



Now That's Smart.

2025 PRODUCT GUIDE

Consumer ICs & Optical ID (OID™)

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● 32-bit SOC Platform

- SNC73200: 32-bit Cortex M3 dual-core multimedia processor (W/ 2D Graphic Engine)
(TFT / CIS / USB 2.0 HS / UART / I²C / I²S / SPI / SD /SDIO / MP3 Codec / Audio Codec)
- SNC73300: 32-bit Cortex M3 dual-core processor (W/ embedded flash)
(USB 2.0 HS / UART / I²C / I²S / SPI / SD /SDIO)
- SNC73400: 32-bit Cortex M3 dual-core processor (W/ embedded CODEC)
(USB 2.0 HS / UART / I²C / I²S / SPI / SD /SDIO / MP3 Codec / Audio Codec)
- SNC73500: 32-bit Cortex M3 dual-core multimedia processor (W/ 2D Graphic Engine)
(TFT / CIS / USB 2.0 HS / UART / I²C / I²S / SPI / SD /SDIO / MP3 Codec / Audio Codec)

● 16-bit DSP Platform

- SNC7001A : 16-bit DSP processor. (w/ USB2.0, SPI, SD Card, CIS, TFT, MIC / AMP...)
- SNC7648S : 16-bit DSP processor. (SPI, TFT, MIC / AMP...)

● 16-bit DSP Voice Engine

- SNC7648 : 16-bit DSP processor. (w/ MIC & AMP for recording, built-in regulator and out AMP in one chip)

● LCD Voice Controller

- SNL86P000 OTP Series : 1K dots LCD controller. (w/ 16CH MIDI)

● 2/8/12/16/24 Channel Speech / Melody Controller

- SNC86P000SA/B/C OTP Series : 120s~960s, 8/16/24+1 channels voice/melody controller, 14-bit PPDAC, Audio32 (384s~3072s@8Kbps).
- SNC85F000E/A/D Flash Type Series : 100s~670s, 2/8-24 channels voice/melody controller, 13-bit ClassD, Audio32 (100s~670s@12Kbps), ADC.
- SNC7650 Flash Type Series : 2/16 channels voice/melody controller, 16-bit DPWM, Audio32(153s~1350s@12Kbps),ADC.

Consumer ICs

● 4-Channel Melody Controller

SNC32P000 OTP Series : 20s~645s, 5 channels 13-bit Push Pull voice/melody controller.

SNC32F10 Series : 5 channels 13-bit Push Pull voice/melody engine for SPI flash.

● 1-Channel Voice Controller

SNC27P000 OTP Series : 20s-1000s, 12-bit PWM direct drive voice controller.(w/PWMIO)

SNC27P000S OTP Series : 40s-1000s, 12-bit PWM direct drive voice controller with 8-channel finger touch.(w/ PWMIO)

● Accessory

SNAD Series : SNAD01/SNAD02, 8-channel 8-bit /10-bit AD converters.

SNAP01C Series : Class AB OP Amplifier (Single & Differential Ends)

SNAUD01 Series : Stereo ADC with SNR100db, Stereo DAC with SNR100db, Headphone Driver, ClassAB Speaker Driver, and 5V to 3.3V LDO.

SNAUD03 Series : Class-D Speaker Driver with SNR80db, and 5V to 3.3V LDO.

SNAUD04 Series : Mono ADC with SNR100db, Class-D Speaker Driver with SNR80db, and 5V to 3.3V LDO.

USB Chips

● USB2.0 Full Speed Audio Series

SN11220 : USB audio class, AC'97/I²S digital interface.

Optical ID (OID™)

● Decoder / Sensor SoC Module :

SNM9S5420BC5020A : Sensor/Decoder SoC Module for OID2L.

SNM9S5430BC2000A /2001A: Sensor/Decoder SoC Module
for OID1.5 & OID2 & OID3 & OID3s.

SNM9S5430BC2100A : Sensor/Decoder SoC LightGuide Module
for OID1.5 & OID2 & OID3 & OID3s.

SNM9S5430BC3000A/3001A : Sensor/Decoder SoC Module without cover
for OID1.5 & OID2 & OID3 & OID3s.

● Sensor :

SN9S6100 : Sensor for handwriting application.
(238x240 B/W sensor, I²C / I²S interface)

● Sensor Module :

SNM9S102BC2000A : Sensor Module for OID1.5 & OID2 & OID3.

