

Computing Power Management Products

Product Selection Guide



DC/DC Family of Products

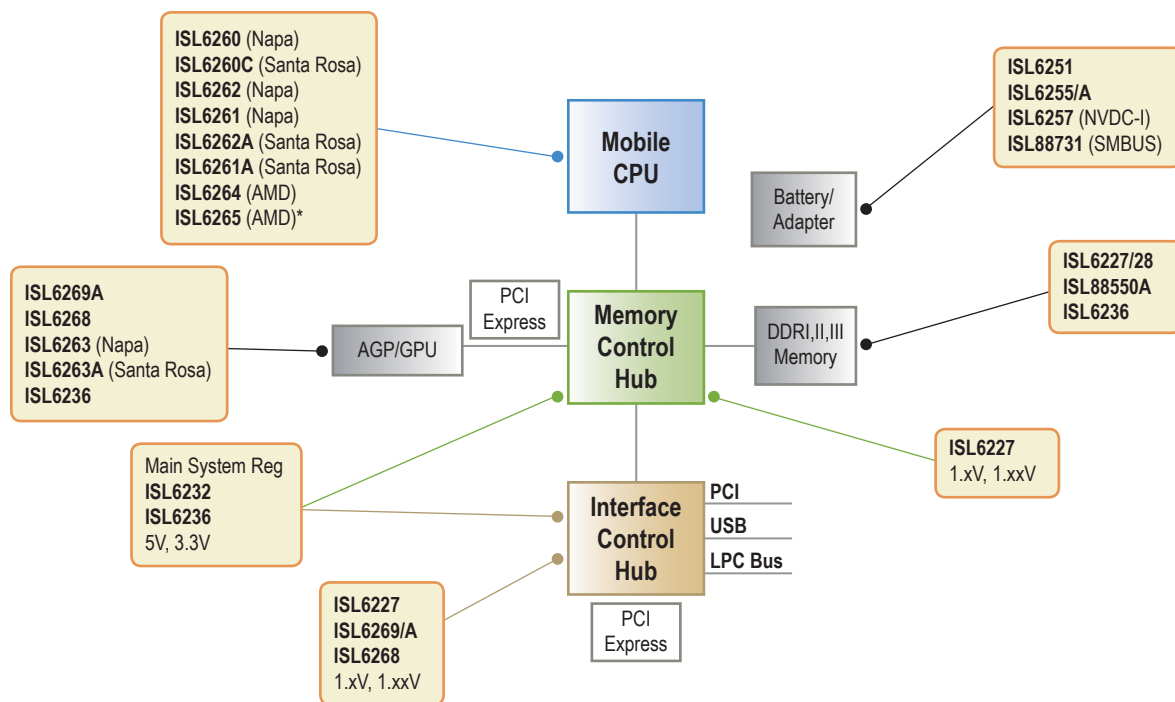
Intersil offers an extensive array of highly-efficient DC/DC conversion ICs specifically designed for desktop, server, VRM and portable applications. No matter what the application, Intersil's DC/DC family of computing power products enables the board designer to develop the most cost-effective, high-performance solution.

This product selection guide includes:

- Single and multiphase CPU core power converters
- Multiphase controllers with integrated MOSFET drivers
- Digital multiphase: precise power
- World-class MOSFET drivers
- Peripheral power, ACPI and DDR memory and solutions
- Stand-alone and embedded graphics power converters
- Integrated FET drivers
- Portable CPU power and system power regulation

