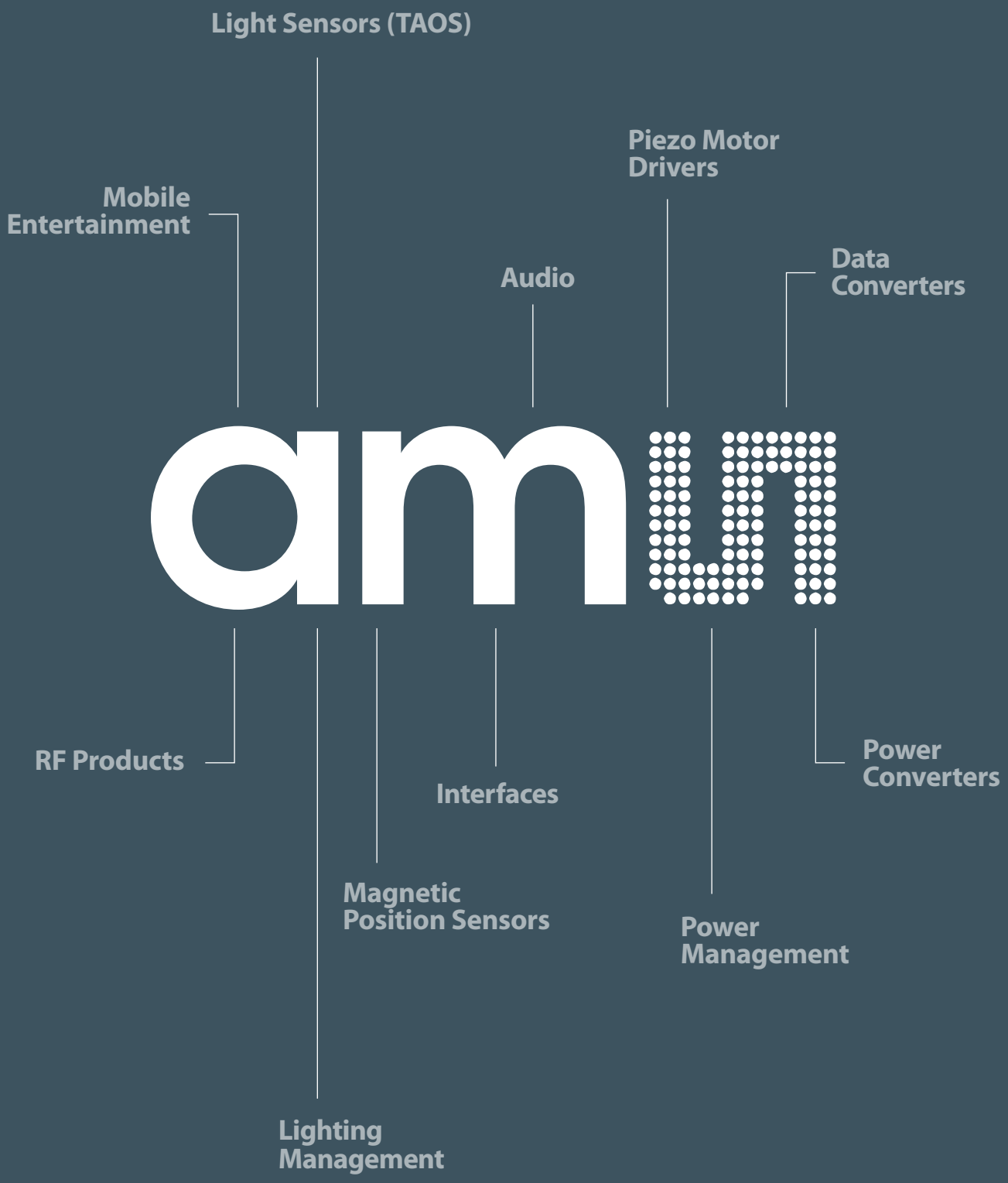
High Performance Analog IC and Sensor Portfolio

Overview
November 2012

ams


Light Sensors (TAOS)
Mobile Entertainment
Piezo Motor Drivers
Audio
Data Converters
RF Products
Interfaces
Power Converters
Magnetic Position Sensors
Power Management
Lighting Management

We provide innovative analog solutions for the most challenging applications.

We help people live a technologically enhanced life that feels easy and natural.

ams analog and sensor solutions help to seamlessly link the real world which is analog with the digital one, creating technology that is intuitive, convenient and unobtrusive.

Audio

Active Noise Cancellation

Part No.	Function	Topology	Output Type	Max. Output Power	SNR, THD	ANC Performance	Supply Voltage	Package
				BTL, 1.8 V, 32 Ohm	SE, 34 mW, 32 Ohm		V	(mm)
AS3400	Accessories	Receive Path feedforward/Feedback	Mono BTL	125mW	>100dB, <0.1%	>20dB	1.0 to 1.8	QFN-24 (4×4)
AS3410	Accessories	Receive Path Feedforward	Stereo SE/ Mono BTL	125mW	>100dB, <0.1%	>25dB	1.0 to 1.8	QFN-24 (4×4)
AS3420	BT Accessories	Receive Path feedforward/Feedback	Mono BTL	125mW	>100dB, <0.1%	>20dB	1.0 to 1.8	QFN-20 (4×4)
AS3430	Accessories	Receive Path Feedback	Stereo SE/ Mono BTL	125mW	>100dB, <0.1%	>20dB	1.0 to 1.8	QFN-32 (5×5)
AS3501	Embedded	Receive Path Feedforward	Stereo SE/ Mono BTL	125mW	>100dB, <0.1%	>25dB	1.0 to 1.8	QFN-24 (4×4)
AS3502	Embedded	Receive Path Feedback	Stereo SE/ Mono BTL	125mW	>100dB, <0.1%	>20dB	1.0 to 1.8	QFN-32 (5×5)
NEW ▸ AS3421	BT Accessories	Receive Path Feedforward	Stereo SE	SE : 35mW	>100dB, <0.1%	>25dB	1.0 to 1.8	QFN-24 (4×4)
NEW ▸ AS3422	BT Accessories	Receive Path Feedback	Stereo SE	SE : 35mW	>100dB, <0.1%	>20dB	1.0 to 1.8	QFN-32 (5×5)

Audio Front-Ends

Part No.	Power Management	Main Audio Features	Audio Codec SNR	Speaker Amplifier	Main Interfaces and Control	USB Charger with Temp. Supervision	Boot ROM for Start-up Sequences	RTC	Package
									(mm)
AS3510	DC-DC StepUp: 1×150mA @ 3.6V DC-DC StepDown: - LDO: 2×50mA, 1×200mA Charge: - Current Sink: -	Headphone Amp: 1× Line Out: - Line In: - Microphone In: 1× Audio Mix: yes	DAC: 91dB ADC: 83dB	•	Gen. Purpose ADC: - I²C & I²S: yes SPDIF: - RES & WDT: RES only DRM Enabled (UID): -	-	-	-	BGA-49 (7×7)
AS3514	DC-DC StepUp: 1×150mA @ 3.6V DC-DC StepDown: - LDO: 2×50mA, 1×200mA, 2× MIC Charge: - Current Sink: -	Headphone Amp: 1× Line Out: 1× Line In: 2× Microphone In: 2× Audio Mix: yes	DAC: 94dB ADC: 83dB	•	Gen. Purpose ADC: 10bit I²C & I²S: yes SPDIF: - RES & WDT: yes DRM Enabled (UID): 64bit	•	25	•	BGA-64 (7×7)
AS3515	DC-DC StepUp: 1×60mA @ 12V DC-DC StepDown: - LDO: 5×200mA, 1×2mA, 2× MIC Charge Pump: 1× for Core Current Sink: 1×40mA (progr.)	Headphone Amp: 1× Line Out: 1× Line In: 2× Microphone In: 2× Audio Mix: yes	DAC: 94dB ADC: 83dB	•	Gen. Purpose ADC: 10bit I²C & I²S: yes SPDIF: - RES & WDT: yes DRM Enabled (UID): 64bit	•	25	•	BGA-64 (7×7)
AS3517	DC-DC StepUp: 1×60mA @ 12V, 1×500mA (USB) DC-DC StepDown: 1×500mA, 2×250mA LDO: 4×200mA, 1×2mA, 2× MIC Charge Pump: 1×10mA (for USB OTG) Current Sink: 1×40mA (prog., log. Dimming)	Headphone Amp: 1× Line Out: 2× Line In: 2× Microphone In: 2× Audio Mix: yes	DAC: 96dB ADC: 90dB	-	Gen. Purpose ADC: 10bit I²C & I²S: yes SPDIF: yes RES & WDT: yes DRM Enabled (UID): 64bit	•	25	•	BGA-81 (9×9)
AS3518	DC-DC StepUp: 1×60mA @ 12V DC-DC StepDown: 2×250mA LDO: 4×200mA, 1× MIC Charge Pump: - Current Sink: 1×36mA (prog., log. Dimming)	Headphone Amp: 1× Line Out: 1× Line In: 3× Microphone In: 1× Audio Mix: yes	DAC: 96dB ADC: 96dB	-	Gen. Purpose ADC: 10bit I²C & I²S: yes SPDIF: yes RES & WDT: yes DRM Enabled (UID): 64bit	+ Current Limitation	5	•	BGA-64 (7×7)
AS3542	DC-DC StepUp: 1×60mA @ 12V DC-DC StepDown: 2×250mA with DVM LDO: 3×200mA, 1×50mA, 1× MIC Charge Pump: - Current Sink: 1×36mA (prog., log. Dimming)	Headphone Amp: 1× Line In/Out: 1× Microphone In: 1× Audio Mix: yes	DAC: 96dB ADC: 85dB	-	Gen. Purpose ADC: 10bit I²C & I²S: yes SPDIF: - RES & WDT: yes DRM Enabled (UID): 64bit	+ Current Limitation + Battery Switch	5 (5 voltage combinations each)	-	MLF-56 (7×7)
AS3543	DC-DC StepUp: 1×60mA @ 12V DC-DC StepDown: 2×250mA with DVM LDO: 3×100mA, 1×50mA, 1× MIC Charge Pump: - Current Sink: 2×36mA (prog., log. Dimming)	Headphone Amp: 1× Line Out: 1×* Line In: 2× Microphone In: 1× Audio Mix: yes	DAC: 102/96dB ADC: 85dB	-	Gen. Purpose ADC: 10bit I²C & I²S: yes SPDIF: - RES & WDT: yes DRM Enabled (UID): 64bit	+ Current Limitation + Battery Switch	5 (25 voltage combinations each)	•	BGA-64 (6×6)

*) with ground noise cancellation

Headphone Amplifiers

Part No.	Topology	Power	PSRR	Output Type	Shutdown	Supply Current	Supply Voltage	Package
		mW	dB			mA	V	(mm)
AS3560	Class G	30	>90	Single ended stereo	via I²C	0.9	2.3 to 5.5	WL-CSP16
AS3561	Class H	30	>90	Single ended stereo	via I²C	0.9	2.3 to 5.5	WL-CSP16

