

2021

nuvoton winbond

Photo By Jeffrey Cheng

## ARM® Cortex®-M Audio SoCs

## • AUI Enabled Series-M0

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Development Tools	Other	Package
										MIC.	Speaker			
<b>ISD91032</b>	Cortex®-M0 49 MHz	64 KB	6 KB	22	3	1	8	10-bit SAR ADC	√	1	Class-D (0.45W)	ISD- DMK_91032C	13-bit DAC, UART	LQFP48
<b>ISD91032C</b>	Cortex®-M0 49 MHz	64 KB	6 KB	22	3	1	8	10-bit SAR ADC	√	1	Class-D (0.45W)	ISD- DMK_91032C	VR, 13-bit DAC, UART	LQFP48
<b>ISD9130</b>	Cortex®-M0 49 MHz	68 KB	12 KB	24	2	1	2	Sigma-Delta >92 dB	√	1	Class-D (1W)	ISD- DMK_9160	8-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP48 QFN32
<b>ISD9160</b>	Cortex®-M0 49 MHz	145 KB	12 KB	24	2	1	2	Sigma-Delta >92 dB	√	1	Class-D (1W)	ISD- DMK_9160	8-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP48 QFN32
<b>ISD9160C</b>	Cortex®-M0 49 MHz	145 KB	12 KB	24	2	1	2	Sigma-Delta >92 dB	√	1	Class-D (1W)	ISD- DMK_9160	VR, 8-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP48 QFN32
<b>ISD91230</b>	Cortex®-M0 49 MHz	64 KB	12 KB	32	2	2 (Quad/ Dual)	4	Sigma-Delta >90 dB	√	1	Class-D (0.45W)	ISD- DMK_91260	16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64 QFN32
<b>ISD91230B</b>	Cortex®-M0 49 MHz	64 KB	12 KB	32	2	2 (Quad/ Dual)	4	Bridge Sense ADC, 24-bit	√	-	Class-D (0.45W)	ISD- DMK_91260B	16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64
<b>ISD91260</b>	Cortex®-M0 49 MHz	128 KB	12 KB	32	2	2 (Quad/ Dual)	4	Sigma-Delta >90 dB	√	1	Class-D (0.45W)	ISD- DMK_91260	16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64 QFN32
<b>ISD91260B</b>	Cortex®-M0 49 MHz	128 KB	12 KB	32	2	2 (Quad/ Dual)	4	Bridge Sense ADC, 24-bit	√	-	Class-D (0.45W)	ISD- DMK_91260B	16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64
<b>ISD91260C</b>	Cortex®-M0 49 MHz	128 KB	12 KB	32	2	2 (Quad/ Dual)	4	Sigma-Delta >90 dB	√	1	Class-D (0.45W)	ISD- DMK_91260	VR, 16-ch Touch Key, Temperature Alarm, 2*UART, I²C, I²S, PDMA, CRC	LQFP64 QFN32
<b>ISD91331</b>	Cortex®-M0 98 MHz	68 KB	16 KB	32	2	1 (Quad)	6	Sigma-Delta >90 dB	√	1	Class-D (1W)	ISD- DMK_91300	16-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP64
<b>ISD91361</b>	Cortex®-M0 98 MHz	145 KB	16 KB	32	2	1 (Quad)	6	Sigma-Delta >90 dB	√	1	Class-D (1W)	ISD- DMK_91300	16-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP64

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Development Tools	Other	Package
										MIC.	Speaker			
<b>ISD91361C</b>	Cortex®-M0 98 MHz	145 KB Flash	16 KB	32	2	1 (Quad)	6	Sigma-Delta >90 dB	√	1	Class-D (1W)	ISD- DMK_91300	VR, 16-ch Touch Key, Temperature Alarm, UART, I²C, I²S, PDMA, CRC	LQFP64

### • AUI Enabled Series-M4

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Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Development Tools	Other	Package	Status*
										MIC.	Speaker				
<b>ISD94124A</b>	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS VAD	LQFP64, QFN48	P
<b>ISD94124B</b>	Cortex®-M4 200 MHz, Basic fetature	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	-	-	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS	LQFP64 QFN48	P
<b>ISD94124C</b>	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	VR, USB 2.0 FS VAD	LQFP64 QFN48	P
<b>ISD94124D</b>	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	BF+NR, USB 2.0 FS VAD	LQFP64	P
<b>ISD94124P</b>	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	BF+NR+VR, USB 2.0 FS VAD	LQFP64	P
<b>ISD94124S</b>	Cortex®-M4 200 MHz	512 KB	192 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	AEC+NR, USB 2.0 FS VAD	LQFP64 QFN48	P
<b>ISD94123B</b>	Cortex®-M4 200 MHz	512 KB Flash	128 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	-	-	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS	LQFP64 QFN48	P
<b>ISD94123S</b>	Cortex®-M4 200 MHz	512 KB	128 KB	41	4	3 (1 x Quad/ Dual)	5	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	AEC+NR, USB 2.0 FS VAD	QFN48	P
<b>ISD94113A</b>	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	3 (1 x Quad/ Dual,)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS VAD	LQFP64 QFN48	P
<b>ISD94113B</b>	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	-	-	ISD-DMK_94100_AM ISD-DMK_94100_DM	USB 2.0 FS	LQFP64 QFN48	P
<b>ISD94113C</b>	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	2 (Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	VR, USB 2.0 FS VAD	LQFP64 QFN48	P
<b>ISD94113S</b>	Cortex®-M4 200 MHz	256 KB	128 KB	57	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DMK_94100_AM ISD-DMK_94100_DM	AEC+NR, USB 2.0 FS VAD	LQFP64 QFN48	P

