LUMISSIL MICROSYSTEMS

2026-2027

Industrial Analog & Mixed-Signal IC Solutions

We Deliver IA for AI

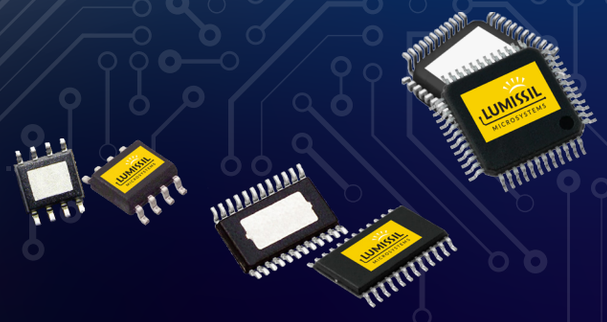


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About Lumissil

Lumissil Microsystems is a fabless semiconductor company specializing in analog and mixed-signal technologies, serving a broad range of markets including automotive, consumer, industrial, and medical. We are a recognized leader in LED driver solutions, supporting both low-to mid-power RGB color mixing and high-brightness lighting applications. In the electric vehicle (EV) space, Lumissil is a key provider of HomePlug Green PHY solutions for EV communication networks.

Our portfolio includes LED drivers, power management ICs, application-specific microcontrollers (MCUs), capacitive sensors, and multimedia microprocessors (MPUs) built on our proprietary XBurst CPU architecture, designed to meet the needs of diverse, performance-driven applications. We also offer low-power capacitive touch sensing solutions, automotive-grade LIN and CAN transceivers, and state-machine-based smart components.

Quality and Long-Term Support
We are committed to long term support and reliable product availability to ensure longevity of your designs.

Samples Availability and Support
This selection guide provides an overview of Lumissil industrial products portfolio. Samples and evaluation boards for all products are available to qualified customers. Please contact your sales representative or distributor for your sample requirements.

Intelligent Analog Solutions Across Key Markets

Lumissil Microsystems delivers “IA for AI”, intelligent analog solutions that connect digital intelligence to the physical world through light, touch, power, sensing, control, and communications. Lumissil’s broad portfolio includes LED drivers, power-management ICs, capacitive-touch controllers, application-specific microcontrollers, and connectivity devices for industrial, consumer, communications, IoT, and home-appliance applications.

From dynamic user-interface lighting and display backlighting to high-power illumination and reliable network connectivity, Lumissil combines intelligent integration, built-in diagnostics, EMI-mitigation features, and responsive technical support to simplify development and help customers bring dependable, differentiated products to market faster.



Gaming & Computing

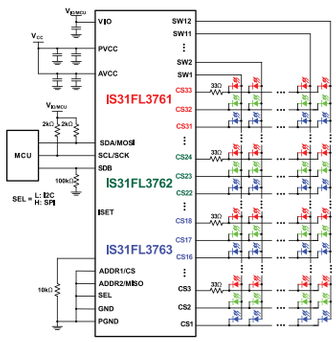
Gaming and computing products use RGB lighting to enhance immersion, provide visual feedback, and create distinctive visual designs. Applications range from multi-zone keyboards, mice, and headsets to consoles and synchronized PC lighting, each with different requirements for LED count, brightness, power, and size. Lumissil offers a broad portfolio of matrix and multi-channel constant-current LED drivers with precise color control, smooth dimming, and power efficient operation.

For high-density designs, Lumissil matrix drivers use row and column multiplexing to control large arrays of individually addressable LEDs with fewer package pins and PCB traces than direct-drive solutions. For moderate LED counts, multi-channel drivers provide a dedicated constant current output for each channel, enabling simultaneous control, full duty cycle operation and higher average brightness than a multiplexed matrix driver at the same peak LED current.