Speaker Amplifiers

Part No.	Gain	Power	PSRR	Output Type	Shutdown	Supply Current	Supply Voltage	Package
	dB	W	dB			mA	V	(mm)
AS1701	Adjustable	1.6	65	Bridged	Active High	6.8	2.7 to 5.5	MSOP-8
AS1702	Adjustable	1.8	79	Differential	Active High/Low	8	2.7 to 5.5	MSOP-10, DFN-10 (3×3)
AS1703	0	1.8	79	Differential	Active High/Low	8	2.7 to 5.5	MSOP-10, DFN-10 (3×3)
AS1704	3	1.8	79	Differential	Active High/Low	8	2.7 to 5.5	MSOP-10, DFN-10 (3×3)
AS1705	6	1.8	79	Differential	Active High/Low	8	2.7 to 5.5	MSOP-10, DFN-10 (3×3)
AS1706	Adjustable	1.6	65	Bridged	Active Low	6.8	2.7 to 5.5	MSOP-8

Operational Amplifiers

Part No.	Amplifiers	Slew Rate	Gain Bandwidth	PSRR	CMRR	Shutdown	Supply Current	Supply Voltage	Package
	#	V/µs	MHz	dB	dB		mA	V	(mm)
AS1710A	1	10	10	-85	-70	•	1.6	2.7 to 5.5	SC70-6
AS1710B	1	10	10	-85	-70	-	1.6	2.7 to 5.5	SC70-5
AS1712A	4	10	10	-85	-70	•	6.4	2.7 to 5.5	TQFN-16 (3×3)
AS1713	1	10	10	-70	-60	•	1.6	2.7 to 5.5	MLPD-8 (2×2)

Phones (Feature/Basic)

Part No.	Supply Voltage	Operating Range	Temperature Range	Last Number & Memory Dialing	Tone Ringer	Handsfree Function	Package
	V	mA	°C				
AS2522B	3.0 to 5.0	15 to 150	-25 to 70	0	•	•	TQFP-32, Die on Foil
AS2523/24	3.0 to 5.0	15 to 150	-25 to 70	0	-	•	SOIC-28, Die on Foil
AS2525	3.0 to 5.0	15 to 100	-25 to 70	29	•	•	TQFP-44, Die on Foil
AS2533	3.8 to 5.0	13 to 100	-25 to 70	15	•	-	SOIC-28, Die on Foil
AS2534	3.8 to 5.0	13 to 100	-25 to 70	1	•	-	SOIC-28, Die on Foil
AS2535	3.8 to 5.0	13 to 100	-25 to 70	12	•	-	SOIC-28, Die on Foil
AS2536	3.8 to 5.0	13 to 100	-25 to 70	15	•	-	SOIC-28, Die on Foil
AS2540	3.6 to 5.0	15 to 100	-15 to 60	0	•	-	SOIC-28, Die on Foil

Data Converters

Analog/Digital Converters

Part No.	Channels	Resolution	Sampling Rate	Fully Differential	Internal Reference	Supply Current	Supply Voltage	Package
	#	bit	ksps			mA @ max speed	V	(mm)
AS1520	8	10	400	•	•	2.8	4.5 to 5.5	TSSOP-20
AS1521	8	10	300	•	•	2.2	2.7 to 3.6	TSSOP-20
AS1522	4	10	400	•	•	2.8	4.5 to 5.5	TSSOP-16
AS1523	4	10	300	•	•	2.2	2.7 to 3.6	TSSOP-16
AS1524	1	12	150	•	-	0.35	2.7 to 5.25	TDFN-8 (3×3)
AS1525	2	12	150	-	-	0.35	2.7 to 5.25	TDFN-8 (3×3)
AS1526	1	10	73	-	•	1.4	2.7 to 5.25	SOIC-150-8
AS1527	1	10	73	-	-	1.0	2.7 to 5.25	SOIC-150-8
AS1528	1	10	150	•	-	0.35	2.7 to 5.25	TDFN-8 (3×3)
AS1529	2	10	150	-	-	0.35	2.7 to 5.25	TDFN-8 (3×3)
AS1530	8	12	400	•	•	2.8	4.5 to 5.5	TSSOP-20
AS1531	8	12	300	•	•	2.2	2.7 to 3.6	TSSOP-20
AS1532	4	12	400	•	•	2.8	4.5 to 5.5	TSSOP-16
AS1533	4	12	300	•	•	2.2	2.7 to 3.6	TSSOP-16
AS1535	8	12	400	•	•	2.5	3.0 to 5.5	QFN-32 (5×5)
AS1536	1	12	73	-	•	1.4	2.7 to 5.25	SOIC-150-8
AS1537	1	12	73	-	-	1.4	2.7 to 5.25	SOIC-150-8
AS1538	8	12	50	•	•	1.1	2.75 to 5.25	TSSOP-16
AS1539	8	10	50	•	•	1.1	2.75 to 5.25	TSSOP-16
AS1540	4	12	50	•	•	1.1	2.75 to 5.25	TQFN-16 (4×4)
AS1541	4	10	50	•	•	1.1	2.75 to 5.25	TQFN-16 (4×4)
AS1542	16	12	1000	•	-	2.4	2.75 to 5.25	TSSOP-28
AS1543	8	12	1000	•	-	5.2	2.75 to 5.25	TQFN-20 (4×4)
AS1544	4	12	1000	•	-	5.2	2.75 to 5.25	TQFN-20 (4×4)
AS1545	2×6	12	2×1000	•	•	5.2	2.7 to 5.25	TQFN-32 (5×5)

Analog Switches

Part No.	Lines	Type	RON	RON flatness	RON matching	On/Off time	Supply Voltage	Package
	#		Ohm	Ohm	Ohm	ns	V	(mm)
AS1741	2	SPST NO	0.8	0.18	0.08	22/14	1.6 to 3.6	MSOP-8 / SOT23-8
AS1742	2	SPST NC	0.8	0.18	0.08	22/14	1.6 to 3.6	MSOP-8 / SOT23-8
AS1743	2	SPST NO/NC	0.8	0.18	0.08	22/14	1.6 to 3.6	MSOP-8 / SOT23-8
AS1744	2	SPDT NO/NC	4	1	0.2	17/6	1.8 to 5.5	MSOP-10
AS1745	2	SPDT NC/NO	4	1	0.2	17/6	1.8 to 5.5	MSOP-10
AS1746	2	SPDT NC/NO	0.5/0.6	0.15	0.06	50/30	1.8 to 5.5	TDFN-10 (3×3) / WL-CSP-10
AS1747	2	SPDT	0.45/0.55	0.4	0.15	400/200	1.8 to 5.5	TDFN-10 (3×3)
AS1748	2	SPDT, Comparator	0.85	0.4	0.15	400/200	1.8 to 5.5	TQFN-16 (3×3)
AS1749	2	SPDT, Shunt	0.85	0.4	0.15	400/200	1.8 to 5.5	TDFN-10 (3×3)
AS1750	2	SPDT, Shunt + Comp	0.85	0.4	0.15	400/200	1.8 to 5.5	TQFN-16 (3×3)
AS1751	4	SPST NO	0.9	0.1	0.12	22/14	1.5 to 3.6	TSSOP-14 / QFN-16 (3×3)
AS1752	4	SPST NC	0.9	0.1	0.12	22/14	1.5 to 3.6	TSSOP-14 / QFN-16 (3×3)
AS1753	4	SPST NO/NC	0.9	0.1	0.12	22/14	1.5 to 3.6	TSSOP-14 / QFN-16 (3×3)

D/A Converters

Part No.	Channels	Resolution	INL	DNL	Functionality	Supply Voltage	Package
	#	bit	LSB	LSB		V	
AS1504	8	8	±0.75	±0.5	Mid-Scale Reset Pin	2.7 to 5.5	SOIC-150-16
AS1505	8	8	±0.75	±0.5	Zero-Scale Setting	2.7 to 5.5	SOIC-150-16

Data Acquisition Front-Ends

Part No.	Description	Channels	Resolution	Sampling Rate	Fully Differential	Internal Reference	Supply Current	Supply Current	Supply Voltage	Package
		#	bit	ksps			mA @ max speed	mA	V	
AS8500	Data Acquisition IC, Single ADC	4 mux	16	8	•	•	4	3	4.9 to 5.1	SOIC-300-16
AS8501	Calibrated Data Acquisition IC, Single ADC	4 mux	16	8	•	•	4	3	4.9 to 5.1	SOIC-300-16
AS8510	Data Acquisition IC, Dual ADC	1 + 3 mux	16	4	•	•	5	4	3.3	SSOP-20

Digital Potentiometers

Part No.	Features	Channels	Resistance	Resolution	INL	DNL	Supply Voltage	Supply Current	Package
		#	kOhm	bit	LSB	LSB	V	µA	(mm)
AS1500	Volatile	1	10	8	±2	±1	2.7 to 5.5	1	SOIC-8
AS1501	Volatile	1	20	8	±2	±1	2.7 to 5.5	1	SOIC-8
AS1502	Volatile	1	50	8	±4	±1	2.7 to 5.5	1	SOIC-8
AS1503	Volatile	1	100	8	±4	±1	2.7 to 5.5	1	SOIC-8
AS1506-10	Non-Volatile	1	10	8	0.5	0.5	2.7 to 5.5	0.2	TDFN-8 (3×3)
AS1506-50	Non-Volatile	1	50	8	0.5	0.5	2.7 to 5.5	0.2	TDFN-8 (3×3)
AS1506-100	Non-Volatile	1	100	8	0.5	0.5	2.7 to 5.5	0.2	TDFN-8 (3×3)
AS1507-10	Non-Volatile	2	10	8	0.5	0.5	2.7 to 5.5	0.2	TQFN-16 (3×3)
AS1507-50	Non-Volatile	2	50	8	0.5	0.5	2.7 to 5.5	0.2	TQFN-16 (3×3)
AS1507-100	Non-Volatile	2	100	8	0.5	0.5	2.7 to 5.5	0.2	TQFN-16 (3×3)

In everything we do we aim to make technology a more natural experience to the user - however challenging the application.

For example:

Automotive Sensors: ams' intelligent battery management devices help to balance the power needs of vehicle systems so that the battery doesn't break down on a cold night or the air-conditioning doesn't stop working on a hot day.

Medical Sensors & Sensor Interfaces: In medical imaging systems like computer tomography scanners, ams ASICs enable doctors to generate extremely high-resolution images of the human body with dramatically lower doses of x-ray radiation.