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## Audio Converters

### • Mono Codec Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
<b>NAU8810</b>	Mono Codec with 2-wire interface	1	1	91	93	-79	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8810-DEMO	2-Wire	2.50~5.50 2.50~3.60 1.71~3.60 1.71~3.60	QFN20 (4x4)
<b>NAU88C10</b>	Mono Codec with 2-wire interface	1	1	91	93	-79	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU88C10-DEMO	2-Wire	2.50~5.50 2.50~3.60 1.71~3.60 1.71 ~ 3.60	QFN20 (4x4)
<b>NAU88U10</b>	AEC-Q100 Automotive Grade Mono Codec with 2-wire interface.	1	1	91	93	-79	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU88C10-DEMO	2-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN20 (4x4)
<b>NAU8812</b>	Mono Codec with speaker driver	1	1	91	93	-79	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8812-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN32 (5x5) SSOP-28
<b>NAU8814</b>	Mono Audio Codec with Equalizer, speaker driver	1	1	91	93	-79	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8814-DEMO	2-Wire 3-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN24 (4x4)
<b>NAU88C14</b>	Mono Audio Codec with Equalizer, speaker driver	1	1	91	93	-79	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU88C14-DEMO	2-Wire 3-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN24 (4x4)

## • Stereo Codec Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ Analog/Digital/ Digital I/O (V)	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
<b>NAU8822A</b>	Stereo Codec with Speaker Drive	2	2	90	94	-80	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8822A- DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)	P
<b>NAU88U22A</b>	AEC-Q100 Automotive Grade Stereo Codec with Speaker Drive	2	2	90	94	-80	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8822A- DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)	P
<b>NAU88C22</b>	Stereo Codec with Speaker Drive	2	2	89	89	-78	-84	8~192	I <sup>2</sup> S PCM (Timeslot)	NAU88C22- DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5) QFN32 (4x4)	P
<b>NAU8820</b>	Stereo Codec	2	2	90	94	-80	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8820- DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)	P

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## • Ultra Low Power (ULP) Codec Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ MICBIAS/ Analog/Digital/	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
<b>NAU88L21</b>	ULP Stereo CODEC with Class-G Headphone Driver	2	2	103	105	-91	-80	8~192	I <sup>2</sup> S (TDM) PCM (Timeslot)	NAU88L21- DEMO	I <sup>2</sup> C	NA 3.0 ~ 3.6 1.62 ~ 1.98 N/A 1.62 to 3.6	QFN32 (5x5)	P
<b>*NAU88L11</b>	ULP Mono CODEC with Class-G Headphone Driver	1	1	102	105	-90	-85	8~96	I <sup>2</sup> S (TDM) PCM (Timeslot)	*NAU88L11- DEMO	I <sup>2</sup> C	NA 3.0 ~ 3.6 1.62 ~ 1.98 N/A 1.62 to 3.6	QFN20 (4x4)	Q4'20
<b>NAU88L24</b>	ULP Stereo CODEC With Advanced Headset Detection and Stereo Class D Amp	2	2	100	103	-85	-77	8~96	I <sup>2</sup> S (TDM) PCM (Timeslot)	NAU88L24I- DEMO	I <sup>2</sup> C	2.5 ~ 5.0 2.5 ~ 5.0 1.6 ~ 2.0 1.1 ~ 1.98 1.6 ~ 3.6	QFN48 (6x6)	P
<b>NAU88L25B</b>	Ultra-Low Power Audio CODEC With Advanced Headset Features and 124dB Class G Headphone Drive	1	2	101	124	-91	-89	8~192	I <sup>2</sup> S / PCM	NAU88L25- DEMO	I <sup>2</sup> C	NA 2.6 ~ 5.0 1.6 ~ 2.0 1.1 ~ 1.98 1.6 ~ 3.6	QFN32 (5x5)	P

## • Stereo ADC Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
<b>NAU8501</b>	Stereo ADC with Input Mixer and Line Output	2	-	90	-	-80	-	8~48	I <sup>2</sup> S (TDM) PCM (Timeslot)	NAU8501- DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)
<b>NAU8502</b>	Stereo ADC with Integrated LDO	2	-	90	-	-80	-	8~48	I <sup>2</sup> S (TDM) PCM (Timeslot)	NAU8502- Card	2-Wire 3-Wire 4-Wire	2.70 ~ 3.60 1.71 ~ 3.60 1.71 ~ 3.60	QFN32 (5x5)

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### • Ultra Low Power (ULP) ADC Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	MICBIAS/ Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
<b>NAU85L20B</b>	ULP Stereo Audio ADC with integrated FLL and Microphone Preamplifier	2	-	101	-	-91	-	8~96	I <sup>2</sup> S (TDM)	NAU85L20-DEMO	I <sup>2</sup> S	1.80 ~ 5.50 1.62 ~ 1.98 1.20 ~ 1.98 1.62 ~ 3.60	QFN28 (4x4)
<b>NAU85L40B</b>	ULP Quad Audio ADC with integrated FLL and Microphone Preamplifier	4	-	101	-	-91	-	8~96	I <sup>2</sup> S (TDM)	NAU85L40-DEMO	I <sup>2</sup> S	2.50 ~ 5.50 1.62 ~ 1.98 1.20 ~ 1.98 1.62 ~ 3.60	QFN28 (4x4)