Matrix RGB Lighting Solutions

IS31FL3761/62/63

- LED PWM resolution:
  - 12-bit, 8+4-bit, 8-bit, or 6+2-bit
- Current adjust:
  - 8-bit global and 8-bit channel
- Configurable bus:
  - 1MHz I2C or 12MHz SPI
- Noise reduction:
  - De-ghost, 180° group phase shift, spread-spectrum



Part	Matrix Config.	PWM Freq. in 6+2	Max Sink Current	Package
IS31FL3761	33 × n, n = 2–12	312kHz	30mA/Ch	QFN-60
IS31FL3762	24 × n, n = 2–12	312kHz	30mA/Ch	QFN-48
IS31FL3763	18 × n, n = 2–12	288kHz	40mA/Ch	QFN-40

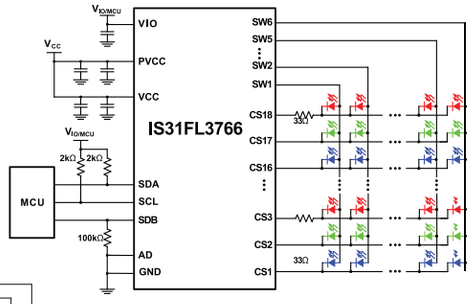


IS31FL3766

- Matrix Config:
  - 18 x n, n = 2,3,5, or 6
- LED PWM resolution:
  - 12-bit, 8+4-bit, 8-bit, or 6+2-bit
- PWM Freq in 6+2: 288kHz
- Max sink current: 40mA/Ch
- Current adjust:
  - 8-bit global and 8-bit channel
- 1MHz I2C only
- Noise reduction:
  - De-ghost, 180° group phase shift, spread-spectrum



QFN-32

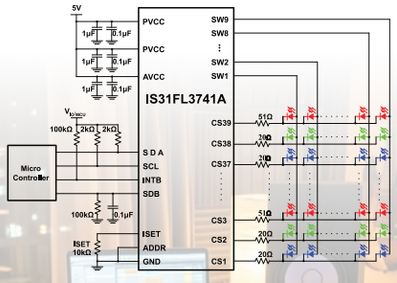


IS31FL3741A

- 39×9 matrix
- 8-bit PWM @ 29kHz, 3.6kHz, 1.8kHz, or 900Hz
- Max sink current: 38mA/Ch
- Current adjust:
  - 8-bit global and 8-bit channel
- 1MHz I2C only
- De-ghost



QFN-60



Multi-Channel RGB Lighting Solutions

9 & 12-Channel LED Drivers

Common QFN-20 Package

9 CHANNELS (3 RGB groups)

Automatic Patterns

IS31FL3099
- 12-bit / 8+4-bit PWM @ 23kHz in 8+4 mode
- 40mA/ch with 8-bit DC, 6-bit GCC
- 4 auto breath patterns, fade in/out 10s
- PWM spread spectrum in 8+4 mode
- I2C 1Mhz

Pulse-Controlled Patterns

IS31FL3299
- 12-bit / 8+4-bit PWM @ 23kHz in 8+4 mode
- 40mA/ch with 8-bit DC, 6-bit GCC
- 3 auto breath patterns
- I2C 1Mhz

Audio & Synchronization

IS31FL3199
- 8-bit PWM
- 40mA/ch, 8 global current settings
- 3 RGB group, 9 grouped breath patterns
- Audio modulation with AGC
- Cascade synchronization
- I2C 400khz

12 CHANNELS (4 RGB groups)

Basic Dimming

IS31FL3206
- 8-bit PWM; 24kHz / 3.6kHz selectable
- 38mA/ch, 4 current scaling levels
- Scaling: 1, 11/12, 9/12, 7/12
- I2C 400kHz

Dimming & Noise Reduction

IS31FL3205
- 8/10/12/16-bit PWM, 62kHz @ 8-bit
- 38mA/ch, 8-bit DC, 8-bit GCC
- Audible noise reduction
  - PWM spread-spectrum
  - 3 group phase delay, selectable 180° phase
- I2C 1Mhz