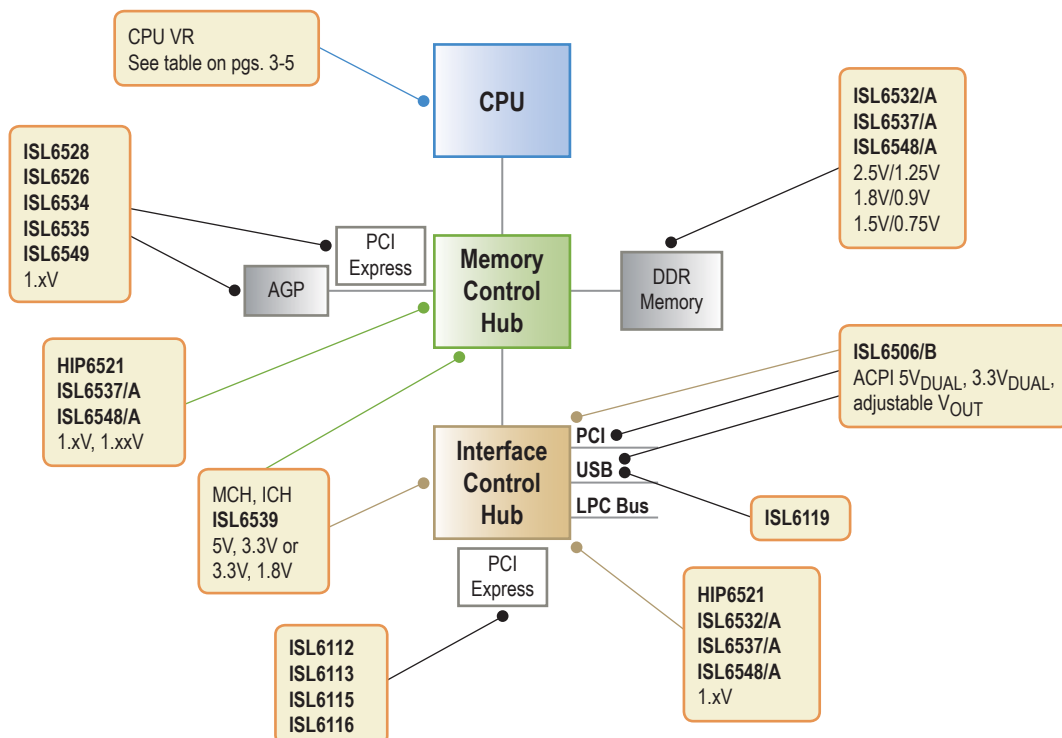


Notebook Architecture



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Desktop/Server Architecture



Desktop Power

Desktop Core Power Controllers

VR11.1

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6336*	6-Phase VR11.1 PWM Controller with Differential Inductor DCR or Resistor Current Sensing with Light Load Efficiency	3	12	0.375	1.6	>200	5	VR11.1	QFN-48
ISL6334*	4-Phase VR11.1 PWM Controller Capable of Precision DCR Differential Current Sensing, with Light Load Efficiency	3	12	0.375	1.6	>130	5	VR11.1	QFN-40
ISL6333*	3 Phase VR11.1 Buck PWM Controller with Integrated MOSFET Drivers with Light Load Efficiency	3	12	0.375	1.6	>75	5	VR11.1	QFN-48
ISL6332*	2 Phase VR11.1 Buck PWM Controller with Integrated MOSFET Drivers with Light Load Efficiency	3	12	0.375	1.6	>50	5	VR11.1	QFN-36

VR11

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6327	6-Phase PWM Controller with 8-Bit DAC Code Capable of Precision DCR Differential Current Sensing	3	12	0.5	1.6	>200	5	VR11 Workstations, Servers	QFN-48
ISL6326	4-Phase PWM Controller with 8-Bit DAC Code Capable of Precision DCR Differential Current Sensing	3	12	0.5	1.6	>130	5	VR11 DT, Servers	QFN-40
ISL6326B	4-Phase PWM Controller with 8-Bit DAC Code Capable of Precision DCR Differential Current Sensing	3	12	0.5	1.6	>130	5	VR11 DT, Servers	QFN-40
ISL6322	4-Phase Buck PWM Controller with Integrated MOSFET Drivers and I ² C Interface for Intel VR10, VR11, and AMD Applications	3	12	0.375	1.99375	>100 (4 TH FET driver external)	5	Overclocking, VR10, VR11, AMD M2 6-Bit	QFN-48
ISL6314*	Single-Phase Buck PWM Controller with Integrated MOSFET Drivers for Intel VR10, VR11, and AMD Applications	5	13.2	0.375	1.6	>25	5	VR10, VR11, and AMD M2	QFN-32
ISL6313*	2-Phase Buck PWM Controller with Integrated MOSFET Drivers for Intel VR10, VR11, and AMD Applications	5	13.2	0.375	1.6	>50	5	VR10, VR11, and AMD M2	QFN-36
ISL6312	4-Phase Buck PWM Controller with Integrated MOSFET Drivers for Intel VR10, VR11, and AMD Applications	3	12	0.375	1.6	>100 (4 TH FET driver external)	5	VR10, VR11, AMD M2 6-Bit	QFN-48
ISL6312A	4-Phase Buck PWM Controller with I _{OUT} Feature and Integrated MOSFET Drivers for Intel VR10, VR11, and AMD Applications	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	QFN-48
ISL6307	6-Phase PWM Controller with 8-Bit VID Code Capable of Precision r _{DS(ON)} or DCR Differential Current	3	12	0.5	1.6	>200	5	VR11	QFN-48
ISL6307A	Ultra-High Bandwidth 6-Phase PWM Controller with 8-Bit VID Code Capable of Precision r _{DS(ON)} or DCR Differential Current Sensing	3	12	0.5	1.6	>200	5	VR11	QFN-48
ISL6307B	6-Phase VR11 PWM Controller with 8-Bit VID Code Capable of Precision r _{DS(ON)} or DCR Differential Current Sensing for Applications Where Supply Voltage is Higher than 5V	3	12	0.5	1.6	>200	12	VR11	QFN-48
ISL6306	4-Phase PWM Controller with 8-Bit DAC Code Capable of Precision r _{DS(ON)} or DCR Differential Current Sensing	3	12	0.5	1.6	>130	5	VR11	QFN-40

*Coming Soon

Desktop Power

VRM10/10.1/10.2

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6568	2-Phase Buck PWM Controller with Integrated MOSFET Drivers for VRM9, VRM10, and AMD Hammer Applications	3	12	0.8375	1.6	>60	5	VR9, VR10, AMD Hammer	QFN-32
ISL6566	3-Phase Buck PWM Controller with Integrated MOSFET Drivers for VRM9, VRM10, and AMD Hammer Applications	3	12	0.8375	1.6	>100	5	VR9, VR10, AMD Hammer	QFN-40
ISL6566A	3-Phase Buck PWM Controller with Two Integrated MOSFET Drivers and One External Driver Signal	3	12	0.8375	1.6	>100 (3 RD FET driver external)	5	VR9, VR10, AMD Hammer	QFN-40
ISL6565A	Multiphase PWM Controller with Precision r _{DS(ON)} or DCR Current Sensing for VR10.X Application	3	12	0.8375	1.6	>90	5, 12	VR10	QFN-28, SOIC-28, TSSOP-28
ISL6565B	Multiphase PWM Controller with Precision r _{DS(ON)} or DCR Current Sensing for VR10.X Application	3	12	0.8375	1.6	>90	5, 12	VR10	QFN-28, SOIC-28, TSSOP-28
ISL6563	2-Phase Multiphase Buck PWM Controller with Integrated MOSFET Drivers	5	12	0.8	1.85	>60	5	VR9, VR10, AMD Hammer (Athlon 64, Opteron, Sempron)	QFN-24
ISL6561	Multiphase PWM Controller with Precision r _{DS(ON)} or DCR Current Sensing	3	12	0.8375	1.65	>120	5, 12	VR10	QFN-40
ISL6556A	Optimized Multiphase Controller with 6-Bit DAC for VR10.X Applications	3	12	0.8375	1.6	>120	5, 12	VR10	SOIC-28, QFN-32
ISL6556B	Optimized Multiphase PWM Controller with 6-Bit DAC and Programmable Internal Temperature Compensation for VR10.X Application	3	12	0.8375	1.6	>120	5, 12	VR10	SOIC-28, QFN-32
ISL6316	Enhanced 4-Phase PWM Controller with 6-Bit VID Code Capable of Precision r _{DS(ON)} or DCR Differential Current Sensing for VR10 Application	3	12	0.8375	1.65	>130	5	VR10X	QFN-40