### • Stereo DAC Series

Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ Analog/Digital/ Digital I/O (V)	Package (mm)
		ADC	DAC	ADC	DAC	ADC	DAC						
<b>NAU8401</b>	Stereo DAC with Speaker Drive and Line Input	-	2	-	94	-	-84	8~48	I <sup>2</sup> S PCM (Timeslot)	NAU8401-DEMO	2-Wire 3-Wire 4-Wire	2.50 ~ 5.50 2.50 ~ 3.60 1.65 ~ 3.60 1.65 ~ 3.60	QFN32 (5x5)
<b>NAU8402</b>	Stereo DAC with 2Vrms Output	-	2	-	98	-	-82	8~96	I <sup>2</sup> S	NAU8402-Card	-	NA 3.0 ~ 3.6 1.7 ~ 3.6 1.7 ~ 3.6	TSSOP 16

### • Precision ADC Series

Part No.	Description	Resolution Bits	Sample Rates (max)	Architectur	Gain	# of Input Channels	Development Tools	ENOB (Gain=1,10SPS)	Package	Satus*
<b>NAU7802</b>	Dual Channel 24-bit ADC	24	10, 20, 40,80 & 320Hz	Sigma-Delta	1x, 2x, 4x,8x, 16x,32x, 64x,128x	2	N/A	23	SOP-16, PDIP-16	P

\*Status: P=Mass Production

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## Audio Amplifiers

### • 2Vrms Line Driver and Class-AB Series

Part No.	Description	SNR (dB)	Output Power		Gain (dB)	Standby Current (uA)	Operating Voltage (V)	Temp (°C)	Development Tools	Package
			Power (W)	THD+N (%)						
<b>NAU8220</b>	2Vrms Line Driver	108	-	0.003	-	-	3.0~3.6	-40~85	NAU8220WG-EVB	SOP14 TSSOP14
<b>ISD8101</b>	1.5W Class-AB Audio Amplifier with Chip Enable, Differential/Single ended inputs, Low pop and Click	100	0.825 (5.0V)	<1	20	<1	2.4~6.8	-40~85	ISD-DEMO8101	8-pin SOP 8-pin PDIP
			1.1 (5.0V)	<10						
			1.5 (6.8V)	<10						
<b>ISD8102</b>	2W Class-AB Audio Amplifier with Head Phone Sense Input	100	2W into 4Ω at 5V	<10	20	<1	2.0~6.8	-40~85	ISD-DEMO8102	8-pin SOP (Thermal ex-pad)
<b>ISD8104</b>	2W Class-AB Audio Amplifier, Differential/Single ended inputs	100	2W into 4Ω at 5V	<10	20	<1	2.0~6.8	-40~85	ISD-DEMO8104	8-pin SOP (Thermal ex-pad)P

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## • Class D Series

Part No.	Description	Output Power		Gain (dB)	Standby Current (uA)	Operating Voltage (V)	Temp (°C)	Development Tools	Package	Status*
		Power (W)	THD+N (%)							
<b>NAU82011</b>	3.1W Mono Class-D Audio Amplifier, variable gain with Differential / Single ended inputs	3.1W into 4Ω at 5V	<10	Variable	<1	2.5~5.5	-40~85	NAU82011VG-EVB	QFN16 WLCSP-9	P
<b>NAU8223</b>	3.1W Stereo Filer-Free Class-D Audio Amplifier, 5 gain steps with Differential / Single ended inputs	3.1W into 4Ω at 5V	<10	0, 6, 12, 18, 24	<1	2.5~5.5	-40~85	NAU8223-EVB	QFN20	P
<b>NAU8224</b>	3.1W Stereo Filer-Free Class-D Audio Amplifier, 2 wire interface gain control with Differential / Single ended inputs	3.1W into 4Ω at 5V	<10	24 to -62	<1	2.5~5.5	-40~85	NAU8224-EVB	QFN20	P
<b>NAU8315</b>	I2S, 3.2W Mono Filer-Free Class-D Audio Amplifier, with I2S input	3.2W into 4Ω at 5V, WLCSP-12	<10	3, 6, 9, 12	typ. 0.3	SPK_VDD: 2.5 - 5.25 IO_Vdd: 1.8 - 5.25	-40~85	NAU8325-DEMO	QFN20 WLCSP-9 WLCSP-12	P
<b>NAU8325</b>	I2S, 3.1W Stereo Filer-Free Class-D Audio Amplifier, 2 wire interface	3.0W into 4Ω at 5V	<10	24 to -62	<2	SPK_VDD: 2.5 - 5.5 A_Vdd: 1.62 - 1.98 IO_Vdd: 1.62 - 3.6	-40~85	NAU8325-DEMO	QFN20	P
<b>NAU83P20</b>	Class D power stage 2x20W into 8Ω (1% THD)	10Wx4 20Wx2	<0.18	3BTL / 3SE	<1	7.0 to 24.0	-40~85	NAU83P20-DEMO	QFN48	P

## • Smart Amplifier

Part No.	Description	Output Power	Operating Voltage (V)	Speaker Protection	Speaker Channel	Audio Interface	Package	Status
<b>NAU8331VG</b>	8W Mono Boosted Class D Amplifier	8W @ 4Ω 6W @ 8Ω	2.9~5.5	External DSP	Mono	I2S, PCM, TDM	WLCSP 35 Balls with 0.5mm Pitch	P
<b>NAU83G10VG</b>	12W Mono Boosted Class D with Klippel Controlled Sound DSP	8W @ 4Ω 6.5W @ 8Ω	2.9~5.5	Integrated DSP	Mono	I2S, PCM, TDM	WLCSP 50 Balls with 0.5mm Pitch	P
<b>NAU83G20VG</b>	20W Mono Boosted Class D with Klippel Controlled Sound DSP	20W @ 4Ω 11W @ 8Ω	Up to 14	Integrated DSP	Mono	I2S, PCM, TDM	WLCSP 50 Balls with 0.5mm Pitch	P

