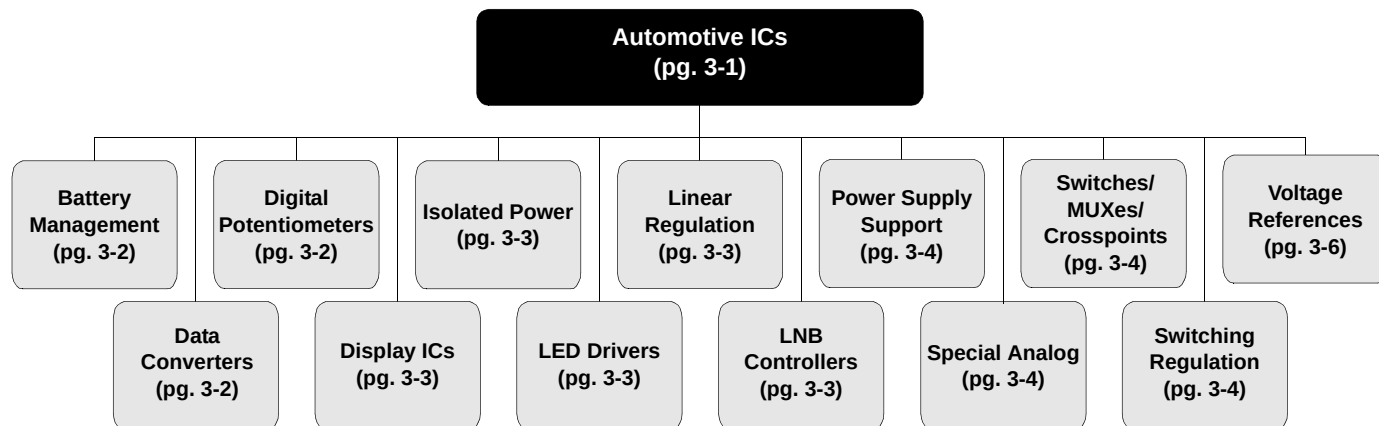




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Intersil has a rich portfolio of Power Management and Signal Path components especially suited for applications in the automotive environment. The following list of devices represents only a small snapshot of devices suitable for automotive qualification (per AECQ100) at Intersil. Many other product options exist within the standard component families at Intersil and if your needs are not met from this list, be sure to contact your local Intersil Automotive representative. Devices within this list beginning with ISL7xxx are already AECQ100 qualified, and many more such devices are on the way.

Battery Management

Input Voltage Range: 7V to 25V; Topology: Fixed Frequency Synchronous Buck; Audible Noise: No, Operating Temperature Range: -10°C to +100°C; Thermal Shutdown: +150°C

Device	iSim	Input Current Limit Accuracy (%)	Battery Charge Voltage (V)	Charging Voltage Accuracy (max) (%)	Battery Charge Voltage Adjust (%)	Charge Current Limit Accuracy (%)	Trickle Charge Current Limit Accuracy (%)	Automatic Trickle Charge (typ) (V)	Battery Leakage Current (max) (μA)	Automatic Power Source Selection	DC Adapter Detection	Switching Freq. (typ) (kHz)	Max Duty Cycle (%)	Package
ISL6251A	Y	±3	4.2/Cell (2S, 3S, 4S)	±0.5	±5/Cell	±3 (CHLIM=2.0V)	±25 (CHLIM=0.2V)	No (Set by Host)	10 (DCIN=0V, No System Load)	No	No	300	99.9	24 Ld QSOP, 28 Ld QFN
ISL6256A		±3	4.2/Cell (2S, 3S, 4S)	±0.5	±5/Cell	±3 (CHLIM=2.0V)	±25 (CHLIM=0.2V)	No (Set by Host)	10 (DCIN=0V, No System Load)	Yes	Yes	300	99.6	28 Ld QFN, 28 Ld QSOP
ISL88731		±3	2.7 to 19.2 in 16mV Steps	±0.5	16mV steps	±3	64mA to 220mA	2.7	2 (DCIN=0V, No System Load)	No (Set by Host)	No (Set by Host)	400	99.9	28 Ld QFN