VRM9.0/9.1

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6568	2-Phase Buck PWM Controller with Integrated MOSFET Drivers for VRM9, VRM10, and AMD Hammer Applications	3	12	0.8375	1.6	>60	5	VR9, VR10, AMD Hammer	QFN-32
ISL6566	3-Phase Buck PWM Controller with Integrated MOSFET Drivers for VRM9, VRM10, and AMD Hammer Applications	3	12	0.8375	1.6	>100	5	VR9, VR10, AMD Hammer	QFN-40
ISL6566A	3-Phase Buck PWM Controller with Two Integrated MOSFET Drivers and One External Driver Signal	3	12	0.8375	1.6	>100 (3 RD FET driver external)	5	VR9, VR10, AMD Hammer	QFN-40
ISL6563	2-Phase Multiphase Buck PWM Controller with Integrated MOSFET Drivers	5	12	0.8	1.85	>60	5	VR9, VR10, AMD Hammer (Athlon 64, Opteron, Sempron)	QFN-24
ISL6560	Microprocessor CORE Voltage Regulator 2-Phase Buck PWM Controller	3	12	1.1	1.85	>60	5	VR9	SOIC-16
HIP6311	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.1	1.85	>120	5	VR9	SOIC-20
HIP6311A	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.1	1.85	>120	5	VR9	SOIC-20
HIP6302	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.1	1.85	>60	5	VR9	SOIC-16
HIP6302V	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.1	1.85	>60	5	VR9	SOIC-16
HIP6301	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.1	1.85	>120	5	VR9	SOIC-20
HIP6301V	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.1	1.85	>120	5	VR9	SOIC-20

Desktop/Server Power

Desktop Core Power Controllers continued

VRM8.5

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6553	Microprocessor CORE Voltage Regulator 2-Phase Buck PWM Controller	3	12	1.05	1.825	>60	5	VR8.5	SOIC-16
ISL6552	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.05	1.825	>120	5	VR8.5	QFN-20, SOIC-20

VRM8.4

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
HIP6303	Microprocessor CORE Voltage Regulator Multiphase Buck PWM Controller	3	12	1.3	2.05	>120	5	VR8.4	SOIC-20

No - VID

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	VRM	Package
ISL6558	Multi-Purpose Precision Multiphase PWM Controller with Optional Active Voltage Positioning	1.2	12	0.8	5	>120	5	N/A	SOIC-16, QFN-20

Server Core Power Controllers

Itanium IA-64

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6564A	Multiphase PWM Controller with Linear 6-Bit DAC Capable of Precision I _{ns(on)} or DCR Differential Current Sensing	3	12	0.525	1.3	≥ 120	5, 12	Montecito	QFN-40
ISL6554	Microprocessor CORE Voltage Regulator 2- to 4-Phase Buck PWM Controller	3	12	0.95	1.7	≥ 60	5	VR8.5	SOIC-20

Digital Multiphase

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	Switching Frequency (kHz)	V _{BIAS} (V)	Application	Package
ISL6595	6-Phase Digital Multiphase Controller with I ² C Interface	13.2	8	0.5	1.6	up to 180	100 to 1500	3.3	VR11	QFN-48
Part Number	Description	V _{IN} (max) (V)	V _{DRIVE} (V)	Output Per Driver I _L GATE Source/ Sink (A)	Output Per Driver I _L GATE Source/ Sink (A)	Phase V _{PHASE} (min) (V)	Phase V _{PHASE} (max) (V)	No Load I _S (mA) (mA)	I _q (mA)	Package
ISL6594A	Advanced Synchronous Buck MOSFET Driver with 3V PWM Interface and Advanced Protection Features	13.2	5 or 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	2.5	4.5	DFN-10, SOIC-8
ISL6594B	Advanced Synchronous Buck MOSFET Driver with 3V PWM Interface and Advanced Protection Features	13.2	5 or 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	2.5	4.5	DFN-10, SOIC-8
ISL6594D	Advanced Synchronous Buck MOSFET Driver with 3V PWM Interface and Advanced Protection Features, IBA Compatible	13.2	12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	N/A	12	DFN-10, SOIC-8

Notebook Power

Notebook Core Power Controllers

IMVP-VI (Centrino Duo Core Based CPUs)