SNM9S102BC3000A : Compact Sensor Module without cover for OID2 & OID3.

● Decoder / DSP SoC :

SN9S303FG : SoC (OID decoder+16-bit DSP Voice controller) for OID3/
OID2. (OID / MP3 / I²C / Serial Flash / SD Card / USB2.0)

SN9S310/SN9S320/SN9S350/SN9S360 : 32-bit Cortex M3 dual-core processor
(w/embedded audio codec) for Sensor /
Decoder SoC module (OID / I²C / I²S /
SAR ADC / UART / PWM / SD Card /
USB2.0 / Audio Codec)



Consumer ICs

SNC7000 Series 16-bit DSP based Voice Processor

Part No.	ROM	Program RAM	RAM	OTP	I/O	Audio Output	Special Function
SNC7001A	-	32K*16	16K*16	-	76 I/O and 4 I	16 bits Audio DAC	48MIPS @ 48MHz External SPI, Parallel memory interface SD flash interface Xtra-ROM interface (read only) CIS interface TFT interface 10-bit/4CH ADC 16 bits audio ADC/DAC (w/MIC & AMP) USB 2.0 High Speed interface (MS, HID class)
SNC7648	48K*16	-	4K*16	-	24 I/O	12 bits DAC	24MIPS @ 24MHz External SPI memory interface 12 bits ADC (w/MIC & AMP) Built-in regulator for external flash Built-in amplifier for SPK output Built-in 4-ch ADC for DC application Built-in various compressed rate algorithm for playing
SNC7648S	-	40K*16	12K*16	-	48 I/O	14 bits DAC	48MIPS @ 48MHz External SPI memory interface 12 bits ADC (w/MIC & AMP) Built-in regulator for external flash Built-in amplifier for SPK output Built-in 4-ch ADC for DC application TFT interface

SNC7300 Dual M3 SoC Processor

Part No.	Package	CPU	RAM	I/O	TFT	CIS	PWM
SNC73200M0NLFG	LQFP128	162MIPS*2	324KB	80	V	V	24
SNC73200M1NLFG	LQFP128	162MIPS*2	324KB+ 8MB PSRAM	80	V	V	24
SNC73231M1NGFG	LQFP80	162MIPS*2	324KB+ 8MB PSRAM	58	V(Serial)	V	17
SNC73240M1VHJG	QFN88L	162MIPS*2	324KB+ 8MB PSRAM	58	V(Serial)	V	18
SNC73282M0UTJG	QFN48L(7x7)	162MIPS*2	324KB	18	-	-	7
SNC73283M0UTJG	QFN48L(7x7)	162MIPS*2	324KB	18	-	-	8
SNC73285M4NTJG	QFN48L(7x7)	162MIPS*2	324KB	29	-	-	14
SNC73290M0NTFG	LQFP48(7x7)	162MIPS*2	324KB	28	-	-	12
SNC73310MSN01AJG	QFN52L(6x6)	96MIPS*2	192KB	36	-	-	24
SNC73313MSN01AJG	QFN52L(6x6)	96MIPS*2	192KB	36	-	-	24
SNC73314MSN01AJG	QFN52L(6x6)	96MIPS*2	192KB	36	-	-	24
SNC73381MSN01MJG	QFN32L(4x4)	96MIPS*2	192KB	21	-	-	20
SNC73410MSN02AJG	QFN52L(6x6)	96MIPS*2	192KB	36	-	-	24
SNC73411MSN02DFG	LQFP64(7x7)	96MIPS*2	192KB	27	-	-	21
SNC73413MSN02TFG	LQFP48(7x7)	96MIPS*2	192KB	23	-	-	18
SNC73414MSN02TFG	LQFP48(7x7)	96MIPS*2	192KB	30	-	-	22
SNC73415MSN02AJG	QFN52L(6X6)	96MIPS*2	192KB	27	-	-	21
SNC73520MSN01GFG	LQFP80	162MIPS*2	324KB	58	V(Serial)	V	17
SNC73521MSN01GFG	LQFP80	162MIPS*2	324KB+ 8MB PSRAM	58	V(Serial)	V	17
SNC73522MSN01LFG	LQFP128	162MIPS*2	324KB+ 8MB PSRAM	80	V	V	24