IS31FL3242
- 8/12-bit PWM, 64kHz @ 8-bit
- 48mA/ch with 8-bit DC, 8-bit GCC
- PWM spread-spectrum with 180° phase
- Spread spectrum
- I2C 1Mhz

Diagnostics & Animation

IS31FL3252
- 8/10+4/12/16-bit PWM, 32kHz @ 10+4-bit
- 27.5 mA/ch, 8-bit DC, 8-bit RGB DC
- Audible noise reduction
  - Spread-spectrum
  - Group phase delay
- I2C 1 MHz

IS31FL3292
- 12-bit / 8+4-bit PWM @ 23kHz in 8+4 mode
- 40mA/ch with 8-bit DC, 6-bit GCC
- 4 auto breath patterns, fade in/out 10s
- PWM spread spectrum in 8+4 mode
- I2C 1Mhz

IS31FL3252: pin-to-pin with IS31FL3205/3206

18-Channel LED Drivers

6 RGB Groups • 12C Control

Basic Dimming

IS31FL3218
- 8-bit PWM
- 38 mA/ch
- 12C 400kHz
- QFN-24 / SOP-24

IS31FL3208A
- 8-bit PWM; 23kHz/3.45kHz selectable
- 38mA/ch, 4/ch current scaling levels
- Scaling: 1, 11/12, 9/12, 7/12
- I2C 400kHz
- QFN-28

Higher Output Current

IS31FL3209
- 8-bit PWM; 23kHz/3.45kHz selectable
- 76 mA/ch
- I2C 400 kHz
- 13-level current scaling levels + OFF
- 1I2C 400kHz
- QFN-28

IS31FL3238
- 8/10/12/16-bit PWM; 62kHz @ 8-bit
- 78mA/ch with 8-bit DC, 8-bit GCC
- Audible noise reduction
  - PWM spread-spectrum
  - 6 phase delay, selectable 180° phase
- I2C 1MHz
- QFN-28