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6262	2-Phase PWM Controller with 7-Bit DAC Code Capable of Lossless DCR Sensing or Resistive Current Sensing	5	25	0.3	1.5	25/phase	5	IMVP-VI (Napa platform, Centrino Duo CPUs)	QFN-48
ISL6262A	2-Phase PWM Controller with 7-Bit DAC Code Capable of Lossless DCR Sensing or Resistive Current Sensing	5	25	0.3	1.5	25/phase	5	IMVP-VI (Santa Rosa platform, Centrino Duo CPUs)	QFN-48
ISL6261	Single-Phase PWM Controller with 7-Bit DAC Code Capable of Lossless DCR Sensing or Resistive Current Sensing	5	25	0.3	1.5	25/phase	5	IMVP-VI (Napa platform, Centrino Duo CPUs)	QFN-40
ISL6261A	Single-Phase PWM Controller with 7-Bit DAC Code Capable of Lossless DCR Sensing or Resistive Current Sensing	5	25	0.3	1.5	25/phase	5	IMVP-VI (Santa Rosa platform, Centrino Duo CPUs)	QFN-40
ISL6260	3-Phase PWM Controller with 7-Bit DAC Code Capable of Lossless DCR Sensing or Resistive Current Sensing	5	25	0.3	1.5	25/phase	5	IMVP-VI (Napa platform, Centrino Duo CPUs)	QFN-40
ISL6260C	3-Phase PWM Controller with 7-Bit DAC Code Capable of Lossless DCR Sensing or Resistive Current Sensing	5	25	0.3	1.5	25/phase	5	IMVP-VI (Santa Rosa platform, Centrino Duo CPUs)	QFN-40

IMVP-IV (Centrino Based CPUs)

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6218	Single-Phase PWM Controller with 6-Bit VID Code Capable of Precision r _{DS(ON)} or DCR Differential Current	5	25	0.7	1.708	20/phase	5	IMVP-IV & IMVP-IV+	TSSOP-38, QFN-28
ISL6217A	2-Phase PWM Controller with 6-Bit VID Code Capable of Precision r _{DS(ON)} or Resistive Current Sensing	5	25	0.7	1.708	20/phase	5	IMVP-IV & IMVP-IV+	TSSOP-38

AMD Turion Controllers

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	Applications	Package
ISL6265*	AMD Next-Generation Multi-Output Regulator	5	25	0.375	1.55	20/phase	5	AMD next-generation processor	QFN-48
ISL6264	Two-Phase PWM Controller with 6-Bit DAC Code with DCR Current Sensing	5	25	0.375	1.55	25/phase	5	AMD Mobile Turion	QFN-40

Power MOSFET Drivers - Synchronous Buck

Part Number	Description	V _{IN} (max) (V)	V _{DRIVE} (V)	Output Per Driver I _{UGATE} Source/ Sink (A)	Output Per Driver I _L GATE Source/ Sink (A)	Phase V _{PHASE} (min) (V)	Phase V _{PHASE} (max) (V)	No Load I _S (max) (mA)	I _Q (mA)	Package
ISL6614	Dual Advanced Synchronous Rectified Buck MOSFET Driver with Protection Features	13.2	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	16	SOIC-14, QFN-16
ISL6614A	Dual Advanced Synchronous Rectified Buck MOSFET Driver with Pre-POR OVP	13.2	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	16	SOIC-14, QFN-16
ISL6614B	Dual Advanced Synchronous Rectified Buck MOSFET Driver with Protection Features	13.2	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	16	SOIC-14, QFN-16
ISL6613A	Advanced Synchronous Rectified Buck MOSFET Driver with Pre-POR OVP	15	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	5	DFN-10, EPSON-8, SOIC-8
ISL6613B	Advanced Synchronous Rectified Buck MOSFET Drivers with Pre-POR OVP	15	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	8	DFN-10, EPSON-8, SOIC-8
ISL6612A	Advanced Synchronous Rectified Buck MOSFET Driver with Pre-POR OVP	15	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	5	DFN-10, EPSON-8, SOIC-8
ISL6612B	Advanced Synchronous Rectified Buck MOSFET Driver with Pre-POR OVP	15	5 to 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	4.5	8	DFN-10, EPSON-8, SOIC-8

