

2022

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			
ISD91032	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
ISD91032C	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
ISD9130	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, I ² C, I ² S, PDMA, CRC	LQFP48 QFN32
ISD9160	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, I ² C, I ² S, PDMA, CRC	LQFP48 QFN32
ISD9160C	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, I ² C, I ² S, PDMA, CRC	LQFP48 QFN32
ISD91230	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, I ² C, I ² S, PDMA, CRC	LQFP64 QFN32
ISD91230B	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, I ² C, I ² S, PDMA, CRC	LQFP64
ISD91260	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, I ² C, I ² S, PDMA, CRC	LQFP64 QFN32

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Development Tools	Other	Package
										MIC.	Speaker			
ISD91260B	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
ISD91260C	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
ISD91331	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
ISD91361	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
ISD91361C	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
ISD91530	Cortex®-M0 49 MHz	64 KB Flash	12KB	50	3	2 (Quad/ Dual)	2	12-bit SAR ADC	√	1	Class- AB (20mW)	ISD- DMK_91500	USB 2.0 FS	LQFP64 QFN48
ISD91535	Cortex®-M0 49 MHz	64 KB Flash	20KB	50	3	2 (Quad/ Dual)	2	12-bit SAR ADC	√	1	Class- AB (20mW)	ISD- DMK_91500	USB 2.0 FS	LQFP64 QFN348

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• AUI Enabled Series-M4

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Development Tools	Other	Package	Status*
										MIC.	Speaker				
ISD94124A	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
ISD94124B	Cortex®-M4 200 MHz, Basic fetaure	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

Part No.	CPU	APROM	SRAM	I/O	Timer	SPI	PWM	ADC	RTC	Audio		Development Tools	Other	Package	Status*
										MIC.	Speaker				
ISD94124C	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
ISD94124D	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
ISD94124P	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
ISD94124S	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
ISD941A24A	Cortex®-M4 200MHz, Stereo CODEC MCP	512 KB	192 KB	29	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DEMO941A24	USB 2.0 FS VAD	LQFP64	P
ISD941A24S	Cortex®-M4 200MHz, Stereo CODEC MCP	512 KB	192 KB	29	4	3 (1 x Quad/ Dual)	6	12-bit SAR ADC	√	4x DMIC	DPWM to external amp	ISD-DEMO941A24	AEC+NR, USB 2.0 FS VAD	LQFP64	P
ISD94123B	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
ISD94123S	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
ISD94113A	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
ISD94113B	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
ISD94113S	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

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						
NAU8810	Mono Codec with 2-wire interface	1	1	91	93	-79	-84	8~48	I ² 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)
NAU88C10	Mono Codec with 2-wire interface	1	1	91	93	-79	-84	8~48	I ² 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)
NAU88U10	AEC-Q100 Automotive Grade Mono Codec with 2-wire interface.	1	1	91	93	-79	-84	8~48	I ² 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)
NAU8812	Mono Codec with speaker driver	1	1	91	93	-79	-84	8~48	I ² 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
NAU8814	Mono Audio Codec with Equalizer, speaker driver	1	1	91	93	-79	-84	8~48	I ² 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)
NAU88C14	Mono Audio Codec with Equalizer, speaker driver	1	1	91	93	-79	-84	8~48	I ² 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							
NAU8822A	Stereo Codec with Speaker Drive	2	2	90	94	-80	-84	8~48	I ² 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
NAU88U22A	AEC-Q100 Automotive Grade Stereo Codec with Speaker Drive	2	2	90	94	-80	-84	8~48	I ² 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
NAU88C22	Stereo Codec with Speaker Drive	2	2	89	89	-78	-84	8~192	I ² 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
NAU8820	Stereo Codec	2	2	90	94	-80	-84	8~48	I ² 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

• 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/ Digital I/O (V)	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
NAU88L21	ULP Stereo CODEC with Class-G Headphone Driver	2	2	103	105	-91	-80	8~192	I ² S (TDM) PCM (Timeslot)	NAU88L21- DEMO	I ² C	NA 3.0 ~ 3.6 1.62 ~ 1.98 N/A 1.62 ~ 3.6	QFN32 (5x5)	P