\* Under Development  
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## Audio Enhancement

Part No.	Description	HW Configuration					Algorithms									
		I <sup>2</sup> S Stereo Inputs	ADC Stereo Inputs	I <sup>2</sup> S Output 2 x Stereo	DAC Single Output	Power Output	Bass	Pro. Eq.	3D	Treble	Volume	Level	Dialog	DRC	V3D	Package
<b>NPCP215F</b>	MaxxAudio	4	0	3	0	20W (8R)	Y	Y	Y	Y	Y	Y	Y	-	-	QFN48
<b>NPCA112D</b>	MaxxAudio	4	0	3	0	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN32
<b>NPCA110P</b>	MaxxAudio	2	3	3	4	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN40
<b>NPCA110T</b>	MaxxAudio	3	0	3	3	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN32
<b>NPCA110D</b>	MaxxAudio	3	0	3	0	-	Y	Y	Y	Y	Y	Y	Y	-	-	QFN32
<b>NPCA110B</b>	MaxxAudio	1	2	1	2	-	Y	Y	-	-	Y	-	-	-	-	QFN32
<b>NPCA120D</b>	DPS	2	0	2	0	-	Y	Y	Y	Y	Y	Y	Y	Y	-	LQFP64
<b>NPCA121D</b>	DPS	3	0	3	0	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	LQFP64

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## ChipCorder® Family

- Digital ChipCorder® Series

Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (°C)	Status*
<b>ISD15102</b>	Multi-message record/playback, Flash memory, I <sup>2</sup> S digital audio and SPI interfaces	2 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_15100	Industrial -40~85°C	P
<b>ISD15104</b>		4 min						
<b>ISD15108</b>		8 min						
<b>ISD15C00</b>	Multi-message record/playback with I <sup>2</sup> S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_15C00	AEC-Q100	P
<b>ISD15D00</b>	Multi-message playback-only with I <sup>2</sup> S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~5.5	QFN32	ISD-DMK_15D00	AEC-Q100	P
<b>ISD3900</b>	Multi-message record/playback with I <sup>2</sup> S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_3900	Industrial -40~85°C	P
<b>ISD3800</b>	Multi-message playback-only with I <sup>2</sup> S digital audio and SPI interfaces	Ext. Flash up to 64 min	Up to 48	2.7~5.5	LQFP48 QFN32	ISD-DMK_3800	Industrial -40~85°C	P
<b>ISD2130</b>	Multi-message playback-only with embedded Flash memory	30 sec	Up to 32	2.7~3.6	QFN20	ISD-DMK_2100	Industrial	P
<b>ISD2115A</b>		15 sec			SOP14	ISD-DMK_2100	Industrial -40~85°C	P
<b>ISD2360</b>	Multi-message, 3-channel audio, playback-only with embedded Flash memory	64 sec	Up to 32	2.4~5.5	QFN32 SOP16	ISD-DMK_2360	Industrial -40~85°C	P
<b>*ISD2361</b>	Multi-message, 3-channel audio, playback-only with embedded Flash and SPI Interface	64 sec + Ext. Flash up to 1024 min	Up to 32	2.4~5.5	QFN32	*ISD-DMK_2361	Industrial -40~85°C	Q4' 20

\* Under Development







## • MLS ChipCorder® Series

Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (°C)
<b>ISD14B20</b>	Multi-message record/playback with internal Flash memory	10~128 sec	4~12	2.4~5.5	DIE	ISD-COB18B20	0~50°C
<b>ISD14B40</b>						ISD-COB18B24	
<b>ISD14B80</b>						ISD-COB18B80	
<b>ISD1916</b>	Multi-message record/playback with internal Flash memory	10~128 sec	4~12	2.4~5.5	SOIC 28	ISD-DEMO1964	Industrial -40~85°C
<b>ISD1932</b>							
<b>ISD1964</b>							






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Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (°C)
<b>ISD1610B</b>	Single-message record/playback with internal Flash memory	6~40 sec	4~12	2.4~5.5	SOIC 16 DIE	I16-COB20	Commercial Industrial
<b>ISD1616B</b>							
<b>ISD1620B</b>							
<b>ISD1730</b>	Multi-message record/playback, internal Flash memory and SPI interface	20~480 sec	4~12	2.4~5.5	SOIC 28 PDIP 28 DIE	ISD-COB1730	Commercial Industrial
<b>ISD1760</b>						ISD-COB17160	
<b>ISD17120</b>						ISD-COB17150	
<b>ISD17240</b>						ISD-COB17240	
<b>ISD1806</b>	Single-message record/playback with internal Flash	6~16 sec	4~8	2.7~4.5	DIE	ISD-COB1810	0~50°C
<b>ISD1810</b>							
<b>ISD18A04</b>	Single-message record/playback with internal Flash memory	4~8 sec	4~8	2.4~5.5	DIE	ISD-COB18A04	0~50°C
<b>ISD18B12</b>	Single-message record/playback with internal Flash memory	6~24 sec	4~8	2.4~5.5	DIE	ISD-COB18B24	0~50°C
<b>ISD18B24</b>							
<b>ISD18C10</b>	Single-message record/playback with internal Flash memory	8-16 sec	4~8	2.7~4.5	DIE	ISD-COB18C10	0~50°C
<b>ISD4002</b>	Multi-message record/playback, internal Flash memory and SPI interface	2~16 min	4,5,3,6,4,8	2.7~3.3	PDIP 28 SOIC 28 DIE	ISD-IPROG-1	Commercial Industrial
<b>ISD4003</b>							
<b>ISD4004</b>							
<b>ISD5102</b>	Multi-message record/playback, internal Flash memory and I <sup>2</sup> C interface	2~16 min	4,5,3,6,4,8	2.7~3.3	PDIP 28 SOIC 28 DIE	ISD-IPROG-1	Commercial Industrial
<b>ISD5104</b>							
<b>ISD5108</b>							
<b>ISD5116</b>							