*Coming Soon

Power MOSFET Drivers

Power MOSFET Drivers - Synchronous Buck

Part Number	Description	V _{IN} (max) (V)	V _{DRIVE} (V)	Output Per Driver I _{UGATE} Source/Sink (A)	Output Per Driver I _{LGATE} Source/Sink (A)	Phase V _{PHASE} (min) (V)	Phase V _{PHASE} (max) (V)	No Load I _S (max) (mA)	I _Q (mA)	Package
ISL6610	Dual Synchronous Rectified MOSFET Driver	22	5	2/2	2/4	-8	30	1.6 (typ)	240A (typ)	SOIC-14, QFN-16
ISL6610A	Dual Synchronous Rectified MOSFET Driver	15	5	2/2	2/4	-8	30	1.6 (typ)	240A (typ)	SOIC-14, QFN-16
ISL6609	Synchronous Rectified MOSFET Driver	15	5.5	2/2	2/4	-8V (<20ns)	15V _{DC} , 30V (<100ns)	0.132	0.132	QFN-8, SOIC-8
ISL6609A	Synchronous Rectified MOSFET Driver	15	5.5	2/2	2/4	GND-0.3V _{DC} GND-8V (<20ns)	15V _{DC} , 30V (<100ns)	0.132	0.132	QFN-8, SOIC-8
ISL6608	Synchronous Rectified MOSFET Driver	17	5	2/2	2/4	V _{BOOT} -7	22		0.008	QFN-8, SOIC-8
ISL6605	Synchronous Rectified MOSFET Driver	17	5	2/2	2/4	V _{BOOT} -7	22		0.002	QFN-8, SOIC-8
ISL6596	Synchronous Rectified MOSFET Driver	15	5 or 12	2/2	2/4	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	2.5	4.5	QFN-10, SOIC-8
ISL6594A	Advanced Synchronous Buck MOSFET Driver with 3V PWM Interface and Advanced Protection Features	13.2	5 or 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	2.5	4.5	DFN-10, SOIC-8
ISL6594B	Advanced Synchronous Buck MOSFET Driver with 3V PWM Interface and Advanced Protection Features	13.2	5 or 12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	2.5	4.5	DFN-10, SOIC-8
ISL6594D	Advanced Synchronous Buck MOSFET Driver with 3V PWM Interface and Advanced Protection Features, IBA Compatible	13.2	12	1.25/2	2/3	GND-0.3V _{DC} GND-8V (<400ns)	15V _{DC} , 30V (<200ns)	N/A	12	DFN-10, SOIC-8
ISL6210	Dual Synchronous Rectified MOSFET Driver	25	5	2/2	2/4	V _{BOOT} -7	30		0.17	QFN-16
ISL6209	High Voltage Synchronous Rectified Buck MOSFET Driver with Programmable Deadtime	25	5	1/2	2/4	V _{BOOT} -7	30		0.085	QFN-8, SOIC-8
ISL6208	High Voltage Synchronous Rectified Buck MOSFET Driver	25	5	2/2	2/4	V _{BOOT} -7	30		0.08	QFN-8, SOIC-8
ISL6208A	High Voltage Synchronous Rectified Buck MOSFET Driver with Programmable Deadtime	25	5	2/2	2/4	V _{BOOT} -7	30		0.01	QFN-8, SOIC-8
ISL6207	High Voltage Synchronous Rectified Buck MOSFET Driver	25	5	2/2	2/4	V _{BOOT} -7	30			QFN-8, SOIC-8
HIP6604B	Synchronous Rectified Buck MOSFET Driver	12	5 or 12		0.7	-5	15	9.8		QFN-16
HIP6603B	Synchronous Rectified Buck MOSFET Driver	12	5 or 12		0.7	-5	15	7		EPSON-8, SOIC-8
HIP6602B	Dual-Channel Synchronous Rectified Buck MOSFET Driver	12	5 or 12		0.7	-5	15	9		SOIC-14, QFN-16
HIP6601B	Synchronous Rectified Buck MOSFET Driver	12	5 or 12		0.7	-5	15	6.6		EPSON-8, SOIC-8

Multiple Output

Dual Switchers/DDR

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	Switching Frequency (kHz)	Package
ISL8112	High Light-Load Efficiency, Dual-Output, Main Power Supply Controller	5.5	25	0.7	5.5	30	400/500, 300/400, 200/300	QFN-32
ISL6539	Wide Input Range Dual PWM Controller with DDR Option	3.3	18	0.9	5.5	8	300	QSOP-28
ISL6531	Dual 5V Synchronous Buck PWM Controller for DDRAM Memory V _{DDQ} and V _{TT} Termination	5	5	0.8	5	20	300	SOIC-24, QFN-32
ISL6530	Dual 5V Synchronous Buck PWM Controller for DDRAM Memory V _{DDQ} and V _{TT} Termination	5	5	0.8	5	1	300	SOIC-24, QFN-32
ISL6445	1.4MHz Dual, 180° Out-of-Phase, Step-Down PWM Controller	4.5	24	0.8	5.5	10	1400	QSOP-24
ISL6440	300kHz Dual, 180° Out-of-Phase, Step-Down PWM Controller	4.5	24	0.8	24	10	300	QSOP-24
ISL6227	Dual Mobile-Friendly PWM Controller with DDR Option	3.3	24	0.9	5.5	16	300	QFN-28, QSOP-28
ISL6228*	High Performance Dual-Output Buck Controller for Notebook Applications	3.3	25	0.6	5	30	200-600	QFN-28

*Coming Soon

Switching Regulation

Multiple Output continued

2-in-1 PWM Switcher + Linear/DDR

Part Number	Description	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
ISL88550A	Synchronous Step-Down Controller with Sourcing and Sinking LDO Regulator	2	25	0.7	3.5	0.7 to 3.5	15	+2.5/-2	5	QFN-28
ISL6549	Single 12V Input Supply Dual Regulator - Synchronous Rectified Buck PWM and Linear Power Controller	1	12	0.8	V _{IN}	0.8 to V _{IN}	20	4	12	SOIC-14, QFN-16, QSOP-16
ISL6532	ACPI Regulator/Controller for Dual-Channel DDR Memory Systems	2.5	5	0.8	5	0.8 to 5	20	3	5	QFN-20
ISL6529	Dual Regulator-Synchronous Rectified Buck PWM and Linear Power Controller	3.3	5	0.8	3.3	0.8 to 3.3	15	4	12	SOIC-14, QFN-16
ISL6529A	Dual Regulator-Synchronous Rectified Buck PWM and Linear Power Controller	3.3	5	0.8	3.3	0.8 to 3.3	15	4	12	SOIC-14, QFN-16
ISL6528	Dual Regulator-Standard Buck PWM and Linear Power Controller	3.3	5	0.8	3.3	0.8 to 3.3	15	4	5	SOIC-8
Part Number	Description	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)	Package
ISL6537	ACPI Regulator/Controller for Dual-Channel DDR Memory Systems	4.5	5.5	0.8	V _{IN}	50% of V _{OUT1}	Adjustable down to 0.8V	Adjustable down to 0.8V	25	QFN-28