Device	Programmable Overcurrent (A)	Input Overvoltage Protection (V)	Battery Overvoltage Protection (V)	Battery Leakage	R _{ON} @ 500mA (mΩ)	Package
ISL9209B	0 to 1	5.58 typ, 5.65 min, 6.0 max	4.34 typ, 4.28 min, 4.4 max	20nA max @ 4.34VVB	250 typ, 450 max	12 Ld TDFN
ISL9209C	0 to 2A	5.5 typ, 5.65 min, 6.0 max	4.34 typ, 4.28 min, 4.4 max	20nA max @ 4.4VVB	170 typ, 280 max	12 Ld TDFN
ISL9212A	0 to 2A	6.8 typ, 6.65 min, 7.0 max	4.4 typ, 4.325 min, 4.475 max	20nA max @ 4.4VVB	170 typ, 280 max	12 Ld DFN
ISL9212B	0 to 2A	6.8 typ, 6.65 min, 7.0 max	4.4 typ, 4.325 min, 4.475 max	20nA max @ 4.4VVB	170 typ, 280 max	12 Ld TDFN

Data Converters

Device	Resolution (Bits)	Conv. Rate (MSPS)	Output I/V	Power Supply V _S (Range) (V)	INL (max) (±LSB)	DNL (max) (±LSB)	V _{REF}	Package
HI5660	8	60, 125	I	+3 to +5	0.5	0.5	Internal	28 Ld SOIC, 28 Ld TSSOP
ISL76161*	12	130	I	3.3	0.5	0.5	Internal	28 Ld TSSOP

*Devices have completed AEC-Q100 qualification.

Digital Potentiometers

Device	# of Devices/ Channels	# of Taps	Memory Type	Bus Interface Type	Resistance Options (kΩ)	V _{CC} Range (V)	DCP Single Supply Range (V)	Resistance Taper	Wiper Current (mA)	Wiper Resistance (Ω)	Supply Current (μA)	Max Operating Temperature (°C)	End-to-End Tempco (ppm/°C)	Package
ISL22416	1	128	Non-Volatile	SPI	10, 50	2.7 to 5.5	0 to 5.5	Linear	±3	70	5	125	±50	10 Ld MSOP, 10 Ld TDFN
ISL90727	1	128	Volatile	I ² C	10, 50	2.7 to 5.5	0 to 5.5	Linear	1	85	0.5	85	±45	6 Ld SC-70
ISL90728	1	128	Volatile	I ² C	10	2.7 to 5.5	0 to 5.5	Linear	N/A	85	0.5			6 Ld SC-70 T+R
ISL96017	1	128	Non-Volatile	I ² C	10, 50	3.0 to 3.6	0 to 3.6	Linear	±3	300	10	85	±100	8 Ld DFN

Display ICs

Device	Input Voltage (V)	V _{BOOST} (V)	FET Size (A)	V _{ON} (V)	V _{OFF} (V)	V _{LOGIC} (V)	# of V _{COM}	# of Gamma	Features	Package
ISL78010*	3 to 5.5	5.5 to 20	2	15 to 36	-5 to -20	1.3 to V _{DD} - 0.2	N/A	N/A		32 Ld TQFP
ISL78020*	2.6 to 5.5	2.99 to 18	3	15 to 36	-25 to -5	N/A	1	0		32 Ld TQFP
ISL78022*	2.6 to 5.5	2.99 to 18	3	15 to 36	-25 to -5	N/A	1	4		32 Ld TQFP

*Devices have completed AEC-Q100 qualification.