SAR ADC	SPI	UART	I ² C	I ² S	SDIO	USB Host	USB Device	Audio Codec	Note
6-CH	2	2	3	5	2	V	2.0 High Speed	-	
6-CH	2	2	3	5	2	V	2.0 High Speed	-	
4-CH	2	1	2	3	1		2.0 High Speed	-	
4-CH	2	1	2	3	1		2.0 High Speed	MICx1 SPKx1	Embedded SNAUD02
2-CH	1	2	2	1	-		2.0 High Speed	MICx2 SPKx1	Embedded SNAUD01
2-CH	1	1	1	-	1		2.0 High Speed	MICx2 HPx1	Embedded SNAUD01
2-CH	-	2	2	5	-		2.0 High Speed	-	Embedded 512KB Flash
4-CH	1	2	2	2	1		2.0 High Speed	-	
6-CH	2	2	2	3	1		2.0 High Speed	-	-
6-CH	2	2	2	3	1		2.0 High Speed	-	Embedded 512KB Flash
6-CH	2	2	2	3	1		2.0 High Speed	-	Embedded 1024KB Flash
4-CH	2	2	2	1	1		2.0 High Speed	-	Embedded 512KB Flash
6-CH	2	2	2	3	1		2.0 High Speed	-	-
6-CH	2	2	1	1	1		2.0 High Speed	MICx2 SPKx1 HPx1	Embedded SNAUD01
4-CH	2	2	1	1	1		2.0 High Speed	MICx1 HPx1	Embedded SNAUD01
6-CH	2	2	1	2	1		2.0 High Speed	SPKx1	Embedded SNAUD03
6-CH	2	2	1	1	1		2.0 High Speed	MICx1 SPKx1	Embedded SNAUD04
4-CH	2	1	2	3	1		2.0 High Speed	-	
4-CH	2	1	2	3	1		2.0 High Speed	-	
6-CH	2	2	3	5	2	V	2.0 High Speed	-	

SNC7650 Series Flash Type Direct Drive 2+16ch speech/MIDI, Audio32

Part No.	Package	Flash	Audio 32 12Kbps (8K S.R.)	Audio 32 Speech Channel	Voice/MIDI Channel	RAM	I/O	10 bit SAR ADC	SPI	UART	I ² C	I ² S	OSC
SNC7650M2FSG	SOP16	256KB	153	2	16	16KB	11 I/O	1	1	1	1	1	ROSC
SNC7650M2LXG	SSOP28	256KB	153	2	16	16KB	23 I/O	1	1	1	1	1	ROSC
SNC7650M4FSG	SOP16	512KB	328	2	16	16KB	11 I/O	1	1	1	1	1	ROSC
SNC7650M4LXG	SSOP28	512KB	328	2	16	16KB	23 I/O	1	1	1	1	1	ROSC
SNC7650M8FSG	SOP16	1024KB	677	2	16	16KB	11 I/O	1	1	1	1	1	ROSC
SNC7650M8LXG	SSOP28	1024KB	677	2	16	16KB	23 I/O	1	1	1	1	1	ROSC
SNC7650M16FSG	SOP16	2048KB	1350	2	16	16KB	11 I/O	1	1	1	1	1	ROSC
SNC7650M16LXG	SSOP28	2048KB	1350	2	16	16KB	23 I/O	1	1	1	1	1	ROSC

Note: Support Package type: SOP16, SSOP28.

SNL86P000 Series 1K Dots LCD Controller with 16ch speech / MIDI

Part No.	LCD Dots (com*seg)	HQDPCM Duration (6K S.R.)	Audio 32 8Kbps (8K S.R.)	RAM	OTP	I/O	PWM I/O	Cap- Touch Key	HW+SW Channel	14-bit PP-DAC	Buzzer driver	RTC function	SPI	ROSC Shift
SNL86P160	16*64	160	512	2784*16	256K*16	24 I/O	12	24	16+1	1	1	v	v +/-	1.5%
SNL86P320	16*64	320	1024	2784*16	512K*16	24 I/O	12	24	16+1	1	1	v	v +/-	1.5%
SNL86P480	16*64	480	1536	2784*16	768K*16	24 I/O	12	24	16+1	1	1	v	v +/-	1.5%

SNC86P000A Series Direct Drive 8 Channels Voice/Melody+1ch H.Q. speech Controller