3-in-1 PWM Switchers + Linears

Part Number	Description	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
ISL6534	Dual PWM with Linear	3.3	12	0.6	9	0.6 to 9	Adj.	20	20	EPTSSOP-24, QFN-32
ISL6532A	3-in-1 ACPI Regulator/Controller for Dual Channel DDR and DDR2 Memory Systems	2.5	5	0.8	5	0.8 to 5	Adj.	20	3	QFN-28
ISL6443	300kHz Dual, 180° Out-of-Phase, Step-Down PWM and Single Linear Controller	4.5	24	0.8	24	24	Adj.	20	20	QFN-28
ISL6442	2.5MHz Dual, 180° Out-of-Phase, Step-Down PWM and Single Linear Controller	4.5	24	0.8	24	24	Adj.	20	20	QSOP-24
ISL6441	1.4MHz Dual, 180° Out-of-Phase, Step-Down PWM and Single Linear Controller	4.5	24	0.8	24	24	Adj.	20	20	QFN-28
HIP6018B	Advanced PWM and Dual Linear Power Control	5	5	1.3	3.5	Adj.	Adj.	25	0.2	SOIC-24

4-in-1 PWM Switchers + Linears

Part Number	Description	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)	Package
ISL6548	ACPI Regulator/Controller for Dual-Channel DDR Memory Systems	4.5	5.5	0.8	V _{IN}	50% of V _{OUT1}	Adj. down to 0.8V	Adj. down to 0.8V	25	QFN-28
ISL6537	ACPI Regulator/Controller for Dual-Channel DDR Memory Systems	4.5	5.5	0.8	V _{IN}	50% of V _{OUT1}	Adj. down to 0.8V	Adj. down to 0.8V	25	QFN-28
ISL6236	High-Efficiency, Quad-Output, Main Power Supply Controllers for Notebook Computers	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	QFN-32
ISL6524	VRM8.5 PWM and Triple Linear Power System Controller	5	5	1.05	1.825	1.2 (also adj. higher)	1.5 (also adj. higher)	1.8 (also adj. higher)	25	SOIC-28
ISL6524A	VRM8.5 PWM and Triple Linear Power System Controller	5	5	1.05	1.825	1.2 (also adj. higher)	1.5 (also adj. higher)	1.8 (also adj. higher)	25	SOIC-28
ISL6523	VRM8.5 Dual PWM and Dual Linear Power System Controller	5	5	1.05	1.825	1.2 (also adj. higher)	1.5 (also adj. higher)	1.8 (also adj. higher)	25	SOIC-28
ISL6521	PWM Buck DC/DC and Triple Linear Power Controller	5	5	0.8	4.5	Adj.	Adj.	Adj.	20	SOIC-16

Switching Regulation

4-in-1 PWM Switchers + Linears continued

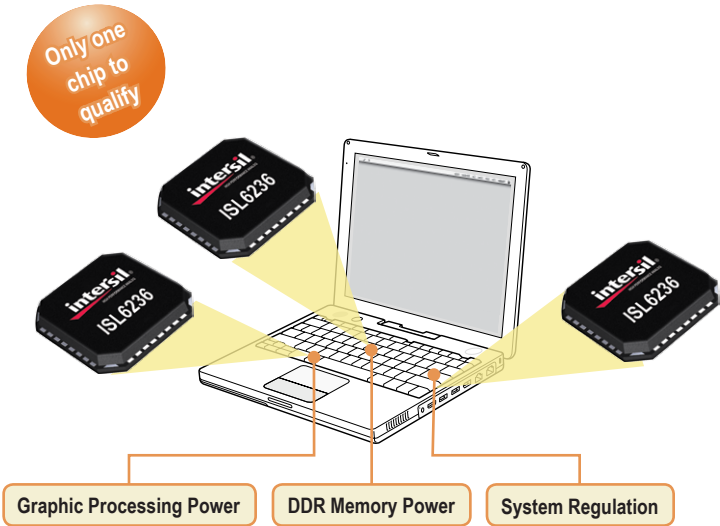
Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT1} (min) (V)	V _{OUT1} (max) (V)	V _{OUT2} (V)	V _{OUT3} (V)	V _{OUT4} (V)	I _{OUT1} (A)	Package
ISL6432	PWM and Triple Linear Power Controller for Home Gateway Applications	5	5	0.8	5	2.5	1.8	1.5		SOIC-16
ISL6232	High-Efficiency System Power Supply Controller for Notebook Computers	5.5	25	3.25 (adj. 0.8)	3.35 (adj. 5.5)	5 (adj. 0.8 to 5.5)	3.3 linear	5 linear	12	QSOP-28
HIP6521	PWM and Triple Linear Power Controller	5	5	0.8	4.5	Adj.	Adj.	Adj.	20	SOIC-16
HIP6021	Advanced PWM and Triple Linear Power Controller	5	5	1.3	3.5	1.5 or 3.3 (also adj. higher)	1.5 (also adj. higher)	1.8 (also adj. higher)	25	SOIC-28
HIP6019B	Advanced Dual PWM and Dual Linear Power Control	5	5	1.3	3.5	Adj.	Adj.	Adj.	25	SOIC-28

5-in-1 PWM Switchers + Linears

Part Number	Description	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)	V _{OUT5} (V)	Package
ISL6548A	ACPI Regulator/Controller for Dual-Channel DDR Memory Systems	5.5	4.5	0.8	V _{IN}	50% of V _{OUT1}	Adjustable down to 0.8V	Adjustable down to 0.8V	Adjustable down to 0.8V	QFN-28
ISL6537A	ACPI Regulator/Controller for Dual-Channel DDR Memory Systems	4.5	5.5	0.8	V _{IN}	50% of V _{OUT1}	Adjustable down to 0.8V	Adjustable down to 0.8V	Adjustable down to 0.8V	QFN-28

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- Pulse-skipping maximizes efficiency in light-load applications
- Fixed-frequency PWM mode reduces RF interference in sensitive applications
- Secondary feedback input maintains charge pump voltage