## Development Tools for AUI Enabler Series

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
<b>NM-I94100_AM</b>	<b>ISD-DMK_94100_AM</b>	ISD941xx series	<ul style="list-style-type: none"> <li>NL-ISD94124A</li> <li>NP-I94124_AM</li> <li>Speaker</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation, debugging and demo kit for ISD941xx</li> <li>Connect with Analog microphone adaptor</li> </ul>	
<b>NM-I94100_DM</b>	<b>ISD-DMK_94100_DM</b>	ISD941xx series	<ul style="list-style-type: none"> <li>NL-ISD94124A</li> <li>NP-I94124_DM</li> <li>Speaker</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation, debugging and demo kit for ISD941xx</li> <li>Connect with Digital microphone adaptor</li> </ul>	
<b>NV-ISD94100</b>	<b>DEMO-I94100-NAU88C22</b>	ISD941xx series	<ul style="list-style-type: none"> <li>DEMO-I94100-NAU88C22</li> </ul>	<ul style="list-style-type: none"> <li>ISD94100* demo board with Audio CODEC (NAU88C22) on board</li> <li>Connect to PC via ISD-NU-LINK for programming and debugging</li> <li>*P/N ISD94100 is for demo board use only</li> </ul>	
<b>NL-ISD94124A</b>	<b>EVB-I94124</b>	ISD94124	<ul style="list-style-type: none"> <li>EVB-I94124</li> </ul>	<ul style="list-style-type: none"> <li>ISD94124PDI Eval board with Nu-Link ICE Bridge on board for drag and drop programming</li> </ul>	
<b>NP-I94124_AM</b>	<b>EVB-I94124-NAU85L40</b>	ISD94124	<ul style="list-style-type: none"> <li>EVB-I94124-NAU85L40</li> </ul>	<ul style="list-style-type: none"> <li>Analog Microphone adaptor for NL-ISD94124A</li> </ul>	
<b>NP-I94124_DM</b>	<b>EVB-I94124-Audio</b>	ISD94124	<ul style="list-style-type: none"> <li>EVB-I94124-Audio</li> </ul>	<ul style="list-style-type: none"> <li>Digital Microphone adaptor for NL-ISD94124A</li> </ul>	

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Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
<b>NM-ISD91260</b>	<b>ISD-DMK_91260</b>	ISD91260CRI	<ul style="list-style-type: none"> <li>• ISD-DEMO91260</li> <li>• ISD-NU-LINK</li> <li>• Speaker</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation and demo kit for ISD91260CRI</li> </ul>	
<b>NM-ISD91260B</b>	<b>ISD-DMK_91260B</b>	ISD91260BRI	<ul style="list-style-type: none"> <li>• ISD-DEMO91260B</li> <li>• ISD-NU-LINK</li> <li>• Speaker</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation and demo kit for ISD91260BRI</li> </ul>	
<b>NM-ISD91032C</b>	<b>ISD-DMK_91032C</b>	ISD91032CFI	<ul style="list-style-type: none"> <li>• ISD-DEMO91032C</li> <li>• ISD-NU-LINK</li> <li>• Speaker</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation and demo kit for ISD91032CFI</li> </ul>	
<b>NM-ISD9160</b>	<b>ISD-DMK_9160</b>	ISD9160	<ul style="list-style-type: none"> <li>• ISD-DEMO9160</li> <li>• ISD-NU-LINK</li> <li>• ISD-9160-Touch</li> <li>• ISD-9160-KB</li> <li>• Speaker</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation, debugging and demo kit for ISD9160</li> <li>• Keil RV/MDK available on Keil website</li> <li>• Supports ICP (In-Circuit Programming)</li> </ul>	
<b>NM-ISD91300</b>	<b>ISD-DMK_91300</b>	ISD913xx	<ul style="list-style-type: none"> <li>• ISD-DEMO91300</li> <li>• ISD-91300-Touch</li> <li>• Speaker</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation, debugging and demo kit for ISD91300</li> <li>• Keil RV/MDK available on Keil website</li> <li>• Supports ICP (In-Circuit Programming)</li> </ul>	

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Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Programmer/Writer					
<b>NW-ISD9160</b>	<b>ISD-ES9160__Prog_F</b>	ISD9160 Series LQFP package	• ISD-ES9160__Prog_F	• ISD9160 LQFP single socket programmer • Connect to PC via ISD NU-LINK for programming and evaluation	
<b>NG-ISD9160</b>	<b>ISD-9160_GANG_Prog_F</b>	ISD9160	• ISD-9160_GANG_Prog_F	• ISD9160 LQFP standalone gang programmer	
<b>NW-ISD91300</b>	<b>ISD-ES91300_PROG_F</b>	ISD913xx	• ISD-ES91300_PROG_F	• ISD913xx LQFP single socket programmer for programming and evaluation	
<b>NG-ISD91300</b>	<b>ISD-91300_GANG_Prog_F</b>	ISD913xx	• ISD-91300_GANG_Prog_F	• ISD913xx LQFP standalone gang programmer	