Device	Topologies	I _{OUT} (max) (mA)	Peak Efficiency (%)	V _{IN} (V)	V _{OUT} (max) (V)	Frequency (MHz)	I _S (max) (mA)	I _q (max) (μA)	I _{sw} (typ) (mA)	Integrated Diode	OVP	Package
ISL97701	Inductor Boost	130	87	2.3 to 5.5	28	1	1	1	1200	Y	Y	10 Ld DFN
ISL97702	Inductor Boost	130	87	2.3 to 5.5	28	1	1	1	1200	Y	Y	10 Ld DFN

Device	# of DCP Channels	# of V _{COM}	V _S (V)	BW (MHz)	SR (V/μs)	EEPROM	Rail-to-Rail	Interface	Package
ISL45042	1	N/A	4.5 to 18	N/A	N/A	Y	N/A	Up/Down	8 Ld TDFN

Isolated Power

Device	iSim	Control Mode	UVLO Rising (V)	UVLO Falling (V)	V _{BIAS} (max) (V)	No-Load Operating Current (mA)	# of PWM Outputs	FET Driver I _{OUT} (max) (A)	Max Duty Cycle (%)	Package
ISL6742	Y	Voltage, Peak Current, or Average Current Mode	8.75	7	20	5	4	0.1	100	16 Ld QSOP
ISL6745		Voltage Mode	6.3	5.7	20	3	2	1	100	10 Ld MSOP
ISL6752	Y	Peak Current Mode	8.75	7	20	6	6	0.1	100	16 Ld QSOP
ISL6753	Y	Peak Current Mode or Voltage Mode	8.75	7	20	5	4	0.1	100	16 Ld QSOP

LED Drivers

Topologies: 3 to 8 High-Power LEDs in Series, Up to 32V

Device	# of LEDs (max)	# of Channels	Digital Interface	For LCD Size	I _{OUT} (max) (mA)	Peak Efficiency (%)	V _{IN} (V)	V _{OUT} (max) (V)	Frequency (MHz)	I _S (max) (mA)	I _q (max) (μA)	I _{sw} (typ) (mA)	Integrated Diode	OVP	Brightness Control	Package
ISL78100*	8	1	N	3.5 to 9	1000	90	2.7 to 16	32	1	3.5	2.5	3000	Y	Y	DC or PWM	20 Ld QFN

*Devices have completed AEC-Q100 qualification

Linear Regulation

Device	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (mA)	I _{BIAS} (min) (mA)	Package
ISL6412	3	3.6	1.8	2.8	840		16 Ld QFN

Device	V _{IN} Range (V)	V _{OUT} Range (V)	Fixed Output Voltage Option	O/P Volt Accuracy (%)	I _{OUT1} (max) (mA)	I _{OUT2} (max) (mA)	PSRR @ 1kHz (dB)	Noise (V _{RMS} 10 to 100) (kHz)	I _q (μA)	Typical Drop-Out Voltage (mV)	Enable/Shutdown	Operating Temp. Range (°C)	Package
ISL9003A	2.3 to 6.5	1.5 to 3.3	Y	±1.8	150	N/A	90	20	29	200 @150mA	Y	-40 to +85	5 Ld SC-70 T+R, 6 Ld μTDFN T+R
ISL9008A	2.3 to 6.5	1.5 to 3.3	Y	±1.8	150	N/A	65	45	45	200 @150mA	Y	-40 to +85	5 Ld SC-70 T+R, 6 Ld μTDFN T+R

LNB Controllers

Device	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (mA)	I _{BIAS} (min) (mA)	Package
ISL6422	8	14	2x13.3/14.3	2x18.3/19.3	2x750	3	38 Ld EPTSSOP, 40 Ld QFN
ISL6423B	8	14	13.3/14.3	18.3/19.3	750	1.5	24 Ld QFN, 28 Ld EPTSSOP

Power Supply Support

Device	iSim	V _{BIAS} Range (V)	Sequenced Voltages or Range (V)	# of Voltages Sequenced	Enable	Output	UV/OV Feature	Package
ISL6125		+1.5 to +5.5	>+0.7	Up to 4	Active Low	Open Drain Logic	UV Latch-Off	24 Ld QFN
ISL6130	Y	+1.5 to +5.5	+0.7 to +5.5	Up to 4	Active High	Charge Pumped FET Drive	UV Latch-Off	24 Ld QFN