Applications

- Notebook computers
- 3- and 4-cell Li+ battery-powered devices
- PDA's

Switching Regulation

ACPI Controllers

Part Number	Description	Chip Set Supported	3.3 V _{DUAL} Reg.	5 V _{DUAL} Reg.	Memory Reg. (V)	Integrated Clock Reg.	Southbridge Resume Well Reg. (V)	VID Reg. (V)	3.3 V _{SBY} Reg.	Package
ISL6506	Multiple Linear Power Controller with ACPI Control Interface	i810, i815, i820, i845, i865, i875, i915, i925, i945, i955 for ICH4, ICH5, ICH6	Y	Y	N	N	N	N	Y	EPSON-8
ISL6506A	Multiple Linear Power Controller with ACPI Control Interface	i810, i815, i820, i845, i865, i875, i915, i925, i945, i955 for ICH4, ICH5, ICH6, ICH7	Y	Y	N	N	N	N	Y	EPSON-8
ISL6506B	Multiple Linear Power Controller with ACPI Control Interface	i810, i815, i820, i845, i865, i875, i915, i925, i945, i955 for ICH4, ICH5, ICH6, ICH8	Y	Y	N	N	N	N	Y	EPSON-8
ISL6505	Multiple Linear Power Controller with ACPI Control Interface	Springdale with ICH5	Y	Y		N		1.2	N	QFN-20, SOIC-20
ISL6504	Multiple Linear Power Controller with ACPI Control Interface	i845G with ICH4	Y	Y		N	1.8	1.2	N	SOIC-16, QFN-20
ISL6504A	Multiple Linear Power Controller with ACPI Control Interface	i845G with ICH4	Y	Y		N	1.5	1.2	N	SOIC-16, QFN-20
HIP6503	Multiple Linear Power Controller with ACPI Control Interface	i810/i820 with ICH2	Y	Y	2.5 or 3.3 (selectable)	Y	1.8		N	SOIC-20
HIP6501A	Triple Linear Power Controller with ACPI Control Interface	i810/i810e/i815/i820, SiS620/5595, SiS630, VIA Apollo ProMedia133	Y	Y	2.5 or 3.3 (selectable)				N	SOIC-16

Single Output

Synchronous Buck/GPU

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	I _{CC} (min) (mA)	I _{CC} (typ) (mA)	Package
ISL8502	Wide Input Range 2A Synchronous Buck Regulator	4.5	18	0.6	V _{IN}	15				QFN-24
ISL8118	3.3V to 20V Single-Phase PWM Controller with Integrated 2A/4A MOSFET Drivers	3.3	20	0.6	V _{IN}	30				QFN-28
ISL8106	Wide V _{IN} , 7V to 25V, Single-Phase PWM Controller with Integrated MOSFET Drivers	7	25	0.6	3.3	12	N/A (internal)		2.2	QFN-16
ISL8105	1V to 12V Single-Phase Synchronous Buck Converter PWM Controller with Integrated MOSFET Gate Drivers	1	12	0.6	5	25	5, 12		3.2	QFN-10, SOIC-8
ISL8105A	1V to 12V Single-Phase Synchronous Buck Converter PWM Controller with Integrated MOSFET Gate Drivers	1	12	0.6	5	25	5, 12		3.2	QFN-10, SOIC-8
ISL8105B	1V to 12V Single-Phase Synchronous Buck Converter PWM Controller with Integrated MOSFET Gate Drivers and Extended Soft-Start Time	1	12	0.6	5	25	5, 12		3.2	QFN-10, SOIC-8
ISL8104	Synchronous Buck PWM Controller	1.2	12	0.6	5	30	8 to 12		51	SOIC-14, QFN-16
ISL6545	5V or 12V Single Synchronous Buck PWM Controller	1	12	0.6	5	25	5, 12		3.2	DFN-10, SOIC-8
ISL6545A	5V or 12V Single Synchronous Buck PWM Controller	1	12	0.6	5	25	5, 12		3.2	DFN-10, SOIC-8
ISL6541	Flexible 5V or 12V Synchronous Buck PWM Controller	1	12	0.8	V _{IN}	20				
ISL6540A	Single-Phase Buck PWM Controller with Integrated High Speed MOSFET Driver and Pre-Biased Load Capability	3.3	20	0.6	V _{IN}	30				QFN-28
ISL6535	Synchronous Buck PWM Controller	1.2	12	0.6	5	30	8 to 12		51	SOIC-14, QFN-16
ISL6527	Single Synchronous Buck PWM Controller	2.5	5	0.8	V _{IN}	20	3.3 to 5	2.6	3.3	SOIC-14, QFN-16
ISL6527A	Single Synchronous Buck PWM Controller	2.5	5	0.8	V _{IN}	20	3.3 to 5	2.6	3.3	SOIC-14, QFN-16
ISL6526	Single Synchronous Buck PWM Controller	2.5	5	0.8	V _{IN}	20	3.3 to 5	6.1	6.9	SOIC-14, QFN-16
ISL6526A	Single Synchronous Buck PWM Controller	2.5	5	0.8	V _{IN}	20	3.3 to 5	6.1	6.9	SOIC-14, QFN-16
ISL6525	Buck and Synchronous-Rectifier PWM Controller	2.5	12	1.2	V _{IN}	25	12		5	SOIC-14
ISL6522	Buck and Synchronous Rectifier PWM Controller	2.5	12	0.8	V _{IN}	25	12		5	SOIC-14, TSSOP-14, QFN-16
ISL6522A	Buck and Synchronous Rectifier PWM Controller	2.5	12	0.8	V _{IN}	25	12		5	SOIC-14, QFN-16
ISL6522B	Buck and Synchronous Rectifier PWM Controller	2.5	12	0.8	V _{IN}	25	12		5	SOIC-14, TSSOP-14, QFN-16