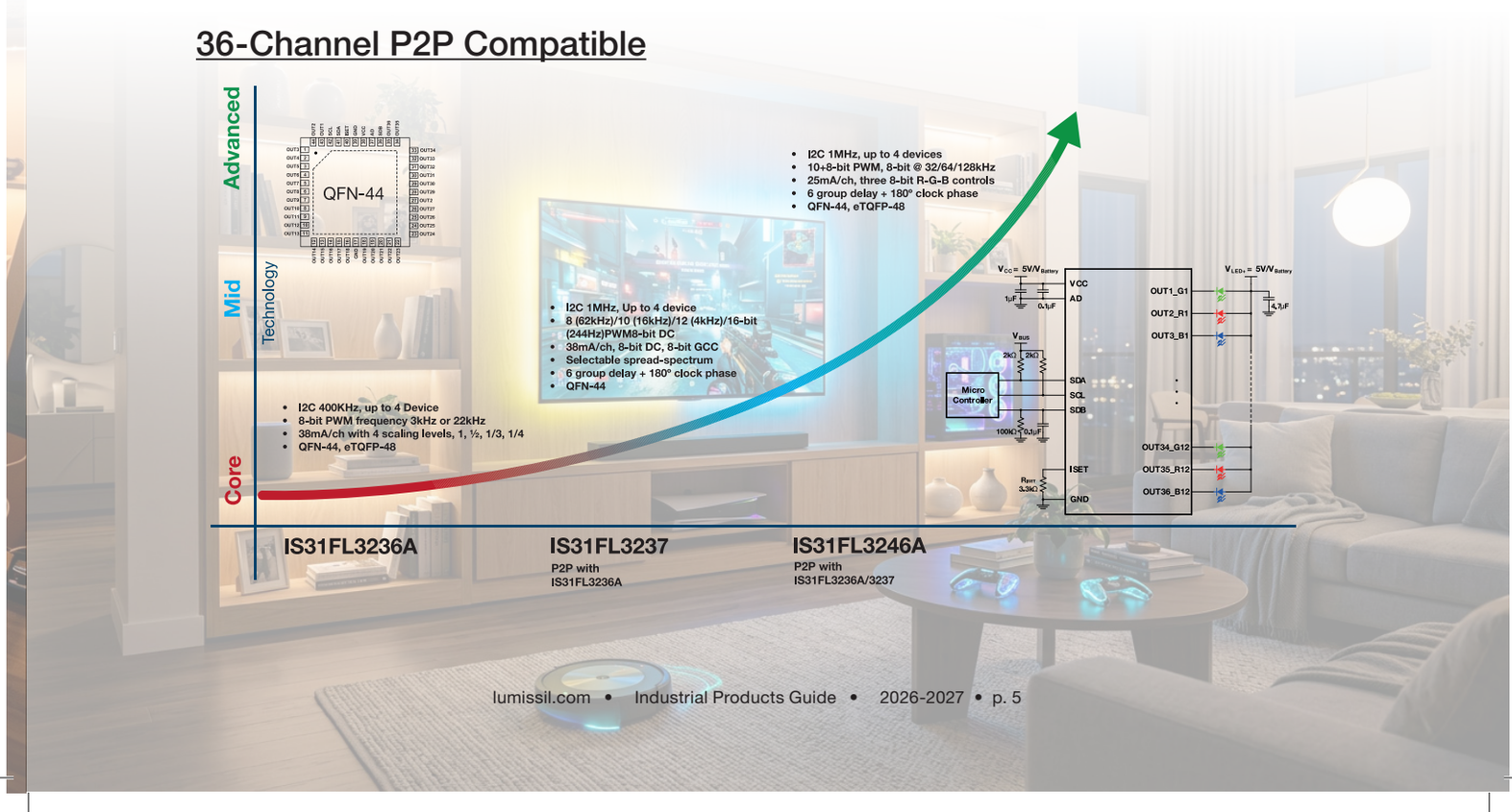
Fine Dimming & Noise Control

IS31FL3018
- 8/10+4/12/16-bit PWM; 32kHz @ 10+4-bit
- 27.5mA/ch, with three 8-bit RGB DC
- Audible noise reduction
  - PWM spread-spectrum
  - 180° phase delay
- I2C 1MHz
- QFN-32

IS31FL3207
- 8/10/12/16-bit PWM; 62kHz @ 8-bit 38 mA/ch
- 38mA/ch with 8-bit DC, 8-bit GCC
- Audible noise reduction
  - PWM spread-spectrum
  - 6 phase delay, selectable 180° phase
- I2C 1MHz
- QFN-28

IS31FL3258
- 8/10/12/16-bit PWM; 62kHz @ 8-bit 38 mA/ch
- 27.5mA/ch, three 8-bit RGB DC
- Audible noise reduction
  - PWM spread-spectrum
  - 180° phase delay
- I2C 1MHz
- Pin-to-pin with IS31FL3208A
- QFN-28

36-Channel P2P Compatible



Home Appliances

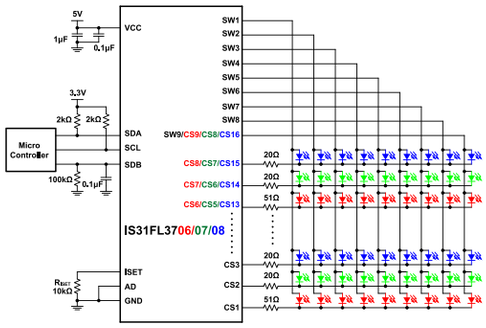
Home appliances increasingly consolidate illumination and touch input into sealed control surfaces, replacing discrete lamps and mechanical switches with backlit icons, segment displays, animations, and capacitive controls. Kitchen and laundry interfaces must remain intuitive, easy to clean, and dependable despite moisture, steam, and electrical noise from motors, compressors, and inverter drives.