Device	V _{BIAS} (V)	SEQ_ENABLE	# of Sequenced ENABLE Outputs	ENABLE Output Type	Power Down Sequencing	Conditions Reported	Package
ISL8702A	3.3 to 24	SEQ_ENABLE	4	Active High, Open Drain	Y	UV/OV	14 Ld SOIC
ISL8723	2.5 to 5	SEQ_ENABLE	4	Charge Pumped FET Drive	Y	UV Latch-Off	24 Ld QFN

Special Analog

Device	Device Description	# of Drivers	Max Operating Frequency (MHz)	Peak Output IPK (A)	Rise Time (ns)	Fall Time (ns)	Turn Off Delay (ns)	I _S (mA)	R _{ON} (Ω)	Input Signal Range (V)	Input Supply Range (VP)	Max Input Signal (V)	Output Signal Range (V)	Max Output Signal Range (V)	Package
ISL55110	Dual, High Speed MOSFET Driver	2	100	3.5	1.5	1.5	20 (QFN Only)	3.5	3	0 to V _P	+2.7 to +5.5	5.5	0 to +13.2	13.2	16 Ld QFN, 8 Ld TSSOP

Device	Device Description	Package
HIP9011	Engine Knock Signal Processor	20 Ld SOIC

Switches/MUXes/Crosspoints

Device	Configuration	Switch Control	Audio Input Range (V)	Audio THD 32Ω (%)	BW USB (MHz)	V _{DD} (V)	I _S Active/PDN (nA)	Package
ISL54205A	USB/MP3	V _{BUS}	±1.5	0.06	630	2.7 to 3.6	6.0/0.001	10 Ld DEN, 10 Ld μTQFN T+R
ISL54206A	USB/MP3	Logic Level	±1.5	0.06	630	2.7 to 5.5	6.0/0.001	10 Ld TDFN, 10 Ld μTQFN T+R

Device	Switch or MUX	Configuration	Type of Switch	r _{DS(ON)} (Ω)	T _(ON) (ns)	T _(OFF) (ns)	CHG INJ (pC)	Leakage (nA)	SRC Cap (pF)	DRN Cap (ON) (pF)	I _S (A)	V _{CC} Range (±V)	Package
ISL54053	Switch/MUX	Single MIX	SPDT	0.86	24	10	26	20	16	48	0.1μ	+1.85 to +5.5	6 Ld μTDFN T+R
ISL54056	Switch/MUX	Quad 2x1	SPDT (Dual DPDT)	0.4	33	16	248	70	38	102	0.1μ	+1.65 to +4.5	16 Ld μTQFN T+R
ISL54503	Switch/MUX	Single MIX	SPDT	2.5	25	15	24	20	7	18	0.1μ	+1.8 to +5.5	6 Ld μTDFN T+R
ISL84467	Switch/MUX	Quad 2x1	SPDT (Dual DPDT)	0.39	33	16	248	70	38	102	150n	+1.65 to +4.5	16 Ld TQFN, 16 Ld TQFN

Device	Configuration	Switch Control	Type of Switch	Crosstalk @ 1MHz (dB)	Off-isolation @ 100kHz (dB)	BW USB (MHz)	Special Features	V _{DD} (V)	I _S Active/PDN (nA)	Package
ISL76120*	USB/MP3	Logic Level	2xSPDT (DPDT)	-70	-98	HS Switches 880, FS Switches 550	All switches 'Off' mode for correct USB client switching	2.7 to 5.5	60	10 Ld TDFN

*Devices have completed AEC-Q100 qualification.