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## Development Tools for Audio Converters

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
<b>NV-NAU88C10</b>	NAU88C10-DEMO	NAU88C10	• NAU88C10-DEMO	• Compact Audio Base Board + NAU88C10YG daughter card	
<b>NV-NAU8810</b>	NAU8810-DEMO	NAU8810	• NAU8810-DEMO	• Compact Audio Base Board + NAU8810YG daughter card	
<b>NV-NAU8812</b>	NAU8812-DEMO	NAU8812	• NAU8812-DEMO	• Compact Audio Base Board + NAU8812RG daughter card	
<b>NV-NAU88C14</b>	NAU88C14-DEMO	NAU88C14	• NAU88C14-DEMO	• Compact Audio Base Board + NAU88C14YG daughter card	
<b>NV-NAU8814</b>	NAU8814-DEMO	NAU8814	• NAU8814-DEMO	• Compact Audio Base Board + NAU8814YG daughter card	






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## Development Tools for Audio CODECs

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
<b>NL-NAU88L25</b>	NAU88L25-DEMO	NAU88L25	• NAU88L25-DEMO	• Demo board for NAU88L25YGB	
<b>NU-NAUSB2I2C</b>	USB-To-I2C/I2S	Audio Amplifier Audio converter (CODEC/ADC/DAC) Audio Enhancement	• USB-To-I2C/I2S	• USB-To-I2C/I2S control board for Audio Converter/Audio Amplifier/Audio Enhancement product lines.	
<b>NL-NAU88L24I</b>	NAU88L24I-DEMO	NAU88L24	• NAU88L24I-DEMO	• Demo board for NAU88L24IG	
<b>NL-NAU88L21</b>	NAU88L21-DEMO	NAU88L21	• NAU88L21-DEMO	• Demo board for NAU88L21YG	
<b>NV-NAU8822A</b>	NAU8822A-DEMO	NAU8822A NAU88U22A	• NAU8822A-DEMO	• Compact Audio Base Board + NAU8822AYG daughter card	
<b>NV-NAU88C22</b>	NAU88C22-DEMO	NAU88C22	• NAU88C22-DEMO	• Compact Audio Base Board + NAU88C22YG daughter card	
<b>NV-NAU8820</b>	NAU8820-DEMO	NAU8820	• NAU8820-DEMO	• Compact Audio Base Board + NAU8820YG daughter card	
<b>NV-NAU8401</b>	NAU8401-DEMO	NAU8401	• NAU8401-DEMO	• Compact Audio Base Board + NAU8401YG daughter card	
<b>NV-NAU8501</b>	NAU8501-DEMO	NAU8501	• NAU8501-DEMO	• Compact Audio Base Board + NAU8501YG daughter card	
<b>NL-NAU85L40</b>	NAU85L40-DEMO	NAU85L40	• NAU85L40-DEMO	• Demo board for NAU85L40YGB	
<b>NL-NAU85L20</b>	NAU85L20-DEMO	NAU85L20	• NAU85L20-DEMO	• Demo board for NAU85L20YGB	
<b>NT-NAU8402</b>	NAU8402-Card	NAU8402	• NAU8402-Card	• NAU8402WG Daughter Board	
<b>NT-NAU8502</b>	NAU8502-Card	NAU8502	• NAU8502-Card	• NAU8502YG Daughter Board	



## Development Tools for Audio Amplifiers






Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Power Amplifier					
<b>NE-NAU82011V</b>	NAU82011V-EVB	NAU82011	• NAU82011V-EVB	• Evaluation Board for NAU82011VG	
<b>NT-ISD8101</b>	ISD-DEMO8101	ISD8101	• ISD8101-DEMO	• Demo Board for I8101SYI	
<b>NT-ISD8102</b>	ISD-DEMO8102	ISD8102	• ISD8102-DEMO	• Demo Board for I8102SYI	
<b>NT-ISD8104</b>	ISD-DEMO8104	ISD8104	• ISD8104-DEMO	• Demo Board for I8104SYI	
<b>NL-NAU8315</b>	NAU8315-DEMO	NAU8315	• NAU8315-DEMO	• Demo Board for NAU8315YG	
<b>NL-NAU8315B</b>	NAU8315B-DEMO	NAU8315	• NAU8315-DEMO	• Demo Board for NAU8315B31VG WLCSP-12	
<b>NL-NAU8325</b>	NAU8325-DEMO	NAU8325	• NAU8325-DEMO	• Demo Board for NAU8325YG	
<b>NE-NAU8223</b>	NAU8223-EVB	NAU8223	• NAU8223-EVB	• Evaluation Board for NAU8223YG	
<b>NE-NAU8224</b>	NAU8224-EVB	NAU8224	• NAU8224-EVB	• Evaluation Board for NAU8224YG	
<b>NU-NAU8224</b>	NAU-ES_MINI_USB	NAU8224	• NAU-ES_MINI_USB	• USB to I <sup>2</sup> C bus dongle for NAU8224-EVB	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Power Amplifier					
<b>NE-NAU8220</b>	NAU8220WG-EVB	NAU8220	• NAU8220WG-EVB	• Evaluation Board for NAU8220WG	
<b>NV-NAU83G10S</b>	NAD-NAU83G10	NAU83G10	• NAD-NAU83G10	• Stereo NAU83G10 EVAL Board	
<b>NV-NAU83G20S</b>	NAD-NAU83G20	NAU83G20	• NAD-NAU83G20	• Stereo NAU83G20 EVAL Board	
<b>NM-N83G10MA</b>	NAD-NAU83G10_BRS-161200	NAU83G10	• NAD-NAU83G10_BRS-161200	• Mono NAU83G10 with Bujeon BRS-161200	
<b>NM-N83G10MB</b>	NAD-NAU83G10_BRS-181300	NAU83G10	• NAD-NAU83G10_BRS-181300	• Mono NAU83G10 with Bujeon BRS-181300	
<b>NM-N83G10SA</b>	NAD-NAU83G10_2*BRS-161200	NAU83G10	• NAD-83G10_2*BRS-161200	• Stereo NAU83G10 with 2x Bujeon BRS-161200	
<b>NM-N83G10SB</b>	NAD-NAU83G10_2*BRS-181300	NAU83G10	• NAD-83G10_2*BRS-181300	• Stereo NAU83G10 with 2x Bujeon BRS-181300	
<b>NM-N83G20MA</b>	NAD-NAU83G20_BUF-4203	NAU83G20	• NAD-NAU83G20_BUF-4203	• Mono NAU83G20 with Bujeon BUF-4203	
<b>NM-N83G20SA</b>	NAD-NAU83G20_2*BUF-4203	NAU83G20	• NAD-NAU83G20_2*BUF-4203	• Stereo NAU83G20 with 2x Bujeon BUF-4203	