Interfaces

Capacitive Sensors

Part No.	Description	Features	Output	Supply	Temp. Range	Package	Remark
				V	°C		
AS1716	Capacitive Sensor Analog Front End	The device provides differential to single ended conversion, programmable gain stage and a 2-pole low pass Multiple Feedback Filter	Analog	4.5 to 5.5	-40 to +125	SOIC-8	Analog front end specifically designed for unbiased Capacitive Sensors, as for instance Knock Sensors

FlexRay Transceivers

Part No.	Network	Description	Supply Voltage	Temperature Range	Package
			V	°C	(mm)
AS8221	FlexRay™	FlexRay™ Standard Transceiver	VBAT 5.5 - 50	-40 to +125	SSOP-20
NEW ▸ AS8222	FlexRay™	FlexRay™ Enhanced Standard Transceiver	VBAT 5.5 - 40	-40 to +150	SSOP-20
AS8223	FlexRay™	FlexRay™ Active Star Device	VBAT 5.5 - 40	-40 to +125	MLF-44 (9×9)
AS8224	FlexRay™	FlexRay™ Active Star Device with Bit-Reshaper	VBAT 5.5 - 40	-40 to +125	MLF-44 (9×9)

Companion ICs/ Power Management

Part No.	Description	Typical Standby Quiescent Current	Operating Supply Range	Ambient Temperature Range	Package
		µA	V	°C	(mm)
AS8525	High Side battery sensor companion IC with LIN	50	4.9 to 18	-40 to +125	punched QFN-32 (5×5)
AS8530	8 PIN LIN Companion IC with microcontroller interface	37	6 to 18	-40 to +125	epSOIC-8
AS8650B	Smart Power Management Device with High Speed CAN Interface	65	6 to 18	-40 to +105 (at maximum load)	QFN-36 (6×6)

Low Voltage Differential Signaling

Part No.	Function	Type	Lines	Data Rate	Terminated	Failsafe Circuit	Supply Current	Supply Voltage	Package
			#	Mbps	Ohm		mA	V	
AS1150	-	Receiver	4	500	-	•	5	3.0 to 3.6	TSSOP-16
AS1151	-	Receiver	4	500	107	•	5	3.0 to 3.6	TSSOP-16
AS1152	-	Driver	4	500	-	-	4	3.0 to 3.6	TSSOP-16
AS1153	-	Receiver	1	260	-	•	2.5	3.0 to 3.6	SOIC-8
AS1154	-	Driver	2	800	-	-	2	3.0 to 3.6	SOIC-8
AS1155	-	Receiver	2	260	-	•	4.5	3.0 to 3.6	SOIC-8
AS1156	-	Driver	1	800	-	-	2	3.0 to 3.6	SOIC-8
AS1157	-	Receiver	1	260	107	•	2.5	3.0 to 3.6	SOIC-8
AS1158	-	Receiver	2	260	107	•	4.5	3.0 to 3.6	SOIC-8
AS1160	20MHz - 66MHz, 10-Bit Serializer	Serializer	10	660	-	-	90	3.0 to 3.6	CTBGA 49-bumps
AS1161	20MHz - 66MHz, 10-Bit Deserializer	Deserializer	10	660	-	-	130	3.0 to 3.6	CTBGA 49-bumps

Solenoid/Relay Drivers

Part No.	Number of Drivers	Internal Supply Voltage	Supply Current	Internal Osc Frequency	Duty Cycle	Energising current	Adjustable Hold Current
		V	mA	KHz	%	mA	
AS1720	1	3.3	2	30	10 to 90	10 to 100	•

Lighting Management

Camera Flash LED Drivers

Part No.	Topology	DC-DC Freq.	Performance		LED Channels				Interfaces		Safety Features		Packages
		MHz	I_{Led} max	V_{Out} max	Curr. Sinks	Curr. Source	Flash LEDs	Indicator LED	I²C	2 pin Enable	TimeOut	TXMask	(mm)
AS3642	Inductive	4	500mA	5.5V	1	High Side	1	Flash LED	•	-	•	-	WL-CSP6 (1.5×1.1, pitch 0.5)
AS3643	Inductive	4	1300mA	5.5V	2	Low Side	1	Flash LED	•	-	•	•	WL-CSP-13 (2.25×1.5, pitch 0.5)
AS3644	Inductive	4	320mA	5.5V	1	High Side	1	Flash LED	•	-	•	-	WL-CSP6 (1.5×1.1, pitch 0.5)
AS3645A	Inductive	2	800/500mA (2/1 LED)	10V	1	High Side	1 or 2	1	•	•	•	•	WL-CSP-12 (1.5×2, pitch 0.5)
AS3645B	Inductive	2	1000/720mA (2/1 LED)	10V	1	High Side	1 or 2	1	•	•	•	•	WL-CSP-12 (1.5×2, pitch 0.5)
AS3647	Inductive	4	1600mA	5.5V	2	Low Side	1	Flash LED	•	-	•	•	WL-CSP-13 (2.25×1.5, pitch 0.5)
AS3648	Inductive	4	2000mA	5.5V	2	Low Side	1 or 2	Flash LED	•	-	•	•	WL-CSP-13 (2.25×1.5, pitch 0.5)
AS3682	Capacitive	-	480mA	5.5V	6	Low Side	1 to 6	•	•	•	•	-	QFN-24 (4×4, pitch 0.5)
AS3683	Capacitive	-	1000mA	5.5V	6	Low Side	1 to 6	•	•	•	•	-	QFN-24 (4×4, pitch 0.5)
AS3685A	Capacitive	-	1000mA	5.5V	1	Low Side	1	Flash LED	-	•	•	•	CSP-12 (1.5×2, pitch 0.5), DFN10 (3×3)
AS3685B	Capacitive	-	1000mA	5.5V	1	Low Side	1	Flash LED	-	•	•	•	DFN-10 (3×3)
AS3685C	Capacitive	-	1000mA	5.5V	1	Low Side	1	Flash LED	•	-	•	•	WL-CSP-12 (1.5×2, pitch 0.5)

Camera Flash XENON Drivers

Part No.	Topology	Supply Voltage	VOut max	IGBT Driver	IGBT Type	Interface	Safety Features	Package
		V	V					(mm)
AS3635	Flyback	2.5-5.5	330 (in circuit trimmable)	•	2.5 and 4V	charge, done, flash	overtemperature, overcurrent	WL-CSP-9 (1.5×1.5, pitch 0.5)
AS3636	Flyback	2.5 - 5.5	330 (in circuit trimmable)	included, trimmable	2.5V and 4V	I²C, strobe, torch	one time breakable fuse in supply path, system level ESD protection	WL-CSP-16 (2.0×2.15, pitch 0.5)

Small Panel LED Backlight Drivers

Part No.	DC-DC				Interface		Part No. Package
	I/source	# of Current Sources	Freq.	Vout max	PWM	Dimming	(mm)
AS3490	25mA	3	2MHz	10V	1	CH1-3	WL-CSP12 (1.7×1.4, pitch 0.5)
AS3492	25mA	5	2MHz	10V	2	CH1-3,CH2-4	WL-CSP12 (1.7×1.4, pitch 0.5)

Large LCD Panel Backlighting

Part No.	Outputs	LED Current per Output	Features	Error Detection	Read-back	Current Accuracy	Supply Voltage	Package
	#	mA				%	V	
AS3691	4	400	Slew rate control	-	-	0.5	From Main Supply	QFN-24 or ePTSSOP-24
AS3693A	16	70	Power supply control	•	-	0.5	From Main Supply	epTQFP-64, QFN-48
AS3693B	16	depends on external FET	Power supply control	•	-	0.5	From Main Supply	epTQFP-64, QFN-64
AS3693B1	16	depends on external FET	Power supply control	•	-	0.5	From Main Supply	MLF-64
AS3693C	9	depends on external FET	Power supply control, PWM input	•	-	0.5	From Main Supply	LQFP-44
AS3693E	16	depends on external FET	Power supply control, PWM input	•	-	0.5	From Main Supply	epTQFP-64, QFN-64
AS3694	12	70	3 DC-DC controllers, slew rate control	•	-	0.5	From Main Supply	epTQFP-64
AS3695A	16	120	Power supply control	•	-	0.2	From Main Supply	QFN-48
AS3695C	16	depends on external FET	Power supply control	•	-	0.2	From Main Supply	LQFP-64, QFN-64
AS3696	4	depends on external FET	3D support	•	-	1	From Main Supply	QFN-32, TQFP-32

Drivers for Smart Notification Light

Part No.	Performance		User Memory	Performance Features						Package
	# of Current Sinks	Charge Pump	kbit	RGB Pattern	Dimming	Ext. PWM	Ext. Trigger	Audio-In	LED Test	(mm)
AS3661	9	150mA	1.5	•	log & lin	-	•	-	•	WL-CSP25 (2.29×2.29, pitch 0.4)
AS3665	9	150mA	1.5	•	log & lin	-	•	•	•	WL-CSP25 (2.61×2.67, pitch 0.5)
AS3668	4	150mA	-	•	log & lin	•	•	•	•	WL-CSP12 (1.25×1.68, pitch 0.4)

LED Driver ICs

Part No.	Outputs	LED Current per Output	Features	Internal PWM	Error Detection	Keys	LED-to-LED Matching	Supply Voltage	Package
	#	mA		bit/function			%	Logic / LED max (V)	(mm)
Dot Matrix Drivers									
AS1100	64	5	Multiplexed	4/global	-	-	3	4 to 5.5 / 5.5	PDIP-24 / SOIC-24
AS1105	32	10	Multiplexed	4/global	-	-	3	4 to 5.5 / 5.5	SOIC-20
AS1106	64	5	Multiplexed	4/global	-	-	3	2.7 to 5.5 / 5.5	PDIP-24 / SOIC-24
AS1107	64	5	Multiplexed	4/global	-	-	3	2.7 to 5.5 / 5.5	PDIP-24 / SOIC-24
AS1108	32	10	Multiplexed	4/global	-	-	3	2.7 to 5.5 / 5.5	PDIP-20 / SOIC-20
AS1115	64	5	Multiplexed, I^2C interface	4/string	•	16	3	2.7 to 5.5 / 5.5	QSOP-24 / TQFN-24 (4×4)
AS1116	64	5.5	Multiplexed	4/string	•	-	3	2.7 to 5.5 / 5.5	QSOP-24 / TQFN-24 (4×4)
AS1117	64	5	1.8V compatible, multiplexed, I^2C interface	4/string	•	8	3	2.7 to 5.5 / 5.5	TQFN-24 (4×4)
AS1118	64	5.5	1.8V compatible, multiplexed	4/string	•	-	3	2.7 to 5.5 / 5.5	TQFN-24 (4×4)
AS1119	144	3.3	Crossplexed, 320mA CP, RAM, 8-bit analog current setting	8/LED	•	-	2	2.7 to 5.5 / 5.5	WL-CSP-36 (3×3)
AS1130	132	2.6	Crossplexed, 36 frame RAM, error handling, 8-bit analog current setting (global & per string)	8/LED	•	-	2	2.7 to 5.5 / 5.5	WL-CSP-25 (2.5×2.2) SSOP-28
Directly Driven LED Drivers									
AS1101	2	80	-	-	-	-	3	2.2 to 3.6 / 3.6	SC70-6
AS1102	3	40	-	-	-	-	3	2.2 to 3.6 / 3.6	SC70-6
AS1103	4	40	-	-	-	-	3	2.2 to 3.6 / 3.6	SC70-6
AS1104	4	40	-	-	-	-	3	2.2 to 3.6 / 3.6	MSOP-8
AS1109	8	100	-	-	•	-	2	3.0 to 5.5 / 15	SOIC150-16, SSOP150-16, TQFN-16 (4×4)
AS1110	16	100	-	-	•	-	3	3.0 to 5.5 / 15	SSOP-24 / TQFN-28 (5×5)
AS1112	16	100	6-bit DOT correction	12/LED	•	-	4.5	3.0 to 5.5 / 15	TQFN-32 (5×5)
AS1113	16	50	-	-	•	-	3	3.0 to 5.5 / 15	SSOP-24 / TQFN-28 (5×5)
AS1121	16	40	6-bit DOT correction	12/LED	•	-	4.5	3.1 to 3.6 / 30	TQFN-32 (5×5)
AS1122	12	40	6-bit DOT correction, internal GSC clock; slim interface	12/LED	•	-	3	2.7 to 3.6 / 30	QFN-24 (4×4)
AS1123	16	40	Low Vds; optimized for single LED per output	-	•	-	3	3 to 5.5 / 5.5	QSOP-24 TQFN-24 (4×4)
AS3665	9	25	Audio Sync, Command Based Programmable Pattern Generator, CP, Automatic Color Correction	12/LED	-	-	2.5	2.5 to 5.5 / 5.5	WL-CSP-25 (2.6×2.6)
AS3691	4	400	Slew rate control	-	-	-	0.5	From Main Supply	QFN-24 or ePTSSOP-24