Lumissil combines matrix LED drivers with capacitive touch and proximity controllers to support both illumination and user input. Constant-current drive, individual LED brightness control, fine PWM dimming, and autonomous effects provide uniform backlighting and smooth transitions, while configurable touch sensing operates through glass, plastic, stainless steel and other non-conductive overlays. With appropriate electrode, overlay, and system design, it is possible to achieve reliable touch detection in wet and electrically noisy appliance environments. Together, these solutions simplify interface development and deliver responsive controls with immediate visual feedback.

Matrix Lighting Solutions

IS31FL370x Family

- 2.7–5.5V
- 8-bit PWM Selectable 0.25, 0.5, 1, 2, 4, 34, 62, or 85kHz, 6+2-bit 220kHz
- Refresh rate 27.5 kHz (8 scans); 24.4 kHz (9 scans)
- LED current: 45mA
- Quiescent - 1.7mA, shutdown - 0.6uA
- 8-bit DC current sink; 64-step GCC
- 1 MHz I2C
- De-ghosting enhanced, programmable
- Spread spectrum, 180° PWM phase shift



Key feature	IS31FL3706	IS31FL3707	IS31FL3708
Matrix config	8×n (n = 1–9), or 9×8	8×n (n = 1–8), or 7×9	16×n (n = 1–8), or 15×9
Led count	72	64	135
Pin-to-Pin		IS31FL3739 IS31FL3717	IS31FL3729 IS31FL3719
Package	QFN-24	SOP-24, SSOP-24	QFN-32, eTQFP-32, LQFP-32



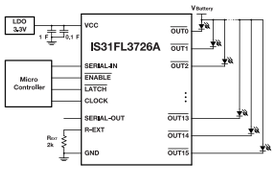
QFN-24 SOP-24 QFN-32

IS31FL3726A

- 3 to 5.5V
- 60mA x 16 Ch
- Current accuracy
  - Bit to bit: < ±4%
  - Device to device: < ±2%
- Serial shift @ 30MHz



QFN-24

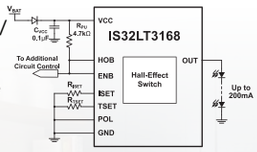


IS32LT3168

- 6.7 to 28V
- Resistor set 20 to 200mA LED current
  - 50µA stand by current
- Omni-polar Hall-effect LED ON/OFF switch
  - Resistor programmable fade ramp
  - Gamma corrected fade
- ENB input for LED ON/OFF with fade



SOP-8-EP

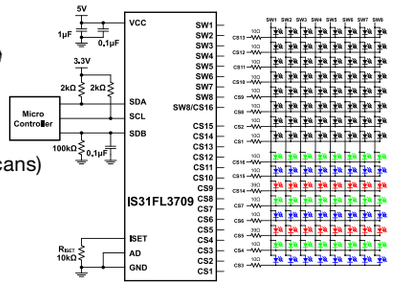


IS31FL3709

- 2.7–5.5V
- Matrix config 16 × n (n = 1–8), or 15 × 9
- 8-bit PWM selectable 0.125, 0.25, 0.5, 1, 2, 8, or 32kHz, 6+2-bit 256kHz
- Refresh rate 32kHz (8 scans); 28.4kHz (9 scans)
- LED current: 34.6mA
- Quiescent - 1.29mA, Shutdown - 0.7µA
- 7-bit GCC; no individual DC scaling
- 1 MHz I2C
- De-ghost programmable
- 180° PWM phase shift; no spread-spectrum