Part No.	HQDPCM Duration (6K S.R.)	Audio32 8Kbps (8K S.R.)	OTP	Program size	RAM	I/O	Touch Key	H/W PWM I/O	H/W Voice/MIDI Channel	H.Q. speech Channel	X'tal RTC LVD	14-bit PP-DAC	LDO for SPI flash	SPI	Int. ROSC
SNC86P120SA	120	384	192K*16	192K*16	1520*16	24 I/O	24	12	8	1*	v	1	v	v +/-	1.5%
SNC86P160SA	160	512	256K*16	256K*16	1520*16	24 I/O	24	12	8	1*	v	1	v	v +/-	1.5%
SNC86P200SA	200	640	320K*16	320K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P240SA	240	768	384K*16	384K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P280SA	280	896	448K*16	448K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P320SA	320	1024	512K*16	512K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P400SA	400	1280	640K*16	512K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P480SA	480	1536	768K*16	512K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P560SA	560	1792	896K*16	512K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P640SA	640	2048	1024K*16	512K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%
SNC86P960SA	960	3072	1536K*16	512K*16	1520*16	32 I/O	32	12	8	1*	v	1	v	v +/-	1.5%

Note: 14-bit Push-Pull DAC for audio output. *Two channel voice playback using HQDPCM when both at the same sample rate.

SNC86P000B Series Direct Drive 16 Channels Voice/Melody+1ch H.Q. speech Controller

Part No.	HQDPCM Audio32 Duration 8Kbps (6K S.R.) (8K S.R.)	OTP	Program size	RAM	I/O	Touch Key	H/W PWM I/O	H/W Voice/MIDI Channel	H.Q. speech Channel	X'tal RTC LVD	I4-bit PP-DAC	LDO for SPI flash	SPI	Int. ROSC
OTP														
SNC86P120SB	120	384	192K*16	192K*16	1520*16	24 I/O	24	12	16	1*	v	1	v	v +/- 1.5%
SNC86P160SB	160	512	256K*16	256K*16	1520*16	24 I/O	24	12	16	1*	v	1	v	v +/- 1.5%
SNC86P200SB	200	640	320K*16	320K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P240SB	240	768	384K*16	384K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P280SB	280	896	448K*16	448K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P320SB	320	1024	512K*16	512K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P400SB	400	1280	640K*16	512K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P480SB	480	1536	768K*16	512K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P560SB	560	1792	896K*16	512K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P640SB	640	2048	1024K*16	512K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%
SNC86P960SB	960	3072	1536K*16	512K*16	1520*16	32 I/O	32	12	16	1*	v	1	v	v +/- 1.5%

Note: I4-bit Push-Pull DAC for audio output. *Two channel voice playback using HQDPCM when both at the same sample rate.

SNC86P000C Series Direct Drive 24 Channels Voice/Melody+1ch H.Q. speech Controller

Part No.	HQDPCM Audio32 Duration 8Kbps (6K S.R.) (8K S.R.)	OTP	Program size	RAM	I/O	Touch Key	H/W PWM I/O	H/W Voice/MIDI Channel	H.Q. speech Channel	X'tal RTC LVD	I4-bit PP-DAC	LDO for SPI flash	SPI	Int. ROSC
OTP														
SNC86P120SC	120	384	192K*16	192K*16	1520*16	24 I/O	24	12	24	1*	v	1	v	v +/- 1.5%
SNC86P160SC	160	512	256K*16	256K*16	1520*16	24 I/O	24	12	24	1*	v	1	v	v +/- 1.5%
SNC86P200SC	200	640	320K*16	320K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P240SC	240	768	384K*16	384K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P280SC	280	896	448K*16	448K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P320SC	320	1024	512K*16	512K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P400SC	400	1280	640K*16	512K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P480SC	480	1536	768K*16	512K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P560SC	560	1792	896K*16	512K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P640SC	640	2048	1024K*16	512K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%
SNC86P960SC	960	3072	1536K*16	512K*16	1520*16	32 I/O	32	12	24	1*	v	1	v	v +/- 1.5%

Note: I4-bit Push-Pull DAC for audio output. *Two channel voice playback using HQDPCM when both at the same sample rate.