Switching Regulation

Synchronous Buck/GPU continued

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	V _{BIAS} (V)	I _{CC} (min) (mA)	I _{CC} (typ) (mA)	Package
ISL6520	Single Synchronous Buck PWM Controller	2.5	5	0.8	5	20	5		3.2	QFN-16, SOIC-8
ISL6520A	Single Synchronous Buck PWM Controller	2.5	5	0.8	5	20	5		3.2	QFN-16, SOIC-8
ISL6439	Single Synchronous Buck PWM Controller for Broadband Gateway Applications	3.3	5	0.8	3.3	20	3.3	6.1	6.9	SOIC-14, QFN-16
ISL6439A	Single Synchronous Buck PWM Controller for Broadband Gateway Applications	3.3	5	0.8	3.3	20	3.3	6.1	6.9	SOIC-14, QFN-16
ISL6420	Advanced Single Synchronous Buck PWM Controller	4.5	16	0.6	V _{IN} -0.5V	20	5	1.4	2	QFN-20, QSOP-20
ISL6420A	PWM Controller with Wide V _{IN} , Start-Up into Pre-Bias Load	4.5	28	0.6	V _{IN} -0.5V	20	5	1.4	2	QFN-20, QSOP-20
ISL6406	Single Synchronous PWM Controller	3.3	5	0.8	5	20	3.3 to 5	7	9.8	QFN-16, SOIC-16, TSSOP-16
ISL6269	High Performance Notebook PWM Controller with Bias Regulator and Audio-Frequency Clamp	7	25	0.6	3.3	25	N/A (internal)	2		QFN-16
ISL6269A	Single-Phase PWM Controller for Notebook Power Applications	7	25	0.6	3.3	25	5	N/A	1.7	QFN-16
ISL6269B	Single-Phase PWM Controller with Audio Switching Frequency Clamp for Notebook Power Applications	7	25	0.6	3.3	25	5	N/A	1.7	QFN-16
ISL6268	High Performance Notebook PWM Controller	7	25	0.6	3.3	25	5	N/A	1.7	QSOP-16
ISL6263	5-Bit VID Single-Phase GPU Controller (Napa)	5	25	0.412	1.2875	25	5	N/A	2.5	QFN-32
ISL6263A	5-Bit VID Single-Phase GPU Controller (Santa Rosa)	5	25	0.412	1.2875	25	5	N/A	2.5	QFN-32
HIP6012	Buck and Synchronous-Rectifier PWM Controller	2.5	12	1.3	V _{IN}	25	12		5	SOIC-14, TSSOP-14
HIP6006	Buck and Synchronous-Rectifier PWM Controller	2.5	12	1.3	V _{IN}	25	12		5	SOIC-14, TSSOP-14

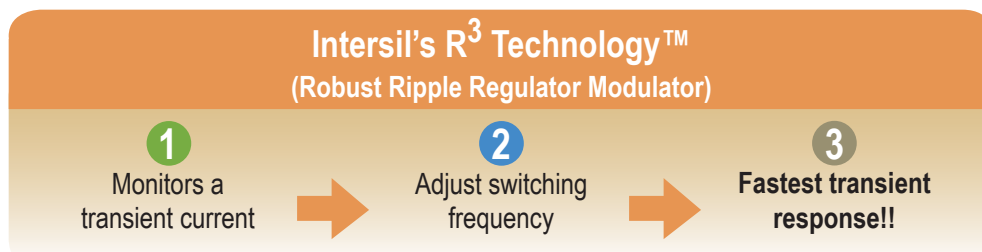
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Li-Ion Battery Chargers

Part Number	Description	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{BAT} (V)	Voltage Accuracy (%)	Input Current Limit Accuracy (%)	Accurate Battery Trickle Charge Current Limit (%)	Battery Charge Accuracy (%)	Applications	Package
ISL88731	Highly-Integrated Battery Charger with SMBus Interface	7	25	1 to 4 cells	±0.5	±3		±3	Li-Ion and Li-Polymer battery charging for NB computers and other battery-operated devices powered from 1 cell up to 4 cells	QFN-28
ISL6257	Highly-Integrated NVDC-I Battery Charger	7	25	2 to 4 cells	±0.5	±3		±3	Li-Ion and Li-Polymer battery charging for NB computers, NVDC applications and other battery-operated devices powered from 2 cells up to 4 cells	QFN-48
ISL6255	Highly-Integrated Battery Charger with Automatic Power Source Selector	7	25	2 to 4 cells	±0.5	±3		±3	Li-Ion and Li-Polymer battery charging for NB computers and other battery-operated devices powered from 2 cells up to 4 cells	QSOP-28, QFN-28
ISL6255A	Highly-Integrated Battery Charger with Automatic Power Source Selector	7	25	2 to 4 cells	±0.5	±3	±25	±3	Li-Ion and Li-Polymer battery charging for NB computers and other battery-operated devices powered from 2 cells up to 4 cells	QSOP-28, QFN-28
ISL6253	Highly-Integrated Battery Charger with Automatic Source Selector and Automatic Trickle Charge	7	25	2 to 4 cells	±0.5	±3		±4	Li-Ion and Li-Polymer battery charging for NB computers and other battery-operated devices powered from 2 cells up to 4 cells	QSOP-28, QFN-28
ISL6251A	Highly-Integrated Battery Charger	7	25	2 to 4 cells	±0.5	±3		±3	Li-Ion and Li-Polymer battery charging for NB computers and other battery-operated devices powered from 2 cells up to 4 cells	QSOP-24, QFN-28

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- **ISL6262A:** Two-phase core controller with internal driver for Santa Rosa platform with P_{MON} (Centrino Duo Mobile Technology)
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