Lighting Management Units

Part No.	# of Current Sinks		Max Current (mA)		Max Vled	Features							Flash		Package
	HV	LV	CP	DC-DC	(V)	LDOs (#)	Auto ALS	DLS	RGB Pattern	Dimming	Audio-In	LED Test	Support	max I (mA)	(mm)
AS3676	3	10	300	controller*	controller*	1	•	•	•	•	•	•	•	300	WL-CSP-30 (3×2.5, pitch 0.5)
AS3677	3	3	50	50	25	1	•	2×	•	•	-	•	-	-	WL-CSP25 (2.3×2.3, pitch 0.4)
AS3687	3	4	150	controller*	controller*	-	-	-	•	•	-	•	-	-	WL-CSP-20 (2×2.5, pitch 0.5)
AS3687XM	3	3	150	controller*	controller*	-	-	-	•	•	•	•	-	-	WL-CSP-20 (2×2.5, pitch 0.5)
AS3688	2	7	900	controller*	controller*	2	-	-	•	•	-	•	•	900	QFN-32 (5×5, pitch 0.5)
AS3689	3	12	400	controller*	controller*	1	-	-	•	•	-	•	•	150	WL-CSP-36 (3×3, pitch 0.5)

*) unlimited - depends on external used devices

Magnetic Position Sensors

Magnetic Rotary Position Sensors

Part No.	Description	Resolution	Interfaces	Output	Max Speed	Overvoltage Protection	Redundant	Supply Voltage	Temp. Range	Package	AUT Qualified
					rpm			V	°C		
AS5030	8-bit Rotary Position Sensor with Digital Angle (Interface) and PWM output	8-bit	SSI	Digital Angle (Interface) / PWM	30000	-	-	5.0	-40 +125	TSSOP-16	-
AS5035	8-bit Rotary Position Sensor with ABI output	8-bit	-	ABI	30000	-	-	3.3 or 5.0	-40 +125	SSOP-16	-
AS5040	10-bit Rotary Position Sensor with Digital Angle (Interface), ABI, UVW and PWM output	10-bit	SSI	Digital Angle (Interface) / ABI / UVW / PWM	30000	-	-	3.3 or 5.0	-40 +125	SSOP-16	-
AS5043	10-bit Rotary Position Sensor with Digital Angle (Interface) or Linear analog output	10-bit	SSI	Digital Angle (Interface) / Linear analog	30000	-	-	3.3 or 5.0	-40 +125	SSOP-16	-
AS5045	12-bit Rotary Position Sensor with Digital Angle (Interface) and ABI output	12-bit	SSI	Digital Angle (Interface) / PWM	-	-	-	3.3 or 5.0	-40 +125	SSOP-16	-
NEW ▸ AS5048A	14-bit Rotary Position Sensor with Digital Angle (Interface) and ABI output	14-bit	SPI	Digital Angle (Interface) / PWM	-	-	-	3.3 or 5.0	-40 +150	TSSOP-14	-
NEW ▸ AS5048B	14-bit Rotary Position Sensor with Digital Angle (Interface) and ABI output	14-bit	I²C	Digital Angle (Interface) / PWM	-	-	-	3.3 or 5.0	-40 +150	TSSOP-14	-
AS5050	10-bit Rotary Position Sensor with Digital Angle (Interface) output	10-bit	SPI	Digital Angle (Interface)	-	-	-	3.3	-40 +85	QFN-16	-
AS5055	12-bit Rotary Position Sensor with Digital Angle (Interface) output	12-bit	SPI	Digital Angle (Interface)	-	-	-	3.3	-40 +85	QFN-16	-
AS5115	Rotary Position Sensor with Sin/Cos signal output	-	SSI	Sin/Cos	-	-	-	5.0	-40 +150	SSOP-16	•
AS5215	Redundant Rotary Position Sensor with Sin/Cos Output	-	SSI	Sin/Cos	-	-	•	5.0	-40 +150	MLF-32	•
AS5130	8-bit Rotary Position Sensor with Digital Angle (Interface) and PWM output	8-bit	SSI	Digital Angle (Interface) / PWM	30000	-	-	5.0	-40 +150	SSOP-16	•
NEW ▸ AS5132	8.5-bit Rotary Position Sensor with Digital Angle (Interface), ABI, UVW (up to 6 Pole Pairs) and PWM output	8.5-bit	SSI	Digital Angle (Interface) / ABI / UVW (up to 6 Pole Pairs) / PWM	72900	-	-	5.0	-40 +150	SSOP-20	•
AS5134	8.5-bit Rotary Position Sensor with Digital Angle (Interface), ABI, UVW (up to 6 Pole pairs) and PWM output	8.5-bit	SSI	Digital Angle (Interface) / ABI / UVW (up to 6 Pole Pairs) / PWM	82000	-	-	5.0	-40 +140	SSOP-20	•
AS5140H	10-bit Rotary Position Sensor with Digital Angle (Interface) Output, ABI and PWM output	10-bit	SSI	Digital Angle (Interface) / ABI / PWM	10000	-	-	3.3 or 5.0	-40 +150	SSOP-16	•
AS5145A/B	12-bit Rotary Position Sensor with Digital Angle (Interface), PWM and ABI output	12-bit	SSI	Digital Angle (Interface) / ABI / PWM	-	-	-	3.3 or 5.0	-40 +150	SSOP-16	•
AS5245	Redundant 12-bit Rotary Position Sensor with Digital Angle (Interface) and ABI output	12-bit	SSI	Digital Angle (Interface) / ABI / PWM	-	-	•	3.3 or 5.0	-40 +150	QFN-32	•
AS5145H	12-bit Rotary Position Sensor with Digital Angle (Interface) and PWM output	12-bit	SSI	Digital Angle (Interface) / PWM	-	-	-	3.3 or 5.0	-40 +150	SSOP-16	•
AS5163	12-bit Rotary Position Sensor with Linear analog or PWM output and Overvoltage Protection	12-bit	-	Linear analog / PWM	-	•	-	5.0	-40 +150	TSSOP-14	•

Magnetic Rotary Position Sensors

	Part No.	Description	Resolution	Interfaces	Output	Max Speed	Overvoltage Protection	Redundant	Supply Voltage	Temp. Range	Package	AUT Qualified
						rpm			V	°C		
	AS5263	Redundant 12-bit Rotary Position Sensor with Linear analog or PWM output and Overvoltage Protection	12-bit	-	Linear analog / PWM	-	•	•	5.0	-40 +150	MLF-32	•
NEW ▸	AS5162	12-bit Rotary Position Sensor with Linear analog output and overvoltage protection	12-bit	-	Linear analog	-	•	-	5.0	-40 +150	SOIC-8	•
NEW ▸	AS5262	Redundant 12-bit Rotary Position Sensor with Linear analog output and overvoltage protection	12-bit	-	Linear analog	-	•	•	5.0	-40 +150	MLF-16	•
NEW ▸	AS5161	12-bit Rotary Position Sensor with PWM output and overvoltage protection	12-bit	-	PWM	-	•	-	5.0	-40 +150	SOIC-8	•
NEW ▸	AS5261	Redundant 12-bit Rotary Position Sensor with PWM output and overvoltage protection	12-bit	-	PWM	-	•	•	5.0	-40 +150	MLF-16	•

Magnetic Linear Position Sensors

Part No.	Description	Resolution	Minium Pole Pair Length	Interfaces	Output	Max Speed	Overvoltage Protection	Redundant	Supply Voltage	Temp. Range	Package	AUT Qualified
			mm			rpm			V	°C		
AS5304A/B	160-step Linear Incremental Position Sensor with Linear analog and ABI output	160 steps (25µm/step)	4	-	Linear analog / ABI	20 m/s	-	-	5.0	-40 +125	TSSOP-20	-
AS5306A/B	160-step Linear Incremental Position Sensor with Linear analog and ABI output	160 steps (15µm/step)	2.4	-	Linear analog / ABI	12 m/s	-	-	5.0	-40 +125	TSSOP-20	-
AS5311	12-bit Linear Incremental Position Sensor with ABI and PWM output	12-bit (0.488µm/step)	2	SSI	ABI / PWM	0.65 m/s	-	-	3.3 or 5.0	-40 +125	TSSOP-20	-
NSE-5310	12-bit Linear Incremental Position Sensor with ABI and PWM output	12-bit (0.488µm/step)	2	I²C	ABI / PWM	0.65 m/s	-	-	3.3 or 5.0	-40 +125	TSSOP-20	-
AS5510	10-bit Linear Absolute Position Sensor with digital interface	10-bit	-	I²C	Digital position (Interface)	-	-	-	2.5 - 3.6	-30 +85	WL-CSP	-

3D Absolute Position Sensors

	Part No.	Description	Resolution	Interfaces	Output	Redundant	Supply Voltage	Temp. Range	Package	AUT Qualified
							V	°C		
NEW ▸	AS5410	14-bit Linear Absolute Position Sensor with Digital (Interface) and PWM output	14-bit	SPI, PWM	Digital (interface) / PWM	-	3.3	-40 +105	TSSOP-16	-

EasyPoint™ Joystick Position Sensor

Part No.	Description	Resolution	Interfaces	Output	Overvoltage Protection	Redundant	Supply Voltage	Temp. Range	Package	AUT Qualified
							V	°C		
AS5013	Two-dimensional Magnetic Position Sensor with Digital Coordinates output	8-bit (X and Y)	I²C	Digital Coordinates (interface)	-	-	3.0	-20 +80	QFN-16	-