SNC85F000E Series Flash Type Direct Drive 2+2ch speech/MIDI, Audio32

Part No.	Embedded Flash	Audio 32 12Kbps (8K S.R.)	H.Q. (6K S.R.)	Audio 32/H.Q. Speech Channel	H/W Voice/MIDI Channel	RAM	I/O	CapTouch/ PWMIO	LDO33	12 bit SAR ADC	SPI	UART	I ² C	OSC
SNC85F100E	96K*16	109	78	2	2	3072*16	16 I/O	0/16	1	-	1	1	1	ROSC
SNC85F150E	128K*16	153	104	2	2	3072*16	16 I/O	0/16	1	-	1	1	1	ROSC
SNC85F240E	192K*16	240	156	2	2	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal
SNC85F320E	256K*16	328	208	2	2	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal
SNC85F500E	384K*16	502	313	2	2	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal
SNC85F670E	512K*16	677	417	2	2	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal

Note: Support Package type : SOP8, SOP16, SSOP24, LQFP48

SNC85F000A Series Flash Type Direct Drive 8~24+2ch speech/MIDI, Audio32

Part No.	Embedded Flash	Audio 32 12Kbps (8K S.R.)	H.Q. (6K S.R.)	Audio 32/H.Q. Speech Channel	H/W Voice/MIDI Channel	RAM	I/O	CapTouch/ PWMIO	LDO33	12 bit SAR ADC	SPI	UART	I ² C	OSC
SNC85F150A	128K*16	153	104	2	8~24	3072*16	16 I/O	0/16	1	-	1	1	1	ROSC
SNC85F240A	192K*16	240	156	2	8~24	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal
SNC85F320A	256K*16	328	208	2	8~24	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal
SNC85F500A	384K*16	502	313	2	8~24	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal
SNC85F670A	512K*16	677	417	2	8~24	3072*16	31 I/O	31/31	1	-	2	1	1	ROSC Xtal

Note: Support Package type : SOP8, SOP16, SSOP24, LQFP48

SNC85F000D Series Flash Type Direct Drive 8~24+2ch speech/MIDI, Audio32, ADC

Part No.	Embedded Flash	Audio 32 12Kbps (8K S.R.)	H.Q. (6K S.R.)	Audio 32/H.Q. Speech Channel	H/W Voice/MIDI Channel	RAM	I/O	CapTouch/ PWMIO	LDO33	12 bit SAR ADC	SPI	UART	I ² C	Int. Rosc
SNC85F240D	192K*16	240	156	2	8~24	3072*16	31 I/O	31/31	1	1	2	1	1	ROSC Xtal
SNC85F320D	256K*16	328	208	2	8~24	3072*16	31 I/O	31/31	1	1	2	1	1	ROSC Xtal
SNC85F670D	512K*16	677	417	2	8~24	3072*16	31 I/O	31/31	1	1	2	1	1	ROSC Xtal

Note: Support Package type : SOP8, SOP16, SSOP24, LQFP48

SNC27P000 OTP Series Direct Drive Voice Controller

Part No.	Duration (6K S.R.)	OTP	Program ROM	RAM	I/O	PWM I/O	Voice Channel	OSC Type	Audio Output	LVD 2.2/3.2V	ROSC Shift
SNC27P020	20	44K*12	44K*12	128*4	1I, 8 I/O	8	1	Int. Rosc	12-bit PWM	N/A*	+/- 1.5%
SNC27P030	30	64K*12	64K*12	128*4	1I, 8 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P040	40	84K*12	64K*12	128*4	1I, 8 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P042	40	84K*12	64K*12	128*4	1I, 8 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P060	60	128K*12	64K*12	128*4	1I, 12 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P061	60	128K*12	64K*12	128*4	1I, 16 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P085	85	176K*12	64K*12	128*4	1I, 12 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P086	85	176K*12	64K*12	128*4	1I, 16 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P120	120	248K*12	64K*12	128*4	1I, 16 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P121	120	248K*12	64K*12	128*4	1I, 16 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P168	168	352K*12	64K*12	128*4	1I, 16 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P169	168	352K*12	64K*12	128*4	1I, 16 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P200	200	412K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P201	200	412K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P250	250	512K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P251	250	512K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P300	300	616K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P301	300	616K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P332	332	680K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P333	332	680K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P400	400	820K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P500	500	1024K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P680	680	1392K*12	64K*12	192*4	1I, 24 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P750	750	1536K*12	64K*12	192*4	1I, 32 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P870	870	1780K*12	64K*12	192*4	1I, 32 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%
SNC27P1000	1000	2048K*12	64K*12	192*4	1I, 32 I/O	8	1	Int. Rosc	12-bit PWM	v	+/- 1.5%

Note: Support PKG type: SOP8, SOP14, SOP16, SSOP24, LQFP48. SNC27P020 is no LVD2.2/3.2V function.