Switching Regulation

2-in-1 PWM Switches + Linear

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT1} (min) (V)	V _{OUT1} (max) (V)	V _{OUT2} (V)	I _{OUT1} (A)	I _{OUT2} (A)	V _{BIAS} (V)	Package
ISL6549	Y	1	12	0.8	V _{IN}	0.8 to V _{IN}	20	4	12	14 Ld SOIC, 16 Ld QFN, 16 Ld QSOP

3-in-1 PWM Switches + Linear

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT1} (min) (V)	V _{OUT1} (max) (V)	V _{OUT2} (V)	V _{OUT3} (V)	I _{OUT1} (A)	I _{OUT2} (A)	Package
ISL6441	Y	4.5	24	0.8	24	24	Adj.	6	6	28 Ld QFN

4-in-1 PWM Switches + Linear

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT1} (min) (V)	V _{OUT1} (max) (V)	V _{OUT2} (V)	V _{OUT3} (V)	V _{OUT4} (V)	I _{OUT1} (A)	I _{OUT2} (A)	Package
ISL6236	Y	5.5	25	4.975 (Adj. 0.7)	5.125 (Adj. 5.5)	3.3 (Adj. 0.5 to 2.5)	3.3 or 5 Linear (Adj. 0.7 to 4.5)	3.3 Always Linear	20		32 Ld QFN
ISL6237		5.5	25	4.975 (Adj. 0.7)	5.125 (Adj. 5.5)	3.3 (Adj. 0.5 to 2.5)	3.3 or 5 Linear (Adj. 0.7 to 4.5)	3.3 Always Linear	20		32 Ld QFN
ISL9440	Y	4.5	24	0.8	24	Adj.	Adj.	Adj.	20	20	32 Ld QFN

Boost Controllers

Device	Control Mode	UVLO Rising (V)	UVLO Falling (V)	V _{BIAS} (max) (V)	No-Load Operating Current (mA)	# of PWM Outputs	FET Driver I _{OUT} (max) (A)	Max Duty Cycle (%)	Package
ISL8843	Peak Current Mode	8.4	7.6	30	2.9	1	1	100	8 Ld MSOP, 8 Ld SOIC

Core Power Supplies

Device	Device Description	Package
ISL6261	One-Phase INT DC/DC Buck Controller	40 Ld MLFP, 40 Ld QFN, 48 Ld MLFP, 48 Ld QFN
ISL6261A	1-Phase Core Controller (Santa Rosa, IMVP-6+)	40 Ld QFN
ISL6262	Two-Phase Core Regulator for IMVP-6 Mobile CPUs	48 Ld QFN
ISL6262A	2-Phase Core Controller (Santa Rosa, IMVP-6+)	48 Ld QFN
ISL6263	5-Bit VID Single-Phase Graphics Core Voltage Regulator	32 Ld QFN
ISL6263A	5-Bit VID Single-Phase Voltage Regulator with Power Monitor for IMVP-6+ Santa Rosa CPU Core	32 Ld QFN
ISL6263B	5-Bit VID Single-Phase Voltage Regulator with Current Monitor for IMVP-6+ Santa Rosa GPU Core	32 Ld QFN

FET Driver

Device	V _{IN} (max) (V)	V _{DRIVE} (V)	Output Per Driver I _{LGATE} Source/Sink (A)	Output Per Driver I _{LGATE} Source/Sink (A)	Phase V _{PHASE} (min) (V)	Phase V _{PHASE} (max) (V)	I _S (mA)	Package
ISL6210	25	5	2	2/4	V _{BOOT} -7	25	0.17	16 Ld QFN

Multiphase Controllers

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	I _S (min) (mA)	I _S (typ) (mA)	Package
ISL6306	Y	3	12	0.5	1.6	≥130	5	VR11			40 Ld QFN
ISL6307	Y	3	12	0.5	1.6	≥200	5	VR11			48 Ld QFN
ISL6312	Y	3	12	0.375	1.6	>100 (4th FET Driver External)	5	VR10, VR11, AMD M2 6-Bit			48 Ld QFN
ISL6312A	Y	5	13.2	0.375	1.6	120	5	Intel VR11/AMD M2 CPU core regulators, low-output-voltage, high-current power supplies, high-current POL modules, high-current embedded voltage regulators, high-current FPGA DC/DC converters			48 Ld QFN
ISL6313	Y	5	12	0.5	1.6	60	5				36 Ld QFN
ISL6314	Y	3	12	0.375	1.6	≥30	5 to 12				32 Ld QFN
ISL6322	Y	3	12	0.375	1.99375	>100 (4th FET Driver External)	5	Overclocking, VR10, VR11, AMD M2 6-Bit			48 Ld QFN