Mobile Entertainment

Analog Integrated Microcontrollers

Part No.	MCU Core	Internal Memory	EMI	Mass Storage Interfaces	Interfaces*	General Purpose ADC	Audio Codec SNR	Audio Features	Power Management	Battery Type Support	Package
			GByte								(mm)
AS3524	32 bit ARM922TDMI 20-266MHz	320kB RAM 128kB ROM	4	Nand Flash, SLC, MLC SD/MMC Memory Stick (Pro) IDE, Ultra ATA	I²S, SPDIF, USB2 HS&OTG, SPI & UARTs, 2-wire Serial IF, Display IF, MCU IF 8, 16-bit, 4× 8-bit GPIOs	-	-	-	-	-	CTBGA180 (10×10)
AS3525A	32 bit ARM922TDMI 20-266MHz	320kB RAM 128kB ROM	4	Nand Flash, SLC, MLC SD/MMC Memory Stick (Pro) IDE, Ultra ATA	I²S, SPDIF, USB2 HS&OTG, SPI & UARTs, 2-wire Serial IF, Display IF, MCU IF 8, 16-bit, 4× 8-bit GPIOs	10 bit 16 channels	DAC: 94dB ADC: 83dB	Headphone Amp: 1× Line Out/In: 1×/2× Microphone In: 2× Audio Mix: yes Speaker Amp: yes	DC-DC StepUp: 1×45mA DC-DC StepDown: - LDO: 5×200mA, 1×2mA, 2× MIC Charge Pump: 1× for Core Current Sink: 1×40mA (progr.)	AA, AAA Li-Ion etc	CTBGA224 (13×13)
AS3525B	32 bit ARM922TDMI 20-266MHz	320kB RAM 128kB ROM	-	Nand Flash, SLC, MLC SD/MMC Memory Stick (Pro) IDE, Ultra ATA	I²S, SPDIF, USB2 HS&OTG, SPI & UARTs, 2-wire Serial IF, Display IF, MCU IF 8, 16-bit, 4× 8-bit GPIOs	10 bit 16 channels	DAC: 94dB ADC: 83dB	Headphone Amp: 1× Line Out/In: 1×/2× Microphone In: 2× Audio Mix: yes Speaker Amp: yes	DC-DC StepUp: 1×45mA DC-DC StepDown: - LDO: 5×200mA, 1×2mA, 2× MIC Charge Pump: 1× for Core Current Sink: 1×40mA (progr.)	AA, AAA Li-Ion etc	CTBGA144 (10×10)
AS3527	32 bit ARM922TDMI 20-266MHz	320kB RAM 128kB ROM	4	Nand Flash, SLC, MLC SD/MMC Memory Stick (Pro) IDE, Ultra ATA	I²S, SPDIF, USB2 HS&OTG, SPI & UARTs, 2-wire Serial IF, Display IF, MCU IF 8, 16-bit, 4× 8-bit GPIOs	10 bit 16 channels	DAC: 96dB ADC: 90dB	Headphone Amp: 1× Line Out/In: 2×/2× Microphone In: 2× Audio Mix: yes Speaker Amp: -	DC-DC StepUp: 1×45mA, 1×500mA DC-DC StepDown: 1×500mA, 2×250mA LDO: 4×200mA, 1×2mA, 2× MIC Charge Pump: 1×10mA Current Sink: 1×40mA (prog., log. Dimming)	Li-Ion etc	CTBGA224 (13×13)

*) This table shows the main interfaces. For more information please refer to the datasheet.

Mobile Entertainment Players

Part No.	MCU Core	Internal Memory	Distinguishing Features	Interfaces*	Integrated Audio	Integrated Power Management	Package
							(mm)
AS3530	32 bit ARM926EJ up to 400 MHz	512kB RAM 128kB ROM	Multimedia Microcontroller - Low power Audio Engine Multi-Standard Audio Decoder, Audio Postprocessor - Low power Video Engine Multi-Standard Video Decoder, Alpha Blending, Scaling, Rotation, PIP, up to D1 resolution - Security Cipher Engine - LCD Controller up to 1024×768	Ext Memory 16 bit & 32 bit Nand Flash (SLC, MLC, iNand, LBA) 3×SD, SDIO, MMC, CE-ATA, MS-Pro 3×I²S IN/OUT, SPDIF I/O USB 2.0 HS OTG 3× SSI,3× UART, IrDa, RGB LCD, MCU LCD, CAN-Bus, GPIOs, KBS XM-AMBADT	-	-	BGA-280 (10×10)
AS3531	32 bit ARM926EJ up to 266 MHz	512kB RAM 128kB ROM	Digital Audio Player - Low power Audio Engine Multi-Standard Audio Decoder, Audio Postprocessor - Low power Video Engine Multi-Standard Video Decoder, Alpha Blending, Scaling, Rotation, PIP, up to QCIF+ Resolution - Security Cipher Engine	Nand Flash (SLC, MLC, iNand, LBA) SD, SDIO, MMC, CE-ATA USB 2.0 HS OTG, SSI, UART, IrDa MCU LCD, GPIOs, KBS	DAC: 100dB SNR, -85dB THD ADC: 83dB SNR 6-Channel Audio Mixer Ground noise Cancellation CAP-less Headphone Out Line-In & Line-Out	Various DC-DC, LDOs for int. and ext. PM USB, Wall-plug Charger (e.g. Lio-Ion, AAA), LED Backlight Driver, Real Time Clock, Power On Reset, Supervisor and Watchdog 10bit, 19 channel Gen Purpose ADC	BGA-124 (8×8)
AS3536	32 bit ARM926EJ up to 400 MHz	512kB RAM 128kB ROM	Multimedia Microcontroller - Low power Audio Engine Multi-Standard Audio Decoder, Audio Postprocessor - Low power Video Engine Multi-Standard Video Decoder, Alpha Blending, Scaling, Rotation, PIP, up to D1 resolution - Security Cipher Engine - LCD Controller up to 1024×768	Ext Memory 16bit & 32bit Nand Flash (SLC, MLC, iNand, LBA) 3×SD, SDIO, MMC, CE-ATA, MS-Pro 2×I²S IN/OUT, SPDIF I/O USB 2.0 HS OTG, 3×SSI,3×UART, IrDa RGB LCD, MCU LCD, CAN-Bus, GPIOs, KBS, XM-AMBADT	10 bit DAC: 100dB SNR, -85dB THD ADC: 83dB SNR 6-Channel Audio Mixer Ground noise Cancellation CAP-less Headphone Out Line-In & Line-Out	Various DC-DC, LDOs for int. and ext. PM USB, Wall-plug Charger (e.g. Lio-Ion, AAA) LED Backlight Driver Real Time Clock, Power On Reset Supervisor and Watchdog 10bit, 19 channel Gen Purpose ADC	CTBGA-244 (10×10)

The most natural sensors are the human senses. These are our inspiration. Our products should strive to be as refined, efficient and natural as they are.

For example:

MEMS microphones in mobile devices like smartphones rely on ams sensor interface solutions to make it sound like the people talking are standing right next to each other.

Industrial Magnetic Position Sensors from ams can measure the slightest movements of the arms and fingers of a surgical robot, enabling doctors to "take surgery beyond the limits of the human hand."

Piezo Motor Drivers

SQUIGGLE® Motor Driver

Part No.	Description	Input Control	Input Voltage	Output Voltage	Current Output	Frequency Output	Efficiency	Features	Package
			VDC	V					(mm)
NSD-1202	2 Phase Ultrasonic Piezo Motor Driver IC, Output for Two SQUIGGLE® motors	I²C	2.8 to 5.5	24 to 40	25mA DC max	140 to 180kHz typical, min 80kHz	65% @ 2.8V	Voltage control over 2.8 to 5.5VDC, step-up converter to high-voltage, programmable voltage 24 to 40V, pulse width duty cycle control for slower speed control, 4 independently addressable output drivers with defined rise/fall time, I²C interface, on-chip registers store driver instructions, power-down mode for minimal power consumption in stand-by	QFN-16 (4×4)
NSD-2101	Ultrasonic Piezo Motor Driver IC, Output for one SQL-RV Series Reduced Voltage SQUIGGLE® RV	I²C	2.8 to 5.5	2.3 to 5.5	1600mA DC max	50 to 200 kHz	-	Control of 2.3 to 5.5 VDC input voltage allowing pulse width duty cycle control of one SQL-RV-1.8 SQUIGGLE® motor. I²C interface provides controls for two independently addressable full bridge output drivers with defined rise/fall time, on-chip	WL-CSP-16 (1.8×1.8) QFN-16 (4×4)

Power Converters

Signal Monitoring

Part No.	Description	Resolutiont	Features	Supply Voltage	Temp. Range	Automotive Qualification	Package	Comments
		bit		V	°C		(mm)	
AS8002	Solar photovoltaic inverter measurement IC with fast over current detection	12	Voltage and current measurement, programmable gain amplifiers, on-chip temperature sensor, fast overcurrent detection	3.0 - 3.6	-40 to +125	-	QFN-16 (4×4)	target market: photovoltaic solar inverters

Power Management

Comparators

Part No.	Inputs	Output Type	Internal Hysteresis	Supply Current	Supply Voltage	Package
	#		mV	µA	V	
AS1970	1	Push/Pull	3	10	2.5 to 5.5	SOT23-5
AS1971	1	Open-Drain	3	10	2.5 to 5.5	SOT23-5
AS1972	2	Push/Pull	3	17	2.5 to 5.5	MSOP-8
AS1973	2	Open-Drain	3	17	2.5 to 5.5	MSOP-8
AS1974	4	Push/Pull	3	34	2.5 to 5.5	TSSOP-14
AS1975	4	Open-Drain	3	34	2.5 to 5.5	TSSOP-14
AS1976	1	Push/Pull	3	0.2	1.8 to 5.5	SOT23-5
AS1977	1	Open-Drain	3	0.2	1.8 to 5.5	SOT23-5

DC-DC Buck-Boost Converters

Part No.	Input Voltage	Output Voltage	Output Current*	Efficiency	Iq	Architecture	fmax	Enable/ SHDN	Reset/ POK	Features	Package
	V	V	mA	%	µA		kHz				(mm)
AS1331	1.8 to 5.5	2.5 to 3.3	300	90	22	Hysteretic, Sync	<500	•	•	Low Battery Detection	TDFN-10 (3×3)
AS1337	0.65 to 4.5	2.5 to 5.0	200	97	20	Fixed, Sync	1.200	•	•	LDO Mode	TDFN-8 (3×3)

DC-DC Step-down Converters

Part No.	Input Voltage	Output Voltage	Output Current	Efficiency	Iq	Architecture	fmax	Enable/ SHDN	Reset/ POK	Features	Package
	V	V		%	µA		kHz				(mm)
► AS1324	2.7 to 5.5	0.6 to Vin	600 mA	96	20	Fixed, Sync	1500	•	•	Powersave Mode	TSOT23-5
AS1328	2.7 to 5.5	0.6 to 4.8	3000 mA	96	25	Fixed, Sync	1500	•	•	Battery monitoring	TDFN-16 (3×3)
AS1332	2.7 to 5.5	1.3 to 3.16	650 mA	96	1000	Fixed, Sync	2000	•	•	RF PA Supply, Vcon	WL-CSP-8
AS1333	2.7 to 5.5	3.09	650 mA	96	1000	Fixed, Sync	2000	•	•	RF PA Supply	WL-CSP-8
► AS1334	2.7 to 5.5	1.2, 1.5, 1.8, 2.5, 3.0, 3.3	650 mA	96	1000	Fixed, Sync	2000	•	•		TDFN-8 (3×3)
AS1335	2.6 to 5.25	0.6 to 5.25	1500 mA	96	400	Fixed, Sync	1500	•	-	High current	TDFN-8 (3×3)
AS1339	2.7 to 5.5	0.8 to 3.75	650 mA	95	4500*	Fixed, Sync	2000	•	-	2 integrated LDOs, Shutdown	WL-CSP-16 (2×2)
► AS1341	4.5 to 20	1.25 to Vin	600 mA	96	12	Hysteretic, Async	<250	•	•	100% Duty Cycle	TDFN-8 (3×3)
AS1346	2.7 to 5.5	1.2 to 3.6	1.2/0.5 A	95	2000	Fixed, Sync	2000	•	•	Battery monitoring, dual output	TDFN-12 (3×3)
AS1347	2.7 to 5.5	1.2 to 3.6	0.5/0.5 A	95	2000	Fixed, Sync	2000	•	•	Battery monitoring, dual output	TDFN-12 (3×3)
AS1348	2.7 to 5.5	1.2 to 3.6	0.5/0.95 A	95	2000	Fixed, Sync	2000	•	•	Battery monitoring, dual output	TDFN-12 (3×3)
AS1349	2.7 to 5.5	1.2 to 3.6	1.2/1.2 A	95	2000	Fixed, Sync	2000	•	•	Battery monitoring, dual output	TDFN-12 (3×3)
► AS7620A	3.6 to 32	1.2 to Vin	500 mA	90	30	Hysteretic, Async	<250	•	•	Early Power Fail Warning, 100% Duty Cycle	MLP-12 (4×4)
► AS7620B	3.6 to 32	3.3	500 mA	90	30	Hysteretic, Async	<250	•	•	Early Power Fail Warning, 100% Duty Cycle	MLP-12 (4×4)