SNC27P000S OTP Series Direct Drive Voice Controller with Touch key functions

Part No.	Duration (6K S.R.)	OTP	Program ROM	RAM	I/O	Touch Key	PWM I/O	Voice Channel	OSC Type	Audio Output	Interrupt	LVD 2.2/3.2V	ROSC Shift
SNC27P040S	40	84K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P060S	60	128K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P085S	85	176K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P120S	120	248K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P121S	120	248K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P168S	168	352K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P169S	168	352K*12	64K*12	256*4	11, 16 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P200S	200	412K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P201S	200	412K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P250S	250	512K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P251S	250	512K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P300S	300	616K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P301S	300	616K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P332S	332	680K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P333S	332	680K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P400S	400	820K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P500S	500	1024K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P680S	680	1392K*12	64K*12	256*4	11, 24 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P750S	750	1536K*12	64K*12	256*4	11, 32 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P870S	870	1780K*12	64K*12	256*4	11, 32 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%
SNC27P1000S	1000	2048K*12	64K*12	256*4	11, 32 I/O	8	8	1	Int. Rosc	12-bit PWM	3	v	+/- 1.5%

Note: Support PKG type: SOP8, SOP14, SOP16, SSOP24, LQFP48. SNC27P020 is no LVD2.2/3.2V function.

SNC32P000 OTP Series Direct Drive 5 Channels Voice/Melody Controller

Part No.	Duration (6K S.R.)	OTP	Program ROM	RAM	I/O	H/W PWM I/O	CSC* I/O	Voice/ MIDI Channel	H.Q. Speech Channel	OSC Type	LVD 22/24/ 28/32	13-bit PP-DAC	H/W I ² C	ROSC Shift
SNC32P020B	22	48K*16	48K*16	320*4	16 I/O	12	0	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P041B	40	64K*16	64K*16	320*4	16 I/O	12	0	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P050B	50	80K*16	64K*16	320*4	16 I/O	12	0	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P040	40	64K*16	64K*16	320*4	16 I/O	12	0	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P060	60	96K*16	64K*16	320*4	16 I/O	12	0	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P080	80	128K*16	64K*16	320*4	16 I/O	12	0	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P120	120	192K*16	64K*16	320*4	20 I/O	12	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P160	160	256K*16	64K*16	320*4	20 I/O	12	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P250	250	400K*16	64K*16	320*4	24 I/O	12	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P320	322	512K*16	64K*16	320*4	24 I/O	12	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P420	420	660K*16	64K*16	320*4	32 I/O	16	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P530	530	840K*16	64K*16	320*4	32 I/O	16	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%
SNC32P645	647	1024K*16	64K*16	320*4	32 I/O	16	12	5/4	1	Int. Rosc	v	1	v	+/- 1.5%

Note: • 13-bit Push-Pull DAC for audio output • CSC* IO: Constant current I/O for directing drive LED without limited resistor
• Support PKG type: SOP8, SOP14, SOP16, SSOP24, LQFP48

SNC32F Series Direct Drive 5 Channels Voice/Melody engine for SPI flash

Part No.	Duration (6K S.R.)	Program Size	RAM	I/O	H/W PWM I/O	CSC* I/O	Voice/ MIDI Channel	H.Q. Speech Channel	SPI +LDO	LDO type	LVD 22/24/ 28/32	13-bit PP-DAC	H/W I ² C	ROSC Shift
SNC32F10	Max. 128M bit 86.6min	64K*16	320*4	28 I/O +4(SPI)	16	12	5/4	1	v	Buck- boost*	v	1	v	Int. Rosc +/- 1.5%
Note: • 13-bit Push-Pull DAC for audio output • CSC* IO: Constant current I/O for directing drive LED without limited resistor • Buck-boost* LDO VDD=2.0V~5.5V Vout=3.0V for SPI flash • Support PKG type: LQFP48														