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Part No.	Description	# of		SNR (dB)		THD (dB)		Sample Rate (KHz)	Audio Format	Development Tools	CTRL IF	SPKVDD/ MICBIAS/ Analog/Digital/ Digital I/O (V)	Package (mm)	Status*
		ADC	DAC	ADC	DAC	ADC	DAC							
NAU88L11	ULP Mono CODEC with Class-G Headphone Driver	1	1	103	105	-93	-85	8~96	I ² S (TDM) PCM (Timeslot)	NAU88L11-DEMO	I ² C	NA 3.0 ~ 3.6 1.62 ~ 1.98 N/A 1.62 ~ 3.6	QFN20 (4x4)	P
NAU88L20*	ULP Stereo CODEC with I2S/PCM interface and digital mixer	2	2	98	100	-91	-85	8~96	I ² S (TDM) PCM (Timeslot)		I ² C	NA 3.0 ~ 3.6 1.6 ~ 3.6 1.6 ~ 3.6 1.6 ~ 3.6	QFN32 (4x4)	2022Q1 MP*
NAU88L24	ULP Stereo CODEC With Advanced Headset Detection and Stereo Class D Amp	2	2	100	103	-85	-77	8~96	I ² S (TDM) PCM (Timeslot)	NAU88L24I-DEMO	I ² C	2.5 ~ 5.0 2.5 ~ 5.0 1.6 ~ 2.0 1.1 ~ 1.98 1.6 ~ 3.6	QFN48 (6x6)	P
NAU88L25B	Ultra-Low Power Audio CODEC With Advanced Headset Features and 124dB Class G Headphone Drive	1	2	101	124	-91	-89	8~192	I ² S / PCM	NAU88L25-DEMO	I ² 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						
NAU8501	Stereo ADC with Input Mixer and Line Output	2	-	90	-	-80	-	8~48	I ² 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)
NAU8502	Stereo ADC with Integrated LDO	2	-	90	-	-80	-	8~48	I ² 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						
NAU85L20	ULP Stereo Audio ADC with integrated FLL and Microphone Preamplifier	2	-	101	-	-91	-	8~96	I ² S (TDM)	NAU85L20-DEMO	I ² S	1.80 ~ 5.50 1.62 ~ 1.98 1.20 ~ 1.98 1.62 ~ 3.60	QFN28 (4x4)
NAU85L40	ULP Quad Audio ADC with integrated FLL and Microphone Preamplifier	4	-	101	-	-91	-	8~96	I ² S (TDM)	NAU85L40-DEMO	I ² 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						
NAU8401	Stereo DAC with Speaker Drive and Line Input	-	2	-	94	-	-84	8~48	I ² 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)
NAU8402	Stereo DAC with 2Vrms Output	-	2	-	98	-	-82	8~96	I ² 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*
NAU7802	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 (%)						
NAU8220	2Vrms Line Driver	108	-	0.003	-	-	3.0~3.6	-40~85	NAU8220WG-EVB	SOP14 TSSOP14
ISD8101	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						
ISD8102	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)
ISD8104	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

• 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 (%)							
NAU82011	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 WCSP-9	P
NAU82039	3.2W Mono Class-D Audio Amplifier, variable gain with Differential / Single ended inputs	3.2W into 4Ω at 5V	<10	12dB	<1	2.5~5.5	-40~85		WLCSP-9	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 (%)							
NAU8223	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
NAU8224	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 ~ -62	<1	2.5~5.5	-40~85	NAU8224-EVB	QFN20	P
NAU8315	I2S, 3.2W Mono Filer-Free Class-D Audio Amplifier, with I2S input	3.2W into 4Ω at 5V	<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
NAU8325	I2S, 3.1W Stereo Filer-Free Class-D Audio Amplifier, 2 wire interface	3.0W into 4Ω at 5V	<10	24 ~ -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
NAU83P20	Class D power stage 2x20W into 80ohms (1% THD)	10Wx4 20Wx2	<0.18	3BTL / 3SE	<1	7.0~24.0	-40~85	NAU83P20-DEMO	QFN48	P