► Design this product with: analogbench Online Simulation Tool

*) no load supply current

Power Management

DC-DC Step-up Converters

	Part No.	Input Voltage	Output Voltage	Output Current*	Efficiency	Iq	Architecture	fmax	Enable/ SHDN	Reset/ POK	Features	Package
		V	V	mA	%	µA		kHz				(mm)
►	AS1301	2.7 to 5.25	5.0	50	95	3000	Charge Pump	1000	•	-	Inductorless	TDFN-10 (3×3) WL-CSP-8
	AS1302	2.9 to 5.15	5.0	30	90	100	Charge Pump	1200	•	-	Inductorless	WL-CSP-8 (1.2×1.2) TDFN-10 (3×3)
	AS1310	0.7 to 3.6	1.8 to 3.0	110	92	1	Hysteretic, Sync	-	•	•	Output Disconnect	TDFN-8 (2×2)
►	AS1320	1.5 to 3.5	3.3	200	90	35	Hysteretic, Sync	<200	•	•	Shdn Batt Feedthrough	SOT23-6
►	AS1321	1.5 to 5.0	5.0	130	96	35	Hysteretic, Sync	<200	•	•	Shdn Batt Feedthrough	SOT23-6
►	AS1322A	0.65 to 5.0	2.5 to 5.0	315	95	30	Fixed, Sync	1200	•	-	Powersave Mode	TSOT23-6
►	AS1322B	0.65 to 5.0	2.5 to 5.0	315	95	30	Fixed, Sync	1200	•	-	Continuous Mode	TSOT23-6
►	AS1323-27	0.75 to 2.0	2.7	100	85	1.6	Hysteretic, Sync	-	•	-	1.6µA Quiescent Current	TSOT23-5
►	AS1323-30	0.75 to 2.0	3.0	90	85	1.6	Hysteretic, Sync	-	•	-	1.6µA Quiescent Current	TSOT23-5
►	AS1323-33	0.75 to 2.0	3.3	80	85	1.6	Hysteretic, Sync	-	•	-	1.6µA Quiescent Current	TSOT23-5
	AS1325-33	1.5 to 3.5	3.3	300	96	35	Hysteretic, Sync	<400	•	•	Shdn Batt Feedthrough	SOT23-6
	AS1325-50	1.5 to 5.0	5.0	185	91	35	Hysteretic, Sync	<400	•	•	Shdn Batt Feedthrough	SOT23-6
	AS1326	0.7 to 5.0	3.3, 2.5 to 5.0	650	96	65	Fixed, Sync	1200	•	-	Synchronizes to External Clock	TDFN-10
►	AS1329	0.65 to 5.0	2.5 to 5.0	315	95	30	Fixed, Sync	1200	•	-	Shdn Batt Feedthrough	TSOT23-6
	AS1330	0.8 to 3.3	1.8 to 3.3	230	92	25	Fixed, Sync	4000	•	•	Output Disconnect	TDFN-8 (2×2)
	AS1336	0.8 to 3.6	2× 1.8 to 3.6	2× 230	92	15	Fixed, Sync	1200	•	•	Dual DC-DC	TDFN-16 (3×3)
	AS1337	0.65 to 4.5	2.5 to 5.0	200	97	20	Fixed, Sync	1200	•	•	LDO Mode	TDFN-8 (3×3)
►	AS1340	2.7 to 50	2.7 to 50	140**	90	30	Fixed, Async	1000	•	•	Output Disconnect	TDFN-8 (3×3)
►	AS1343	0.9 to 3.6	5.5 to 42	180**	85	22	Fixed, Async	1000	•	•	Output Disconnect	TDFN-10 (3×3)
	AS1344	0.9 to 3.6	5.5 to 42	100	85	22	Fixed, Async	1000	•	•	Softstart, Shutdown, Output Disconnect	TDFN-10 (3×3)

► Design this product with: analogbench Online Simulation Tool

*) at 2V Vin; if Vout is adjustable, Vout = 3.3V **) at 3.3Vin, Vout=12V

Low Dropout Regulators

Part No.	Outputs	Accuracy	Output Current**	Feature	Output Voltage	Dropout Voltage @ max Current	Supply Current	Supply Voltage	Package
	#	%	mA		V	mV	µA	V	(mm)
AS1351	2	± 1.5	200	OTP*	1.8 to 3.3	200	125	3.0 to 5.5	QFN-12 (3×3)
AS1352	4	± 2.0	200	OTP*	1.8 to 3.3	200	225	3.0 to 5.5	QFN-12 (4×4), QFN-16 (3×3)
AS1353	1	± 1.0	150	Low Noise	1.5 to 3.6	60	115	2.5 to 5.5	SOT23-5
AS1355	3	± 1.0	300	OTP*	1.25 to 3.6	100 @ 200mA	160	2.3 to 5.5	QFN-16 (3×3)
AS1356	1	± 1.0	150	Power-OK	1.5 to 3.6	60	115	2.5 to 5.5	SOT23-5
AS1357	3	± 1.5	200	OTP*	1.8 to 3.3	200	175	3.0 to 5.5	QFN-12 (4×4), QFN-16 (3×3)
AS1358	1	± 0.5	150	Ultra Low Noise, High PSRR	1.5 to 4.5	70	40	2.0 to 5.5	TSOT23-5
AS1359	1	± 0.5	300	Ultra Low Noise, High PSRR	1.5 to 4.5	140	40	2.0 to 5.5	TSOT23-5
AS1360	1	± 1.5	250	High Voltage, Low IQ	1.8, 2.5, 3.0, 3.3, 5.0	400	1.5	2.0 to 20	SOT23-3
AS1361	1	± 0.5	150	Ultra Low Noise, High PSRR, POK	1.5 to 4.5	70	40	2.0 to 5.5	TSOT23-6
AS1362	1	± 0.5	300	Ultra Low Noise, High PSRR, POK	1.5 to 4.5	140	40	2.0 to 5.5	TSOT23-6
AS1363	1	±0.75	500	Ultra Low Dropout, Ultra Low Noise	1.2 to 5.3	150	40	2.0 to 5.5	SOT23-6
AS1364	1	±0.75	1000	Ultra Low Dropout, Ultra Low Noise	1.2 to 5.3	140	35	2.0 to 5.5	TDFN-8 (3×3)
AS1367	1	± 1.0	150	Under Voltage Lockout, Low IQ, Low Noise	1.2 to 5.5	100	10	2.0 to 5.5	TDFN-8 (2×2)
AS1369	1	±0.7	200	Micro-Sized	1.2 to 5.0	80	25	2.0 to 5.5	CS-WLP-4
AS1371	1	± 1.0	400	Low Input Voltage	0.6 to 3.3	80	50	1.2 to 3.6	TDFN-6 (3×3)
AS1372	1	± 1.5	350	Low Voltage applications	0.5 to 2.2	85	40	0.7 to 5.5	CS-WLP-5
AS1374	2	± 1.0	200	Ultra Low Noise, High PSRR	1.2 to 3.6	120	30	2 to 5.5	CS-WLP-6
AS1375	1	± 2	200	Ultra Low Quiescent Current	1.2 to 5	200	1	2 to 5.5	TDFN-6 (2×2)
AS1376	1	2	1000	Ultra Low Input Voltage , 2 weeks availability for non-standard devices between 0.5V and 1.1V in 50mV steps and between 1.1V and 2.2V in 100mV steps.	0.5 to 2.2	120	60	0.7 to 3.6	TDFN-8 (2×2)
AS13985	1	± 1.0	150	Ultra Low Dropout	1.2 to 5.0	45	95	2.5 to 5.5	CS-WLP-5 / SOT23-5
AS13986	2	± 1.0	150	Ultra Low Dropout	1.2 to 5.0	45	135	2.5 to 5.5	CS-WLP-8

*) One Time Programmable: The Output Voltage of each Output port can be programmed, one time, on a PCB board, (**) per output

Real Time Clocks

Part No.	Functions	Date/Time Format	Interface	Supply Voltage	Time Keeping Current	Time of Day Alarms	Package
				V	µA		(mm)
AS1801	Clock/Calendar , Trickle Charger	24-hour or 12-hour format with AM/PM indicator	I^2C	1.8 to 3.6	400	2	TDFN-8 (2×2)

Power Management

Power Management Units

Part No.	DC-DC Step up Converters	DC-DC Step down converters	RF LDOs	Digital LDOs	Current Sinks	Charge Pump	Audio DAC	Audio ADC	Audio Features	General Purpose ADC	Charger	Customizable Startup Sequences	Package
			mA	mA	mA	V/mA							(mm)
AS3603	45mA (Backlight)	0.5A	3×150, 2×75	2×200	4×160	5/30	-	-	0.5W Stereo	-	Linear	8×	QFN-48
AS3604	45mA (Backlight)	0.5A	3×200, 2×150	2×250	4×160	5/30	-	-	0.5W Stereo	-	Linear	8×	QFN-48
AS3605	-	0.5A	4×150	2×250	3×40, 2×160	6/60	-	-	1W Stereo	-	Linear	Programmable	QFN-40 (5×5)
AS3606	1× General Purpose (Voltage or Current Output) (30V)	3×0.7A or 1.4A+0.7A	1×100, 3×250	-	2×38 (HV)	-	-	-	-	10 bit	Linear	Programmable	QFN-32 (5×5)
AS3607	1× General Purpose (Voltage or Current Output) (30V)	3×0.7A or 1.4A+0.7A	1×100, 4×250	-	2×38 (HV)	-	-	-	-	10 bit	Linear	Programmable	QFN-36 (6×6)
AS3608	1× General Purpose (Voltage or Current Output) (30V)	3×1A or 2A+1A	1×100, 4×250	-	2×38 (HV)	-	-	-	-	10 bit	Linear	Programmable	QFN-36 (6×6)
AS3654	2× General Purpose (Voltage or Current Output)	3×0.5A	1×150, 1×400	2×200	4×40, 3×40 (HV)	5/100	18 bit	-	1× Headphone, 1× Line In, 1× Line Out	10 bit	Step-Down + Linear	8×	BGA-100 (10×10)
AS3658	2× General Purpose (Voltage or Current Output)	3×0.5A or 1.6A + 2×0.5A or 1.6A + 1A	1×400, 2×150	4×200	4×40, 3×40 (HV)	5/100	96dB SNR	84dB SNR	2× Headphone, 1× Line Out, 1× Line In, Mic Input, Audio Mixer, Equalizer	10 bit	Step-Down/ Linear + Linear	8× + Programmable	BGA-124 (8×8)
AS3710	3× General Purpose (Voltage or Current Output)	1.5A + 2×1A or 2A + 1.5A	2×250	6×300	3×40 (HV)	-	-	-	-	10 bit	Step-Down/ Linear	Programmable	QFN-56 (7×7)
AS3711	2× General Purpose (Voltage or Current Output)	1×3A + 1.5A + 2×1A or 3A + 2A + 1.5A	2×250	6×300	3×40 (HV)	-	-	-	-	10 bit	Step-Down/ Linear	Programmable	QFN-56 (7×7)
AS3712	3× General Purpose (Voltage or Current Output)	1.5A + 2×1A or 2A + 1.5A	2×250	6×300	3×40 (HV)	-	-	-	-	10 bit	-	Programmable	QFN-56 (7×7)
AS3713	2× General Purpose (Voltage or Current Output)	1×3A + 1.5A + 2×1A or 3A + 2A + 1.5A	2×250	6×300	3×40 (HV)	-	-	-	-	10 bit	-	Programmable	QFN-56 (7×7)