## Development Tools for ChipCorder® Family










Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
<b>NM-ISD15100</b>	ISD-DMK_15100	ISD15102/04/08	<ul style="list-style-type: none"> <li>• ISD-DEMO15100</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD15102/4/8	
<b>NM-ISD15C00</b>	ISD-DMK_15C00	ISD15C00	<ul style="list-style-type: none"> <li>• ISD-DEMO15C00</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD15C00	
<b>NM-ISD15D00</b>	ISD-DMK_15D00	ISD15D00	<ul style="list-style-type: none"> <li>• ISD-DEMO15D00</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD15D00	
<b>NM-ISD2100Q</b>	ISD-DMK_2100	ISD2100YYI	<ul style="list-style-type: none"> <li>• ISD-DEMO2100_Q</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD2100Y	
<b>NM-ISD2360Q</b>	ISD-DMK_2360_Q	ISD2360YYI	<ul style="list-style-type: none"> <li>• ISD-DEMO2360_Q</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD2360Y	
<b>NM-ISD2360S</b>	ISD-DMK_2360_S	ISD2360SYI	<ul style="list-style-type: none"> <li>• ISD-DEMO2360_S</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD2360S	
<b>NM-ISD3800</b>	ISD-DMK_3800	ISD3800	<ul style="list-style-type: none"> <li>• ISD-DEMO3800</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD3800	
<b>NM-ISD3900</b>	ISD-DMK_3900	ISD3900	<ul style="list-style-type: none"> <li>• ISD-DEMO3900</li> <li>• ISD-ES_MINI_USB</li> <li>• Speaker</li> </ul>	• Evaluation and demo kit for ISD3900	

## Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
<b>NT-ISD1964</b>	ISD-DEMO1964	ISD1916/32/64 Class-D output	• ISD-DEMO1964	• ISD1900 demo board with I1964SYI on board	
<b>NT-ISD1964A</b>	ISD-DEMO1964_AUX	ISD1916/32/64 AUX output	• ISD-DEMO1964_AUX	• ISD1900 AUX output demo board with ISD1964SYI01 on board	
<b>NC-ISD18B24</b>	ISD-COB18B24	ISD18B12/24	• ISD-COB18B24	• ISD18B24/12 demo board	
<b>NC-ISD18C10</b>	ISD-COB18C10	ISD18C10	• ISD-COB18C10	• ISD18C10/18C06 demo board (SPK/MIC sharing)	
<b>NC-ISD1810</b>	ISD-COB1810	ISD1806/10	• ISD-COB1810	• ISD1810/1806 demo board	






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## Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
<b>NC-ISD17240</b>	ISD-COB17240	ISD17240/210/180	• ISD-COB17240	• ISD17240/210/180 demo board	
<b>NC-ISD17150</b>	ISD-COB17150	ISD17150	• ISD-COB17150	• ISD17150/120/090 demo board	
<b>NC-ISD1760</b>	ISD-COB1760	ISD1760	• ISD-COB1760	• ISD1760/50/40 demo board	
<b>NC-ISD1730</b>	ISD-COB1730	ISD1730	• ISD-COB1730	• ISD1730 demo board	
<b>NC-ISD1620B</b>	I16-COB20	ISD1600 Series	• I16-COB20	• ISD1610/16/20 demo board	
Programmer/Writer					
<b>NW-ISD15100</b>	ISD-ES15100_Mini_PROG_F	ISD15102/04/08	• ISD-ES15100_Mini_PROG	• ISD15102/04/08 LQFP single socket programmer • Connect to PC via ISD-ES_Mini_USB for programming and evaluation	
<b>NW-ISD2100Q</b>	ISD-ES2100_Mini_PROG_Q	ISD2100 Series QFN package	• ISD-ES2100_Mini_PROG_Q	• ISD2100 QFN single socket programmer • Connect to PC via ISD-ES_Mini_USB for programming and evaluation	
<b>NW-ISD2100S</b>	ISD-ES2100_Mini_PROG_S	ISD2100 Series SOP package	• ISD-ES2100_Mini_PROG_S	• ISD2100 SOP single socket programmer • Connect to PC via ISD-ES_Mini_USB for programming and evaluation	
<b>NG-ISD2100Q</b>	ISD-2100_GANG_Prog_Q	ISD2100 Series QFN package	• ISD-2100_GANG_Prog_Q	• ISD2100 QFN standalone gang programmer	