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• Smart Amplifier

Part No.	Description	Output Power	Operating Voltage (V)	Speaker Protection	Speaker Channel	Audio Interface	Package	Status
NAU8331VG	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
NAU83G10VG	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
NAU83G20VG	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

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Audio Enhancement

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

ChipCorder® Family

- Digital ChipCorder® Series

Part No.	Description	Duration	Sample Rate (KHz)	Operating Voltage (V)	Package	Development Tools	Temp (°C)	Status*
ISD15102	Multi-message record/playback, Flash memory, I ² S digital audio and SPI interfaces	2 min	Up to 48	2.7~3.6	LQFP48	ISD-DMK_15100	Industrial -40~85°C	P
ISD15104		4 min						
ISD15108		8 min						
ISD15C00	Multi-message record/playback with I ² 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
ISD15D00	Multi-message playback-only with I ² 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
ISD3900	Multi-message record/playback with I ² 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
ISD3800	Multi-message playback-only with I ² 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
ISD2130	Multi-message playback-only with embedded Flash memory	30 sec	Up to 32	2.7~3.6	QFN20 SOP14	ISD-DMK_2100	Industrial -40~85°C	P
ISD2115A		15 sec						P
ISD2360	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
ISD2361	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 SOP16	ISD-DMK_2361	Industrial -40~105°C	P









• MLS ChipCorder® Series

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











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

Development Tools for AUI Enabler Series

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
NM-I94100_AM	ISD-DMK_94100_AM	ISD941xx Series	<ul style="list-style-type: none"> NL-ISD94124A NP-I94124_AM Speaker 	<ul style="list-style-type: none"> Evaluation, Debugging and Demo Kit for ISD941xx Connect with Analog Microphone Adaptor 	
NM-I94100_DM	ISD-DMK_94100_DM	ISD941xx Series	<ul style="list-style-type: none"> NL-ISD94124A NP-I94124_DM Speaker 	<ul style="list-style-type: none"> Evaluation, Debugging and Demo Kit for ISD941xx Connect with Digital Microphone Adaptor 	
NV-ISD94100	DEMO-I94100-NAU88C22	ISD941xx Series	<ul style="list-style-type: none"> DEMO-I94100-NAU88C22 	<ul style="list-style-type: none"> ISD94100* Demo Board with Audio CODEC (NAU88C22) on Board Connect to PC Via ISD-NU-LINK for Programming and Debugging * P/N ISD94100 is for Demo Board Use Only 	
NL-ISD94124A	EVB-I94124	ISD94124	<ul style="list-style-type: none"> EVB-I94124 	<ul style="list-style-type: none"> ISD94124PDI Eval Board with Nu-Link ICE Bridge on Board for Drag and Drop Programming 	
NP-I94124_AM	EVB-I94124-NAU85L40	ISD94124	<ul style="list-style-type: none"> EVB-I94124-NAU85L40 	<ul style="list-style-type: none"> Analog Microphone Adaptor for NL-ISD94124A 	
NP-I94124_DM	EVB-I94124-Audio	ISD94124	<ul style="list-style-type: none"> EVB-I94124-Audio 	<ul style="list-style-type: none"> Digital Microphone Adaptor for NL-ISD94124A 	
NV-ISD941A24	ISD-DEMO941A24	ISD941A24	<ul style="list-style-type: none"> ISD-DEMO941A24 	<ul style="list-style-type: none"> Demo Board for ISD941A24SDI 	
NU-NULINKISD	ISD-NU-LINK	ISD9160 ISD91032 ISD91260	<ul style="list-style-type: none"> ISD-NU-LINK 	<ul style="list-style-type: none"> USB Dongle for ISD-DEMO9160, for Evaluation and Debugging. Support ICP(In-Circuit Programming) 	








Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Development Kit					
NM-ISD91260	ISD-DMK_91260	ISD91260CRI	<ul style="list-style-type: none"> • ISD-DEMO91260 • ISD-NU-LINK • Speaker 	• Evaluation and Demo Kit for ISD91260CRI	
NM-ISD91260B	ISD-DMK_91260B	ISD91260BRI	<ul style="list-style-type: none"> • ISD-DEMO91260B • ISD-NU-LINK • Speaker 	• Evaluation and Demo Kit for ISD91260BRI	
NM-ISD91032C	ISD-DMK_91032C	ISD91032CFI	<ul style="list-style-type: none"> • ISD-DEMO91032C • ISD-NU-LINK • Speaker 	• Evaluation and Demo Kit for ISD91032CFI	
NM-ISD9160	ISD-DMK_9160	ISD9160	<ul style="list-style-type: none"> • ISD-DEMO9160 • ISD-NU-LINK • ISD-9160-Touch • ISD-9160-KB • Speaker 	<ul style="list-style-type: none"> • Evaluation, Debugging and Demo Kit for ISD9160 • Keil RV/MDK Available on Keil Website • Supports ICP (In-Circuit Programming) 	
NM-ISD91300	ISD-DMK_91300	ISD913xx	<ul style="list-style-type: none"> • ISD-DEMO91300 • ISD-91300-Touch • Speaker 	<ul style="list-style-type: none"> • Evaluation, Debugging and Demo Kit for ISD91300 • Keil RV/MDK Available on Keil Website • Supports ICP (In-Circuit Programming) 	
NM-ISD91500	ISD-DMK_91500	ISD91500ADI	<ul style="list-style-type: none"> • NT-ISD91500 • ISD-NU-Link • Speaker 	• Evaluation and Demo Kit for ISD91500ADI	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Programmer/Writer					
NW-ISD9160	ISD-ES9160__Prog_F	ISD9160 Series LQFP Package	• ISD-ES9160__Prog_F	• ISD9160 LQFP Single Socket Programmer • Connect to PC Via ISD NU-LINK for Programming and Evaluation	
NG-ISD9160	ISD-9160_GANG_Prog_F	ISD9160	• ISD-9160_GANG_Prog_F	• ISD9160 LQFP Standalone Gang Programmer	
NW-ISD91300	ISD-ES91300_PROG_F	ISD913xx	• ISD-ES91300_PROG_F	• ISD913xx LQFP Single Socket Programmer for Programming and Evaluation	
NG-ISD91300	ISD-91300_GANG_Prog_F	ISD913xx	• ISD-91300_GANG_Prog_F	• ISD913xx LQFP Standalone Gang Programmer	
NT-ISD91260B	ISD-DEMO91260B	ISD91260B	• ISD-DEMO91260B	• ISD91260BRI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NT-ISD91260	ISD-DEMO91260	ISD91261	• ISD-DEMO91260	• ISD91260CRI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NT-ISD91032C	ISD-DEMO91032C	ISD91032	• ISD-DEMO91032C	• ISD91032CFI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NT-ISD9160	ISD-DEMO9160	ISD9160	• ISD-DEMO9160	• ISD9160CFI Demo Board • Connect to PC Via ISD-NU-LINK for Programming and Debugging	
NP-ISD9160-T	ISD-9160-TOUCH	ISD9160	• ISD-9160-TOUCH	• 8-Input Touch Pad for ISD-DEMO9160	
NP-ISD9160-K	ISD-9160-KB	ISD9160	• ISD-9160-KB	• 8-Input Key Pad for ISD-DEMO9161	