Supervisors

Part No.	Supervised Voltages	Supervised Voltages	Supervised Voltages	Supervised Voltages	Push/Pull Active Low	Push/Pull Active High	Open-Drain	Watch-dog	Manual Reset	Supply Current	Supply Voltage	Package
	V (IN1)	V (IN2)	V (IN3)	V (IN4)						µA	V	(mm)
AS1901	2.2 to 3.1	-	-	-	•	-	-	-	-	0.23	1.0 to 3.6	SOT23-3
AS1902	2.2 to 3.1	-	-	-	-	•	-	-	-	0.23	1.0 to 3.6	SOT23-3
AS1903	2.2 to 3.1	-	-	-	-	-	•	-	-	0.23	1.0 to 3.6	SOT23-3
AS1904	2.2 to 3.1	-	-	-	•	-	-	-	-	0.15	1.0 to 3.6	SOT23-3
AS1905	2.2 to 3.1	-	-	-	-	•	-	-	-	0.15	1.0 to 3.6	SOT23-3
AS1906	2.2 to 3.1	-	-	-	-	-	•	-	-	0.15	1.0 to 3.6	SOT23-3
AS1907	1.6 to 2.5	-	-	-	•	-	-	-	-	2.6	0.7 to 3.6	SOT23-3
AS1908	1.6 to 2.5	-	-	-	-	•	-	-	-	2.6	0.7 to 3.6	SOT23-3
AS1909	1.6 to 2.5	-	-	-	-	-	•	-	-	2.6	1.0 to 3.6	SOT23-3
AS1910	1.58 to 3.6	Adjustable	-	-	•	-	-	•	•	5.8	1.0 to 3.6	SOT23-6
AS1911	1.58 to 3.6	Adjustable	-	-	-	•	-	•	•	5.8	1.0 to 3.6	SOT23-6
AS1912	1.58 to 3.6	Adjustable	-	-	-		•	•	•	5.8	1.0 to 3.6	SOT23-6
AS1913	1.58 to 3.6	0.9 to 2.5	-	-	•	-	-	•	•	5.8	1.0 to 3.6	SOT23-6
AS1914	1.58 to 3.6	0.9 to 2.5	-	-	-	•	-	•	•	5.8	1.0 to 3.6	SOT23-6
AS1915	1.58 to 3.6	0.9 to 2.5	-	-	-	-	•	•	•	5.8	1.0 to 3.6	SOT23-6
AS1916	1.58 to 3.6	-	-	-	•	-	-	•	•	5.5	1.0 to 3.6	SOT23-5
AS1917	1.58 to 3.6	-	-	-	-	•	-	•	•	5.5	1.0 to 3.6	SOT23-5
AS1918	1.58 to 3.6	-	-	-	-	-	•	•	•	5.5	1.0 to 3.6	SOT23-5
AS1920-18	3	1.8	Adjustable	-	•	-	-	-	-	6.5	1.0 to 3.6	SOT23-5
AS1922-18	3	1.8	Adjustable	-	-	-	•	-	-	6.5	1.0 to 3.6	SOT23-5
AS1923A	5.0, Adj.	3.3, 3.0	2.5, 1.8, Adj	-5.0, 1.8, Adj	-	-	•	-	-	55	1.0 to 5.5	SOT23-5
AS1923B	5.0, Adj.	3.3, 3.0	2.5, 1.8, Adj	-5.0, 1.8, Adj	•	-	-	-	-	55	1.0 to 5.5	SOT23-5
AS1925	0.9, 1.2, 1.5	-	-	-	•	•	-	-	•	3.5	0.75 to 1.8	SOT23-5
AS1926	0.9, 1.2, 1.5	-	-	-	-	•	•	-	•	3.5	0.75 to 1.8	SOT23-5
AS1927	1.57 to 4.62	-	-	-	•	•	•	•	•	0.17	1.0 to 5.5	TDFN (2×2)

Light Sensors (TAOS)

Ambient Light Sensors

	Part No.	Type	Operating Voltage	I²C Bus	Alternate Address Options	Programmable			Flexible Timing	Package	
			V			Gain	Integration Time	Interrupts		CL	FN
NEW ▸	TSL25721	Light-to-Digital	2.4 - 3.6	VDD	•	•	•	•	•	-	•
NEW ▸	TSL25723	Light-to-Digital	2.7 - 3.6	1.8V	•	•	•	•	•	-	•
NEW ▸	TSL45315	Light-to-Digital	2.3 - 3.3	VDD	•	Automatic	100, 200, 400 mS	-	•	•	-
	TSL45317	Light-to-Digital	2.3 - 3.3	1.8V	•	Automatic	100, 200, 400 mS	-	•	•	-

Ambient Light Sensors and Proximity Detection

	Part No.	Type	Operating Voltage	I²C Bus	Alternate Address Options	IR LED	Recommended Operating Distance			Package
			V				Short: < 15 cm	Medium: < 46 cm	Long: > 46 cm	FN
	TMD27711	Light-to-Digital	2.6 - 3.6	VDD	-	•	•	-	-	Module
	TMD27713	Light-to-Digital	2.6 - 3.6	1.8V	-	•	•	-	-	Module
NEW ▸	TSL27721	Light-to-Digital	2.4 - 3.6	VDD	•	-	•	•	-	FN
NEW ▸	TSL27723	Light-to-Digital	2.4 - 3.6	1.8V	•	-	•	•	-	FN

Color Sensors

	Part No.	Type	Operating Voltage	I²C Bus	Alternate Address Options	Color Sensor	IR Filter	Color Filter Array Configuration	Ambient Light Sensing	Sync Input	Package		
			V								FN	CS	SOIC
NEW ▸	TCS34725	Light-to-Digital	2.7 - 3.6	VDD	•	RGBC	•	4 × 4	•	-	•	-	-
NEW ▸	TCS34727	Light-to-Digital	2.7 - 3.3	1.8V	•	RGBC	•	4 × 4	•	-	•	-	-
NEW ▸	TCS34715	Light-to-Digital	2.7 - 3.3	VDD	•	RGBC	-	4 × 4	•	-	•	-	-
	TCS34717	Light-to-Digital	2.7 - 3.3	1.8V	•	RGBC	-	4 × 4	•	-	•	-	-
	TCS3103/4	Light-to-Voltage	4.5 - 5.5	-	-	RGB	-	3 × 3	-	-	•	-	-
	TCS3200	Light-to-Frequency	2.7 - 5.5	-	-	RGBC	-	8 × 8	-	-	-	-	•
	TCS3210	Light-to-Frequency	2.7 - 5.5	-	-	RGBC	-	4 × 6	-	-	-	-	•
	TCS3414	Light-to-Digital	2.7 - 3.6	VDD	•	RGBC	•	2 × 8	-	•	•	•	-

Color Sensors and Proximity Detection

	Part No.	Type	Operating Voltage	I²C Bus	Alternate Address Options	Color Sensor	IR Filter	Ambient Light Sensing	Recommended Operating Distance			Package
			V						Short: < 15 cm	Medium: < 46 cm	Long: > 46 cm	
NEW ▸	TCS37725	Light-to-Digital	2.7 - 3.6	VDD	•	RGBC	•	•	•	•	•	FN
	TCS37727	Light-to-Digital	2.7 - 3.3	1.8V	•	RGBC	•	•	•	•	•	FN
NEW ▸	TCS37715	Light-to-Digital	2.7 - 3.3	VDD	•	RGBC	-	•	•	•	•	FN
	TCS37717	Light-to-Digital	2.7 - 3.3	1.8V	•	RGBC	-	•	•	•	•	FN

Proximity Detection

	Part No.	Type	Operating Voltage	I²C Bus	Alternate Address Options	Recommended Operating Distance			Package
			V			Short: < 15 cm	Medium: < 46 cm	Long: > 46 cm	
	TMD26711	Light-to-Digital	2.6 - 3.6	VDD	-	•	-	-	Module
	TMD26713	Light-to-Digital	2.6 - 3.6	1.8V	-	•	-	-	Module
NEW ▸	TSL26721	Light-to-Digital	2.4 - 3.6	VDD	•	•	•	-	FN
NEW ▸	TSL26723	Light-to-Digital	2.7 - 3.6	1.8V	•	•	•	-	FN

Light-to-Digital

	Part No.	Operating Voltage	I²C Bus	Programmable			Alternate Address Options	Flexible Timing	Package	
		V		Gain	Integration Time	Interrupts			CL	FN
NEW ▸	TSL25721	2.4 - 3.6	VDD	•	•	•	•	•	-	•
NEW ▸	TSL25723	2.7 - 3.6	1.8V	•	•	•	•	•	-	•
NEW ▸	TSL45315	2.3 - 3.3	VDD	Automatic	100, 200, 400 mS	-	•	•	•	-
	TSL45317	2.3 - 3.3	1.8V	Automatic	100, 200, 400 mS	-	•	•	•	-

Light-to-Frequency

Part No.	Operating Voltage	Responsivity	FOUT (Max)	IR Only	Package				
	V	Hz/µW/cm²			Sidelooker	DIP	SOIC	T	CL
TSL230	2.7 - 5.5	790 @ 640nm	1.1 MHz	-	-	•	•	-	-
TSL235	2.7 - 5.5	625 @ 635nm	500 KHz	-	•	-	-	-	-
TSL237	2.7 - 5.5	1200 @ 640nm	1 MHz	-	•	-	-	•	-
TSL238	2.7 - 5.5	3400 @ 640nm	1 MHz	-	-	-	•	•	-
TSL245	2.7 - 5.5	500 @ 940nm	500 KHz	•	•	-	-	-	-