QFN-32

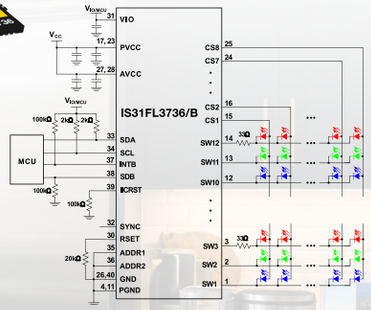


IS31FL3736/B

- 2.7V-5.5V
- 12×8 matrix (96 LEDs)
- 8-bit PWM and LED on/off control
- Three Auto Breath profiles
- 8-bit GCC
- 1MHz I2C
- Programmable de-ghost
- Multi-device synchronization
- IS31FL3736B: 8-bit PWM selectable 1.05, 2.1, 4.2, 8.4, 26.7kHz; 8.4kHz default
- IS31FL3736: 8-bit PWM; 7.35kHz fixed



QFN-40

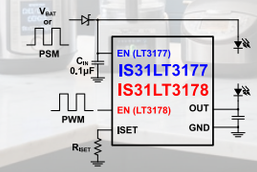


IS31LT3176/77/78

- 10mA to 200mA adjustable current
- Up to 1kHz PWM input (3177/3178)
- Up to 10kHz PWM input (3176)



SOP-8-EP (3177 / 3178) DFN-6 (3176)



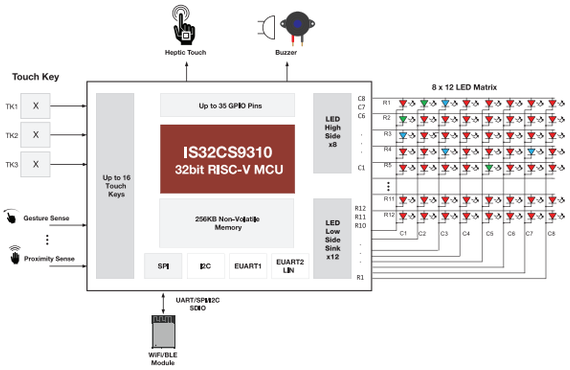
Touch Sense Solutions

IS31CS9310



eLQFP-64

- Integrated RISC-V CPU @ 32MHz
- On-board 256KB ECC eFLASH
- On-board 32KB ECC SRAM
- (16KB + 16KB DMA)
- 16 CH Touch Keys (self-cap), Shield, 8 CH APS, 8 x 8 Key Scan Matrix (mutual cap)
- 8 x 12 LED Matrix Driver, 12-bit PWM, 80mA current sink, de-ghost, spread-spectrum
- I2C, UART, EUART/LIN, SPI, 35 GPIOs, 16-bit TCC, 3 CH 14-bit PWM
- Buzzer / melody generator



IS31SE51xx Family

- Auto Sleep / wake on touch
- Buzzer / melody generator
- Proximity sense
- Per-key sensitivity settings
- Multi-key / press-and-hold
- I2C controlled

	IS31SE5118A	IS31SE5117B	IS31SE5120A
Cap Touch Channels	8	16	24
Configurable GPIO	NO	YES	YES
Package	TSSOP-16, QFN-16	QFN-24	QFN-32



TSSOP-16



QFN-24



QFN-32



QFN-16

IS31CS9311

- Same as IS31CS9310 with integrated DC/DC
  - DC/DC Converter + LDO, 8 to 18Vin with under voltage lockout, 1 – 16Vout adjustable
  - 1.2A output
  - 400KHz switching frequency
  - Thermal shutdown