Development Tools for Audio Converters











Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
NV-NAU88C10	NAU88C10-DEMO	NAU88C10	• NAU88C10-DEMO	• Compact Audio Base Board + NAU88C10YG Daughter Card	
NV-NAU8810	NAU8810-DEMO	NAU8810	• NAU8810-DEMO	• Compact Audio Base Board + NAU8810YG Daughter Card	
NV-NAU8812	NAU8812-DEMO	NAU8812	• NAU8812-DEMO	• Compact Audio Base Board + NAU8812RG Daughter Card	
NV-NAU88C14	NAU88C14-DEMO	NAU88C14	• NAU88C14-DEMO	• Compact Audio Base Board + NAU88C14YG Daughter Card	
NV-NAU8814	NAU8814-DEMO	NAU8814	• NAU8814-DEMO	• Compact Audio Base Board + NAU8814YG Daughter Card	
NT-NAU88C10	NAU88C10-Card	NAU88C10	• NAU88C10-Card	• NAU88C10YG Daughter Board	
NT-NAU8810	NAU8810-Card	NAU8810	• NAU8810-Card	• NAU8810YG Daughter Board	
NT-NAU8812	NAU8812-Card	NAU8812	• NAU8812-Card	• NAU8812YG Daughter Board	
NT-NAU88C14	NAU88C14-Card	NAU88C14	• NAU88C14-Card	• NAU88C14YG Daughter Board	
NT-NAU8814	NAU8814-Card	NAU8814	• NAU8814-Card	• NAU8814YG Daughter Board	

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Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
NL-NAU88L25	NAU88L25-DEMO	NAU88L25	• NAU88L25-DEMO	• Demo Board for NAU88L25YGB	
NU-NAU88L25	NAU-Audio_Control_USB	NAU88L21 NAU88L24I NAU88L25 NAU85L40	• NAU-Audio_Control_USB	• Micro USB Audio Control Board for Connecting NL-NAU88L21, NL-NAU88L24I, NL-NAU88L25 and NL-NAU85L40 to PC	
NL-NAU88L24I	NAU88L24I-DEMO	NAU88L24	• NAU88L24I-DEMO	• Demo Board for NAU88L24IG	
NL-NAU88L21	NAU88L21-DEMO	NAU88L21	• NAU88L21-DEMO	• Demo Board for NAU88L21YG	
NL-NAU88C22	NAU88C22-DEMO	NAU88C22	• NAU88C22-DEMO	• Demo Board for NAU88C22YG	
NU-NAUSB2I2C	USB-To-I2C/I2S_V1.1	NAU88C22 NAU8315/8315B NAU8325 NAU88L21 NAU88L24/88L25 NAU85L40/85L20 NPCA120/121	• USB-To-I2C/I2S_V1.1	• USB-To-I2C/I2S Control Board for Audio Amplifier & Audio Codec Demo Board	
NV-NAU8822A	NAU8822A-DEMO	NAU8822A NAU88U22A	• NAU8822A-DEMO	• Compact Audio Base Board + NAU8822AYG Daughter Card	
NV-NAU8820	NAU8820-DEMO	NAU8820	• NAU8820-DEMO	• Compact Audio Base Board + NAU8820YG Daughter Card	
NV-NAU8401	NAU8401-DEMO	NAU8401	• NAU8401-DEMO	• Compact Audio Base Board + NAU8401YG Daughter Card	
NV-NAU8501	NAU8501-DEMO	NAU8501	• NAU8501-DEMO	• Compact Audio Base Board + NAU8501YG Daughter Card	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation Board					
NL-NAU7802	NAU7802-EVB	NAU7802	• NAU7802-DEMO	• Evaluation Board for NAU7802	
NL-NAU88L11	NAU88L11-DEMO	NAU88L11	• NAU88L11-DEMO	• Demo Board for NAU88L11YG	
NL-NAU85L40S	NAU85L40S-DEMO	NAU85L40S	• NAU85L40S-DEMO	• Demo Board fo NAU85L40YGB with Single Ended MIC.	
NL-NAU85L40	NAU85L40-DEMO	NAU85L40	• NAU85L40-DEMO	• Demo Board for NAU85L40YGB	
NL-NAU85L20	NAU85L20-DEMO	NAU85L20	• NAU85L20-DEMO	• Demo Board for NAU85L20YGB	
NT-NAU85L40	NAU85L40-Card	NAU85L40	• NAU85L40-Card	• NAU85L40YG Daughter Board	
NT-NAU88L24I	NAU88L24I-Card	NAU88L24	• NAU88L24I-Card	• NAU88L24IG Daughter Board	
NT-NAU8822A	NAU8822A-Card	NAU8822A NAU88U22A	• NAU8822A-Card	• NAU8822AYG Daughter Board	
NT-NAU8820	NAU8820-Card	NAU8820	• NAU8820-Card	• NAU8820YG Daughter Board	
NT-NAU8401	NAU8401-Card	NAU8401	• NAU8401-Card	• NAU8401YG Daughter Board	
NT-NAU8501	NAU8501-Card	NAU8501	• NAU8501-Card	• NAU8501YG Daughter Board	
NT-NAU8402	NAU8402-Card	NAU8402	• NAU8402-Card	• NAU8402WG Daughter Board	
NT-NAU8502	NAU8502-Card	NAU8502	• NAU8502-Card	• NAU8502YG Daughter Board	