Light-to-Voltage

Part No.	Operating Voltage	Responsivity				Fast Response	Low Noise	IR Only	Package			
	V	Low	Medium	High	Ultra				Sidelooker	SOIC	SM	T
TSL12	2.7 - 5.5	-	-	•	-	•	-	-	•	-	•	•
TSL13	2.7 - 5.5	-	•	-	-	•	-	-	•	-	•	•
TSL14	2.7 - 5.5	•	-	-	-	•	-	-	•	-	•	-
TSL250/60	2.7 - 5.5	-	•	-	-	-	•	TSL260	•	•	•	-
TSL251/61	2.7 - 5.5	-	•	-	-	-	•	TSL261	•	•	•	-
TSL252/62	2.7 - 5.5	•	-	-	-	•	•	TSL262	•	-	•	-
TSL253	2.7 - 5.5	-	•	-	-	•	-	-	•	-	•	-
TSL254	2.7 - 5.5	•	-	-	-	•	-	-	•	-	•	-
TSL257/67	2.7 - 5.5	-	-	-	•	-	-	TSL267	•	-	•	•

Linear Sensor Arrays

Part No.	Operating Voltage	DPI	Pixels	Integration	Clock MHz (Max)	Package			
	V					CS	CL	P	PCB
TSL201CL	4.5 - 5.5	200	64	Start/Stop per Pixel	5	-	•	-	-
TSL202R	4.5 - 5.5	200	128	Start/Stop per Pixel	5	-	-	•	-
TSL208R	4.5 - 5.5	200	512	Start/Stop per Pixel	5	-	-	-	•
TSL210	4.5 - 5.5	200	640	Start/Stop per Pixel	5	-	-	-	•
TSL2014	4.5 - 5.5	200	896	Start/Stop per Pixel	5	-	-	-	•
TSL1401	3.0 - 5.5	400	128	Frame by Frame	8	•	•	-	-
TSL1402R	3.0 - 5.5	400	256	Frame by Frame	8	-	-	•	-
TSL1406R	3.0 - 5.5	400	768	Frame by Frame	8	-	-	-	•
TSL1410R	3.0 - 5.5	400	1280	Frame by Frame	8	-	-	-	•
TSL1412S	3.0 - 5.5	400	1536	Frame by Frame	8	-	-	-	•
TSL3301	3.0 - 5.5	300	102	Frame by Frame	10	-	•	-	-

RF Products

NFC interface IC (NFiC)®

Part No.	Protocols Supported	Frequency	Features	Wakeup	Power Harvest	Data Rate	Supply Voltage	Temp. Range	Package	Interface Type
		MHz			mA	kbps	V	°C		
NEW ▸ AS3953	ISO14443 A - Level 4 (106-844kbps) NFC Tag type 4	13.56	Energy harvesting, 1k EEPROM, Passive Wakeup, SPI	Inductive	5	up to 848	from RF Field	-40 to +85	MLPD10	SPI

HF RFID Reader ICs

Part No.	Protocols Supported	Fre-quency	Antenna Management	Wakeup	Closed Loop Modulation Depth Adjustment	Max. Output Power	Data Rate	Supply Voltage	Temp. Range	Package
		MHz				mW	kbps	V	°C	(mm)
AS3910	ISO14443 A/B, ISO-15693 (transparent mode)	13.56	Yes	No	Yes	700	up to 848	2.4 - 3.6	-40 to +85	QFN-32 (5×5)
AS3911	ISO14443 A/B (848kbps), ISO-15693, ISO18092 (NFC active) FeliCa, EMVCo	13.56	Yes	Capacitive & Inductive	Yes	1000	up to 6500 (VHBR)	2.4 - 5.5	-40 to +125	QFN-32 (5×5)

UHF RFID Reader ICs

Part No.	Standards	ISM Range	TX Modulation	Sensitivity	Output Power	Link frequencies supported	Data Rate	Temp. Range	Package
		MHz		dBm	dBm	kHz	kbps	°C	
AS3990	EPC Class 1 - Gen 2, ISO 18000 6c/b	840-960	ASK-DSB, PR-ASK	-66	0	40 - 640	40 - 640	-40 to +85	QFN-64
AS3991	EPC Class 1 - Gen 2, ISO 18000 6c/b	840-960	ASK-DSB, PR-ASK	-66	20	40 - 640	40 - 640	-40 to +85	QFN-64
AS3992	EPC Class 1 - Gen 2, ISO 18000 6c/b, DRM	840-960	ASK-DSB, PR-ASK	-86	20	40 - 640	40 - 640	-40 to +85	QFN-64

RF-Transceivers

Part No.	Description	ISM Range	TX/RX Current Consumption	Sensitivity	Output Power	Data Rate	Supply Voltage	Package
		MHz	mA (max)	dBm	dBm	kbps	V	(mm)
AS3900	27MHz FSK Transceiver with integrated Link Manager	27.12	7.3/3.8	-85@117kbps	0, 5, 10	26.5/53/106/212	2.2 to 3.6	QFN-28 (5×5)
AS3940	2.4GHz FSK Transceiver with integrated Link Manager	2405 to 2480	21.5/20.9	-100@250kbps -92.5@2Mbps	-24 to 0	250/1000/2000	2.2 to 3.6	QFN-32 (5×5)

Ultra High Frequency

Part No.	Description	Standards	ISM Range	Channels	Temp. Sensor	Data Rate	Supply Voltage	Temp. Range	Package
			MHz	#		kbps	V	°C	(mm)
AS3977	Multi-Channel Narrowband FSK Transmitter	ETSI, FCC, ARIB, automotive qualified	300 - 928	Multi Width Narrow Bandwidth	Fully Integrated	up to 100	2.0 - 3.6	-40 to +85	QFN-16 (4×4)

Low Frequency

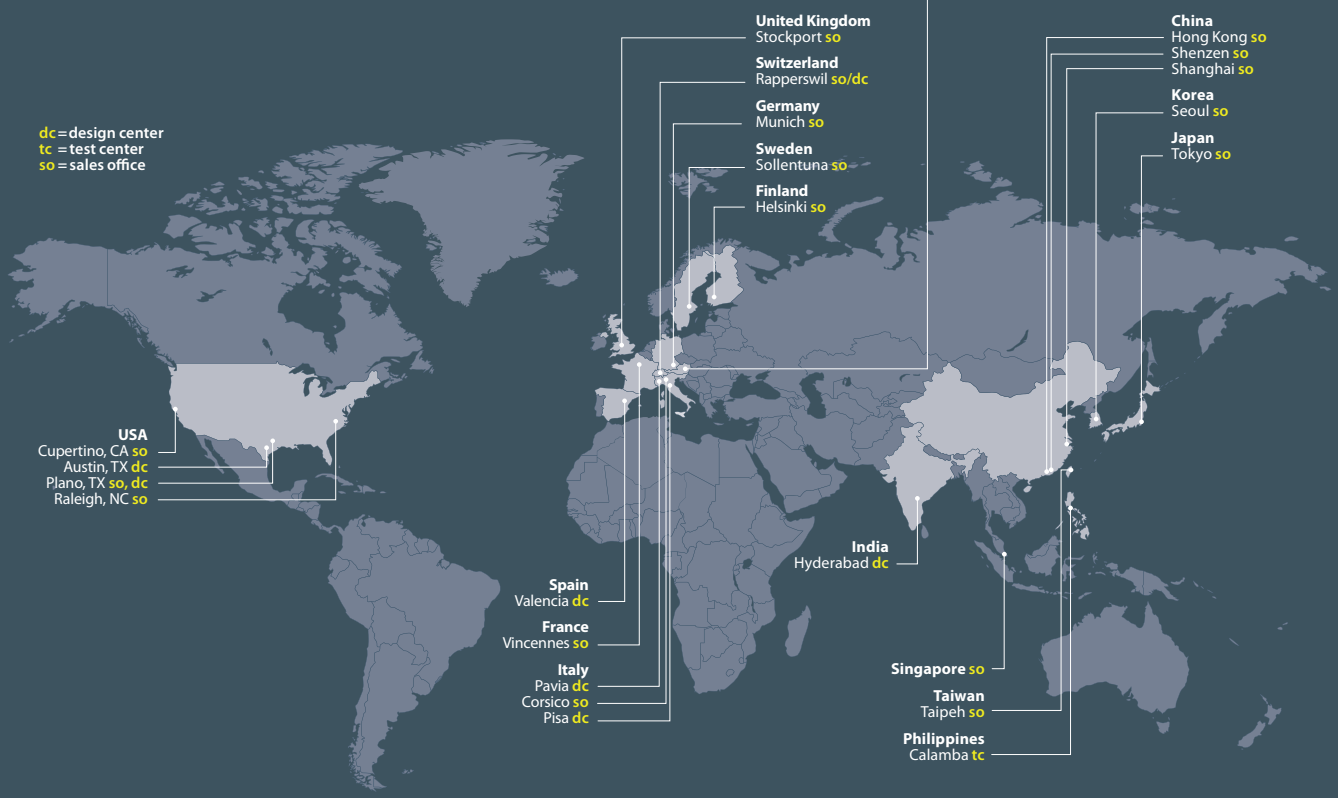
Part No.	Description	LF Carrier Frequency Range	Channels	Current Consumption	Data Rate	Wakeup Sensitivity	Dynamic Range	RSSI step	Package
		kHz	#	µA	kbps	µVrms	dB	dB	(mm)
AS3930	1-D Low Power LF Wakeup Receiver	110 - 150	1	2.7	0.5 - 4	100	64	2	TSSOP-16, QFN-16 (4×4)
AS3931	3-D LF Wakeup Receiver	19 - 150, automotive qualified	3	7.2	1365	124	60	Analog	TSSOP-16
AS3932	3-D Low Power LF Wakeup Receiver	110 - 150	3	2.7	0.5 - 4	100	64	2	TSSOP-16, QFN-16 (4×4)
AS3933	3-D Low Power LF Wakeup Receiver with Auto Antenna Tuning	15 - 150	3 (with integrated Auto Antenna Tuning)	2.7	0.5 - 4	80	64	2	TSSOP-16 QFN-16 (4×4)

Lightning Sensor

	Part No.	Description	Features	Supply Voltage	Current Consumption	Interface	Temp. Range	Package
				V	(PD/Listening/Active) µA		°C	(mm)
NEW ▸	AS3935	Franklin Lightning Sensor™ IC	Distance estimation up to 40km in 14 steps, embeded Disturber rejection algorithm & auto antenna tuning	2.4V to 5.5	0.4 / 60 / 210	SPI or I²C	-40 to 85	MLPQ-16 (4×4)

ams Headquarters

Tobelbader Strasse 30
8141 Unterpremstaetten, Austria
Phone: +43 3136 500-0
Email: info@ams.com
Web: www.ams.com



Get free samples and buy our products online at:

www.ams.com/ICdirect

Europe (Headquarters)
ams
Tobelbader Strasse 30
8141 Unterpremstaetten, Austria
Phone: +43 3136 500-0
Email: sales-europe@ams.com

Asia/Pacific
ams
Tomson Commercial Building, Suite 1006
No 710 Dongfang Rd
Pudong, Shanghai, China, 200122
Phone: +86 21 6162 7488
Email: sales-asia@ams.com

Americas
AMS-TAOS USA Inc.
1001 Klein Road, Suite 300
Plano, TX 75074, USA
Phone: +1 972 673 0759
Email: sales-americas@ams.com

www.ams.com