Multiphase Controllers (Continued)

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	I _S (min) (mA)	I _S (typ) (mA)	Package
ISL6326	Y	3	12	0.5	1.6	>130	5	VR11 DT, Servers			40 Ld QFN
ISL6326B		3	12	0.5	1.6	>130	5	VR11 DT, Servers			40 Ld QFN
ISL6327	Y	3	12	0.5	1.6	>200	5	VR11 Workstations, Servers			48 Ld QFN
ISL6563	Y	5	12	0.8	1.85	≥60	5	VR9, VR10, AMD Hammer™ (Athlon 64™, Opteron™, Sempron™)			24 Ld QFN
ISL6315		5	12	0.84	1.6	>60	5		4	6	24 Ld QFN

Single and Dual Integrated FET Buck Regulators

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	I _q (μA)	Switching Frequency (MHz)	Peak Efficiency (%)	POR	Package
ISL6410	Y	3	3.6	1.2, 1.5, 1.8	1.2, 1.5, 1.8	0.6	2300	0.75	90	Y	10 Ld MSOP, 16 Ld QFN
ISL8502	Y	4.5	14	0.6	V _{IN}	2.5		0.5 to 1.2	95	Y	24 Ld QFN
ISL9106		2.7	5.5	0.8		1.2	34	1.6	95	Y	10 Ld DFN
ISL97656		2.3	6	5	25	4	700	0.64 to 1.2	90		10 Ld TDFN
ISL65426		2.8	5.5	1	V _{IN}	6	2.8	1	95		50 Ld QFN

Single Output PWM Controllers

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	I _S (min) (mA)	I _S (typ) (mA)	Package
ISL6268		7	25	0.6	3.3	25	5	N/A	1.7	16 Ld QSOP
ISL6269	Y	7	25	0.6	3.3	25	N/A (Internal)	2	1.7	16 Ld QFN
ISL6269A	Y	5	25	0.6	3.3	25	5	N/A	1.7	16 Ld QFN
ISL6269B		7	25	0.6	3.3	25	5	N/A	1.7	16 Ld QFN
ISL6341	Y	1.5	12	0.8	V _{IN}		4.5 to 14.4	6.4		10 Ld TDFN
ISL6341A	Y	1.5	12	0.8	V _{IN}		4.5 to 14.4	6.4		10 Ld TDFN
ISL6341B		1.5	12	0.8	V _{IN}		4.5 to 14.4	6.4		10 Ld TDFN

Dual Output PWM Controllers

Device	iSim	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	Switching Freq. (kHz)	Package
ISL6228	Y	3.3	25	0.6	5		200 to 600	28 Ld TQFN
ISL6445	Y	4.5	24	0.8	5.5	6	1400	24 Ld QSOP

Voltage References

Device	V _{OUT} (V)	Initial Accuracy (mV)	Temp Coefficient (ppm/°C)	I _S (max) (μA)	V _S Range (V)	Output Noise (μV _{pp})	I _{SOURCE} /I _{SINK} (mA max)	Package
ISL60002BIH311	1.20	±1.0	20	0.9	2.7 to 5.5	30	7/7	3 Ld SOT-23 T+R
ISL60002CIH312	1.25	±2.5	20	0.9	2.7 to 5.5	30	7/7	3 Ld SOT-23
ISL60002DAH333	3.30	±5.0	20	0.9	3.5 to 5.5	30	7/7	3 Ld SOT-23 T+R
ISL60002DIH312	1.25	±5.0	20	0.9	2.7 to 5.5	30	7/7	3 Ld SOT-23