Development Tools for Audio Amplifiers

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Power Amplifier					
NE-NAU82011V	NAU82011V-EVB	NAU82011	• NAU82011V-EVB	• Evaluation Board for NAU82011VG	
NE-NAU82011Y	NAU82011Y-EVB	NAU82011	• NAU82011Y-EVB	• Evaluation Board for NAU82011YG	
NT-ISD8101	ISD-DEMO8101	ISD8101	• ISD8101-DEMO	• Demo Board for I8101SY1	
NT-ISD8102	ISD-DEMO8102	ISD8102	• ISD8102-DEMO	• Demo Board for I8102SY1	
NL-NAU8315	NAU8315-DEMO	NAU8315	• NAU8315-DEMO	• Demo Board for NAU8315YG	
NL-NAU8315B	NAU8315B-DEMO	NAU8315	• NAU8315-DEMO	• Demo Board for NAU8315B31VG WLCSP-12	
NL-NAU8325	NAU8325-DEMO	NAU8325	• NAU8325-DEMO	• Demo Board for NAU8325YG	
NE-NAU8223	NAU8223-EVB	NAU8223	• NAU8223-EVB	• Evaluation Board for NAU8223YG	
NE-NAU8224	NAU8224-EVB	NAU8224	• NAU8224-EVB	• Evaluation Board for NAU8224YG	
NU-NAU8224	NAU-ES_MINI_USB	NAU8224	• NAU-ES_MINI_USB	• USB to I ² C Bus Dongle for NAU8224-EVB	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Power Amplifier					
NE-NAU8220	NAU8220WG-EVB	NAU8220	• NAU8220WG-EVB	• Evaluation Board for NAU8220WG	
NV-NAU83G10S	NAD-NAU83G10	NAU83G10	• NAD-NAU83G10	• Stereo NAU83G10 EVAL Board	
NV-NAU83G20S	NAD-NAU83G20	NAU83G20	• NAD-NAU83G20	• Stereo NAU83G20 EVAL Board	
NM-N83G10MA	NAD-NAU83G10_BRS-161200	NAU83G10	• NAD-NAU83G10_BRS-161200	• Mono NAU83G10 with Bujeon BRS-161200	
NM-N83G10MB	NAD-NAU83G10_BRS-181300	NAU83G10	• NAD-NAU83G10_BRS-181300	• Mono NAU83G10 with Bujeon BRS-181300	
NM-N83G10SA	NAD-NAU83G10_2*BRS-161200	NAU83G10	• NAD-83G10_2*BRS-161200	• Stereo NAU83G10 with 2x Bujeon BRS-161200	
NM-N83G10SB	NAD-NAU83G10_2*BRS-181300	NAU83G10	• NAD-83G10_2*BRS-181300	• Stereo NAU83G10 with 2x Bujeon BRS-181300	
NM-N83G20MA	NAD-NAU83G20_BUF-4203	NAU83G20	• NAD-NAU83G20_BUF-4203	• Mono NAU83G20 with Bujeon BUF-4203	
NM-N83G20SA	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					
NU-ISDMINUSB	ISD-ES_Mini_USB	ISD-ES_Mini_USB	<ul style="list-style-type: none"> • ISD2130/2115 • ISD2360 • ISD15012/4/8 • ISD15C00/3900 • ISD15D00/3800 	• USB Dongle for Connecting Digital ChipCorder Demo Board to PC	
NM-ISD15100	ISD-DMK_15100	ISD15102/04/08	<ul style="list-style-type: none"> • ISD-DEMO15100 • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD15102/4/8	
NM-ISD15C00	ISD-DMK_15C00	ISD15C00	<ul style="list-style-type: none"> • ISD-DEMO15C00 • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD15C00	
NM-ISD15D00	ISD-DMK_15D00	ISD15D00	<ul style="list-style-type: none"> • ISD-DEMO15D00 • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD15D00	
NM-ISD2100Q	ISD-DMK_2100	ISD2100YYI	<ul style="list-style-type: none"> • ISD-DEMO2100_Q • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD2100Y	
NM-ISD2360Q	ISD-DMK_2360_Q	ISD2360YYI	<ul style="list-style-type: none"> • ISD-DEMO2360_Q • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD2360Y	
NM-ISD2360S	ISD-DMK_2360_S	ISD2360SYI	<ul style="list-style-type: none"> • ISD-DEMO2360_S • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD2360S	
NM-ISD3800	ISD-DMK_3800	ISD3800	<ul style="list-style-type: none"> • ISD-DEMO3800 • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD3800	
NM-ISD3900	ISD-DMK_3900	ISD3900	<ul style="list-style-type: none"> • ISD-DEMO3900 • ISD-ES_MINI_USB • Speaker 	• Evaluation and Demo Kit for ISD3900	

