°C	Active Low, (OD, external resistor)	CSP-3 SOT23-5
CT1723	1.4 to 5.5	Accuracy: ±0.25°C	Pre-Program Range: 0°C to 125°C	Active Low, (OD, external resistor)	CSP-4 SOT23-5
CTS7509	2.5 to 5.5	Accuracy: ±2.0°C	Resistor Program Range: -40°C to 125°C	Active Low, (OD, external resistor)	SOT23-5
CTS7510	2.5 to 5.5	Accuracy: ±2.0°C	Resistor Program Range: -40°C to 125°C	Active Low, (OD, internal resistor) Active Low, (Push-pull) Active High, (Push-pull)	SOT23-6

## Temperature/ Fan Measure and Control

Device	VCC (V)	Interface	Temperature	Fan control	Description	Package
<b>CTF2301A</b>	3.0 to 3.6	I2C/SMBus	1-CH Local 1-CH Remote Lo_Resolution:0.0625°C Re_Resolution:0.125°C Lo_Accuracy:±0.1°C Re_Accuracy:±1°C Range: -40 to 125°C	Temperature-based Fan Speed Control PWM Freq: 22.7Hz~180kHz Duty Cycle: 0~100% TCRIT Function	1-CH Fan Speed Monitor and Driver	MSOP-10 DFN-3x3-10
<b>CTF2301B</b>	3.0 to 3.6	I2C/SMBus	1-CH Local 1-CH Remote Lo_Resolution:0.0625°C Re_Resolution:0.125°C Lo_Accuracy:±0.1°C Re_Accuracy:±1°C Range: -40 to 125°C	Temperature-based Fan Speed Control PWM Freq: 22.7Hz~180kHz Duty Cycle: 0~100%	1-CH Fan Speed Monitor and Driver	MSOP-8 SOP-8
<b>CTF2302</b>	3.0 to 5.0	I2C/SMBus	1-CH Local 4-CH Remote Lo_Resolution:0.0625°C Re_Resolution:0.0625°C Lo_Accuracy:±1°C Re_Accuracy:±2°C Range: -40 to 125°C	Temperature-based Fan Speed Control PWM Freq: 10Hz~40kHz Duty Cycle: 0~100% Duty Cycle Resolution: 0.39% THERM Temperature with Hysteresis Fan Failures Detect	2-CH Fan Speed Monitor and Driver	QFN-3x3-16-A
<b>CTF2304</b>	3.0 to 5.0	I2C/SMBus	1-CH Local 8-CH Remote Lo_Resolution:0.0625°C Re_Resolution:0.0625°C Lo_Accuracy:±1°C Re_Accuracy:±1°C Range: -40 to 125°C	Temperature-based Fan Speed Control PWM Freq: 10Hz~40kHz Duty Cycle: 0~100% Duty Cycle Resolution: 0.39% THERM Temperature with Hysteresis Fan Failures Detect	4-CH Fan Speed Monitor and Driver	QFN-3x3-24

## System Temperature/ Voltage/ FanSpeed Monitor

Device	VCC (V)	Interface	Temperature	Analog Voltage	Fan Speed	Logic	Package
<b>CT80</b>	2.7 to 5.5	I2C/SMBus	1-CH, Local only Accuracy: 1.0°C Resolution: 0.0625°C	7-CH Range: 0-2.56V or 0-VCC Resolution: 2.56mV or 6.0mV	2-CH	3-CH Input 2-CH Output	TSSOP-24

## Thermocouple IC

Device	VCC (V)	Interface	Temperature	Protection	Description	Package
<b>CT1780</b>	3.0 to 5.5	1-wire	Multiple Thermocouple Types:K-,J-,N-,T-,E- Thermocouple Resolution:0.25°C ADC:14 bit Internal Cold-Junction Resolution:0.0625°C Range: -40 to 125°C	Detect Open Thermocouple Detect Thermocouple Short	Cold-Junction Compensated, Single-Wire Thermocouple-to-Digital Convert	DFN-4x3-10



## Humidity Sensor

Device	VCC (V)	Interface	Temperature Accuracy	Humidity Accuracy	I_Aoc/1Hz	I_SD	ADD	Package
<b>CHT8310</b>	1.65 to 5.5	I2C/SMBus	±0.2°C	±2.0%RH@20% to 80%RH	2uA	55nA	4	DFN-3x3-6
<b>CHT8315</b>	1.35 to 5.5	I2C/SMBus	±0.2°C	±1.5%RH@20% to 80%RH	1uA	40nA	4	DFN-3x3-6
<b>CHT1305</b>	1.8 to 5.5	Single-wire	±0.2°C	±2.0%RH@50%RH	2.5uA	100nA	/	DFN-3x3-6
<b>CHT8325</b>	1.8 to 5.5	I2C/SMBus	±0.1°C	±1.0%RH@20% to 80%RH	5.5uA	360nA	4	DFN-3x3-6
<b>CHT8550C</b>	1.65 to 5.5	I2C/SMBus	±0.2°C	±2.5%RH@20% to 80%RH	2.1uA	50nA	1	CSP-4



## General ADC

Device	VCC (V)	Interface	Resolution (bit)	Channel	Description	Package
<b>CAD2512A04</b>	3.0 to 5.5	I2C/SMBus	12	4-CH	Internal Temperature Sensing: $\pm 1^\circ\text{C}$ Accuracy 9 selectable addresses	MSOP-8 DFN 3x3-8
<b>CAD2512A08</b>	3.0 to 5.5	I2C/SMBus	12	8-CH	Internal Temperature Sensing: $\pm 1^\circ\text{C}$ Accuracy 9 selectable addresses	TSSOP-16 QFN-3x3-16



## High Precision ADC with Voltage, Current, Power Monitor

Device	VCC (V)	Interface	Resolution (bit)	Channel	Common Mode Voltage (V)	Package
<b>CAD2719</b>	2.7 to 5.5	I2C/SMBus	12	1	0 to 26	SOP-8 SOT23-8 DFN-2x2-8
<b>CAD2720</b>	2.7 to 5.5	I2C/SMBus	12	1	0 to 26	MSOP-10 DFN-3x3-10
<b>CAD2726/-Q</b>	2.7 to 5.5	I2C/SMBus	16	1	0 to 36	MSOP-10 DFN-3x3-10
<b>CAD2730</b>	2.7 to 5.5	I2C/SMBus	16	1	0 to 36	QFN 3x3-16
<b>CAD27323</b>	2.7 to 5.5	I2C/SMBus	16	3	0 to 26	QFN 4x4-16
<b>CAD27334</b>	2.7 to 5.5	I2C/SMBus	17	4	0-32	CSP-16, QFN 4x4-16