Accessory

SNAD01	8 channels, 8-bit resolution with 8-Bit No Missing Code, Low Power Consumption, 3-Wire Serial interface
SNAD02	8 channels, 10-bit resolution with 10-Bit No Missing Code, Low Power Consumption, 3-Wire Serial interface
SNAP01C	Class AB OP AMP, single end & differential mode, Adjustable gain control
SNAUD01	Stereo ADC with SNR 100db, Stereo DAC with SNR 100db, HeadPhone Driver, ClassAB Speaker Driver, and 5V to 3.3V LDO
SNAUD03	ClassD Speaker Driver with SNR 80db, and 5V to 3.3V LDO
SNAUD04	Mono ADC with SNR 100db, ClassD Speaker Driver with SNR 80db, and 5V to 3.3V LDO

USB Chips

Audio	Part No.	Main Function	Application	OS supporting	Package
USB 2.0 Full Speed	SN11220	USB audio class, AC'97/I ² S digital interface	USB headset/microphone, wireless audio		LQFP48

Optical ID (OID™)

OID / ELA ICs

Part No.	Main Function	Dot Pattern Version	Index Number	Package
SN9S6100	Sensor for handwriting application (238x240 B/W, I ² C/I ² S interface)	—	—	CSP21
SNM9S6100BC4000A	Sensor module for handwriting application (238x240 B/W, I ² C/I ² S interface)	—	—	Module
SNM9S5420BC5020A	Sensor/Decoder SoC Module for OID2L	—	—	Module
SNM9S5430BC2000A/2001A	Sensor/Decoder SoC Module for OID1.5 & OID2 & OID3 & OID3s	—	—	Module
SNM9S5430BC2100A	Sensor/Decoder SoC LightGuide Module for OID1.5 & OID2 & OID3 & OID3s	—	—	Module
SNM9S5430BC3000A/3001A	Sensor/Decoder SoC Module without cover for OID1.5 & OID2 & OID3 & OID3s	—	—	Module
SNM9S102BC2000A	Sensor Module for OID2 & OID3	—	—	Module
SNM9S102BC3000A	Compact Sensor Module for OID2 & OID3	—	—	Module
SN95303FG	OID SoC for OID3 & OID2 (OID / MP3 / I ² C / Serial Flash / SD Card / USB2.0 / 16-bit Voice controller)	OID3/OID2	268M/65K	LQFP80
SN95310	OID 32-bit Dual-core Microcontroller (OID / I ² C / I ² S / SAR ADC / UART / PWM / SD Card / USB2.0 / Audio Codec01)	OID4/OID3s/ OID3/OID2	70T/268M/ 268M/65K	LQFP64L (7x7)
SN95320	OID 32-bit Dual-core Microcontroller (OID / I ² C / I ² S / SAR ADC / UART / PWM / SD Card / USB2.0 / Audio Codec02)	OID4/OID3s/ OID3/OID2	70T/268M/ 268M/65K	QFN52L (6x6)
SN95350	OID 32-bit Dual-core Microcontroller (OID / I ² C / I ² S / SAR ADC / UART / PWM / SD Card / USB2.0)	OID4/OID3s/ OID3/OID2	70T/268M/ 268M/65K	QFN46L (4.5x6.5)
SN95360	OID 32-bit Dual-core Microcontroller (OID / I ² C / I ² S / SAR ADC / UART / PWM / SD Card / USB2.0 / Audio Codec04)	OID4/OID3s/ OID3/OID2	70T/268M/ 268M/65K	QFN46L (4.5x6.5)

Accessory for Testing & Verification tools (for production purposes only)

Part No.	Main Function	Description
OID-VIEWER-V2	OID Viewer	Printing Quality Inspection tool by PC
OID-IMAGE-VIEWER-V1	Sensor/Decoder SoC Image Viewer	Image Viewer for Sensor/Decoder SoC series module
OID-IMGVIEWER-2000A-V1	Image Viewer with 2000A module	Pen-shaped Image Viewer with SNM9S5430BC2000A module
OID-IMGVIEWER-3000A-V1	Image Viewer with 3000A module	Pen-shaped Image Viewer with SNM9S5430BC3000A module
OID-CALI-MNB-V2	OID2 Calibration Board	OID Pen Production Calibration Board for OID1 / OID1.5 / OID2
OID-CALI-HW-V1	IRLED Calibration Board	For 9530x Series IRLED Calibration (EEPROM)
OID-CODEBOOK-V3	OID3 Code Book	OID3 Reference Index Book
OID-CODE-BOOK-S-V3	OID3 special Code Book	OID3 special Reference Index Book
OID-95303-PEN	OID3 SoC PEN	OID3 SoC SN95303FG Demo PEN