Development Tools for ChipCorder® Family






Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NT-ISD1964	ISD-DEMO1964	ISD1916/32/64 Class-D Output	• ISD-DEMO1964	• ISD1900 Demo Board with I1964SY1 on Board	
NT-ISD1964A	ISD-DEMO1964_AUX	ISD1916/32/64 AUX Output	• ISD-DEMO1964_AUX	• ISD1900 AUX Output Demo Board with ISD1964SY101 on Board	
NT-ISD15100	ISD-DEMO15100	IAD15108/04/02	• ISD-DEMO15100	• ISD15108 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD15C00	ISD-DEMO15C00	IAD15C00	• ISD-DEMO15C00	• ISD15C00 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD3900	ISD-DEMO3900	IAD3900	• ISD-DEMO3900	• ISD3900 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	
NT-ISD15D00	ISD-DEMO15D00	IAD15D00	• ISD-DEMO15D00	• ISD15D00 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation	

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NT-ISD3800	ISD-DEMO3800	ISD3800	• ISD-DEMO3800	<ul style="list-style-type: none"> • ISD3800 LQFP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation 	
NT-ISD2100Q	ISD-DEMO2100_Q	ISD2130/2115	• ISD-DEMO2100_Q	<ul style="list-style-type: none"> • ISD2130 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation 	
NT-ISD2100S	ISD-DEMO2100_S	ISD2130/2115	• ISD-DEMO2100_S	<ul style="list-style-type: none"> • ISD2130 SOP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation 	
NT-ISD2361	ISD-DEMO2361_Q	ISD2361	• ISD-DEMO2361_Q	<ul style="list-style-type: none"> • ISD2361 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation 	
NT-ISD2360Q	ISD-DEMO2360_Q	ISD2360	• ISD-DEMO2360_Q	<ul style="list-style-type: none"> • ISD2360 QFN Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation 	
NT-ISD2360S	ISD-DEMO2360_S	ISD2360	• ISD-DEMO2360_S	<ul style="list-style-type: none"> • ISD2360 SOP Demo Board • Connect to PC Via ISD-ES_Mini_USB for Programming and Evaluation 	
NC-ISD18B24	ISD-COB18B24	ISD18B12/24	• ISD-COB18B24	<ul style="list-style-type: none"> • ISD18B24/12 Demo Board 	