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## Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
<b>NG-ISD2100S</b>	ISD-2100_GANG_Prog_S	ISD2100 Series package SOP	• ISD-2100_GANG_Prog_S	• ISD2100 SOP standalone gang programme	
<b>NW-ISD2360Q</b>	ISD-ES2360_MINI_PROG_Q	ISD2360	• ISD-ES2360_MINI_PROG_Q	• ISD2360 QFN single socket programmer, used with ISD-ES_Mini_USB • Connect to PC via ISD-ES_Mini_USB for programming and evaluation	
<b>NW-ISD2360S</b>	ISD-ES2360_MINI_PROG_S	ISD2360	• ISD-ES2360_MINI_PROG_S	• ISD2360 SOP single socket programme • Connect to PC via ISD-ES_Mini_USB for programming and evaluation	
<b>NG-ISD2360S</b>	ISD-2360_GANG_PROG_S	ISD2360 packageP SO	• ISD-2360_GANG_PROG_S	• ISD2360 SOP standalone gang programme	
<b>NG-ISD2360Q</b>	ISD-2360_GANG_PROG_Q	ISD2360 QFN package	• ISD-2360_GANG_PROG_Q	• ISD2360 QFN standalone gang programmer	
<b>*NM-ISD2361Q</b>	ISD-DMK_2361_Q	ISD2361YYI	• ISD-DEMO2361_Q • ISD-ES_MINI_USB • Speaker	• Evaluation and demo kit for ISD2361Y • Available in Q4'20	
<b>*NM-ISD2361S</b>	ISD-DMK_2361_S	ISD2361SYI	• ISD-DEMO2361_S • ISD-ES_MINI_USB • Speaker	• Evaluation and demo kit for ISD2361S • Available in Q4'20	

\* Under Development






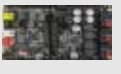
Contact us: [ChipCorder@nuvoton.com](mailto:ChipCorder@nuvoton.com)

## Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
<b>NW-ISDPROG</b>	ISD-PROG	ISD2100 Series ISD15100 Series ISD15D00 Series Winbond SPI Flash	• ISD-PROG	• Stand alone Programmer for Digital ChipCorder	
<b>NW-ISDIPROG1</b>	ISD-IPROG-1	ISD4000/5000/1700	• ISD-PROG-1	• Single chip programming board support ISD4000/5000/1700 Series	
<b>NW-P1700</b>	P1700	ISD1700	• P1700	• Programmer adapter of ISD-IPROG-1 for ISD1700 Series	
<b>NE-ISD1700</b>	ISD-ES17XX_USB_PB	ISD1700 Serie	• ISD-ES17XX_USB_PB	• Eval board for 1700 Series	
<b>NE-ISD1900</b>	ISD-ES1900_USB_PROG	ISD1900 Serie	• ISD-ES1900_USB_PROG	• USB evaluation board for ISD1900 Series	
<b>NE-ISD1600</b>	ISD-ES1600_USB_PROG	ISD1600 Serie	• ISD-ES1600_USB_PROG	• USB evaluation board for ISD1600 Series	
Software					
	<b>VPE</b>	ISD2130/15 ISD2360 ISD15C00/3900 ISD15C00/3900/15102/4/8 ISD15D00/3800	• Development software	• Download link: <a href="http://www.nuvoton.com/hq/products/isd-voice-ics/isd-chipcorder-family/Software/?__locale=en&amp;resourcePage=Y">http://www.nuvoton.com/hq/products/isd-voice-ics/isd-chipcorder-family/Software/?__locale=en&amp;resourcePage=Y</a>	
	<b>SDK for Audio SoC</b>	ISD91xxx	• Development software	• <a href="http://www.nuvoton.com/hq/products/application-specific-socs/arm-based-audio/Software/?__locale=en&amp;resourcePage=Y&amp;category=%2f_categories%2fsupport%2ftool-and-software%2fsoftware%2f&amp;pageIndex=1">http://www.nuvoton.com/hq/products/application-specific-socs/arm-based-audio/Software/?__locale=en&amp;resourcePage=Y&amp;category=%2f_categories%2fsupport%2ftool-and-software%2fsoftware%2f&amp;pageIndex=1</a>	

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## Development Tools for Audio Enhancement Series

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
<b>NE-NPCA120</b>	EVB-NPCA120_V1.0	NPCA120DD	• NPCA120DD evaluation board	• NPCA120 Audio enhancement, Bongiovi DPS, Standard level evaluation board	
<b>NE-NPCA121</b>	EVB-NPCA121_V1.0	NPCA121DD	• NPCA121DD evaluation board	• NPCA121 Audio enhancement, Bongiovi DPS, Premium level evaluation board	
<b>NE-NPCA110XB</b>	NPCA110x evaluation board	NPCA110x device	• NPCA110x evaluation board	• NPCA110x 1 watt base board	
<b>NT-NPCA110PP</b>	NPCA110P/M Piggy board	NPCA110P	• NPCA110P/M evaluation board	• NPCA110P Piggy board	
<b>NU-NPUSB2I2C</b>	USB-To-I <sup>2</sup> C/I <sup>2</sup> S	NPCA110x & NPCP215x	• USB-To-I <sup>2</sup> C/I <sup>2</sup> S	• USB2I2C board for NPCA110x & NPCP215x	
<b>NE-NPCP215F</b>	NPCP215x evaluation board	NPCP215F	• NPCP215x evaluation board	• NPCP215F evaluation board	

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