Development Tools for ChipCorder® Family

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NC-ISD18C10	ISD-COB18C10	ISD18C10	• ISD-COB18C10	• ISD18C06/18C10 Demo Board (SPK/MICSharing)	
NC-ISD1810	ISD-COB1810	ISD1806/10	• ISD-COB1810	• ISD1806/1810 Demo Board	
NC-ISD17240	ISD-COB17240	ISD17240/210/180	• ISD-COB17240	• ISD17240/210/180 Demo Board	
NC-ISD17150	ISD-COB17150	ISD17150	• ISD-COB17150	• ISD17150/120/090 Demo Board	
NC-ISD1760	ISD-COB1760	ISD1760	• ISD-COB1760	• ISD1760/50/40 Demo Board	
NC-ISD1730	ISD-COB1730	ISD1730	• ISD-COB1730	• ISD1730 Demo Board	
NC-ISD1620B	I16-COB20	ISD1600 Series	• I16-COB20	• ISD1610/16/20 Demo Board	
Programmer/Writer					
NW-ISD15100	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	
NW-ISD2100Q	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	
NW-ISD2100S	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	
NG-ISD2100Q	ISD-2100_GANG_Prog_Q	ISD2100 Series QFN Package	• ISD-2100_GANG_Prog_Q	• ISD2100 QFN Standalone Gang Programmer	

Development Tools for ChipCorder® Family











Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NG-ISD2100S	ISD-2100_GANG_Prog_S	ISD2100 Series Package SOP	• ISD-2100_GANG_Prog_S	• ISD2100 SOP Standalone Gang Programme	
NW-ISD2360Q	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	
NW-ISD2360S	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 Evaluatio	
NG-ISD2360S	ISD-2360_GANG_PROG_S	ISD2360 PackageP SO	• ISD-2360_GANG_PROG_S	• ISD2360 SOP Rstandalone Gang Programme	
NG-ISD2360Q	ISD-2360_GANG_PROG_Q	ISD2360 QFN Package	• ISD-2360_GANG_PROG_Q	• ISD2360 QFN Standalone Gang Programmer	

Development Tools for ChipCorder® Family

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

Contact us: Chipcorder@nuvoton.com

Development Tools for Audio Enhancement Series

Ordering No.	Part No.	Supported Devices	Content	Description	Picture
Evaluation/Demo/Development Board					
NE-NPCA120	EVB-NPCA120_V1.0	NPCA120DD	• NPCA120DD Evaluation Board	• NPCA120 Audio Enhancement, Bongiovi DPS, Standard Level Evaluation Board	
NE-NPCA121	EVB-NPCA121_V1.0	NPCA121DD	• NPCA121DD Evaluation Board	• NPCA121 Audio Enhancement, Bongiovi DPS, Premium Level Evaluation Board	
NL-NPCA120	DEMO-NPCA12X-V2.0	NPCA120DD	• NPCA120DD Demo Board	• NPCA120DD LQFP-64 Audio Enhancement, Bongiovi DPS, Standard Level Demo Board	
NL-NPCA121	DEMO-NPCA12X-V2.0	NPCA121DD	• NPCA121DD Demo Board	• NPCA121DD LQFP-64 Audio Enhancement, Bongiovi DPS, Standard Level Demo Board	
NL-NPCA120DY	DEMO-NPCA120_V3.0	NPCA120DY	• NPCA120DY Demo Board	• NPCA120DY QFN-48 Audio Enhancement, Bongiovi DPS, Standard Level Demo Board	
NE-NPCA110XB	NPCA110x Evaluation Board	NPCA110x device	• NPCA110x Evaluation Board	• NPCA110x 1 Watt Base Board	
NT-NPCA110PP	NPCA110P/M Piggy Board	NPCA110P	• NPCA110P/M Evaluation Board	• NPCA110P Piggy Board	
NU-NPUSB2I2C	USB-To-I²C/I²S	NPCA110x & NPCP215x	• USB-To-I²C/I²S	• USB2I2C Board for NPCA110x & NPCP215x	
NE-NPCP215F	NPCP215x Evaluation Board	NPCP215F	• NPCP215x Evaluation Board	• NPCP215F Evaluation Board	
NU-NPUSB2I2C	USB-To-I2C/I2S_V1.1	NPCA120DD/ 121DD/120DY	• USB-To-I2C/I2S_V1.1	• USB2I2C Control Board for NPCA120/121 Eval & Demo Board	



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