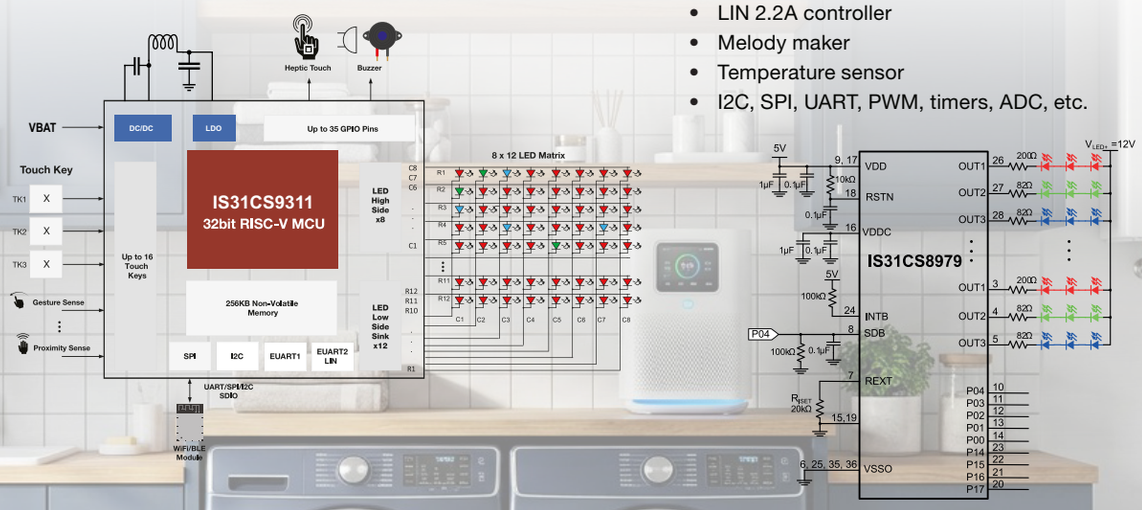
eLQFP-64

IS31CS8979

- 32MHz 1-cycle 8-bit MCU
- 2KB ECC SRAM
- 64KB ECC eFLASH
- 18 CH LED Driver, 60mA, Constant-current, PWM dimmable
- Up to 15 touch keys
- Up to 9 GPIO
- LIN 2.2A controller
- Melody maker
- Temperature sensor
- I2C, SPI, UART, PWM, timers, ADC, etc.



QFN-40



Personal Care & Hygiene

Personal-care products such as electric toothbrushes, shavers, styling tools, and skincare devices often use LEDs as their primary user interface. Lumissil low-power LED drivers efficiently control battery-level indicators, backlit displays, timers, charging animations, and color-coded status rings, helping extend run-time in compact, sealed, battery-powered designs.

Inductive-boost drivers generate the higher voltage needed for LED strings as battery voltage declines, while inductor less charge-pump drivers reduce component count and support low-profile designs. Fine PWM dimming, per-channel current adjustment, autonomous lighting patterns, low shutdown current, and integrated fault and thermal protection to produce smooth, consistent lighting effects while reducing host-processor activity and extending useful battery life.

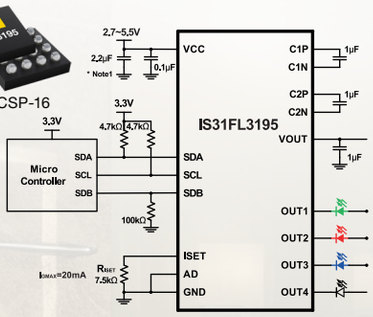
Charge Pump Capacitive Boost

IS31FL3195 - 4 Ch

- 2.7V to 5.5V Input
- Up to 20mA/Ch
- 1x, 1.5x operating modes
  - 1MHz Frequency
- 1MHz I2C, Up to 4 devices
- 1µA Shutdown current
- Auto Breath Function



WLCSP-16

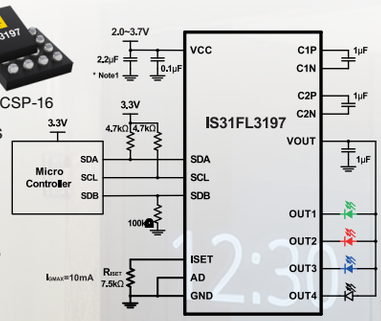


IS31FL3197- 4 Ch

- 2.0V to 3.7V Input
- Up to 10mA/Ch
- 1x, 1.5x, 2x operating modes
  - 1MHz Frequency
- 12-bit PWM Dimming
  - 8-bit DC
- 400KHz I2C, Up to 4 devices
- 0.5µA Shutdown current
- Auto Breath Function



WLCSP-16

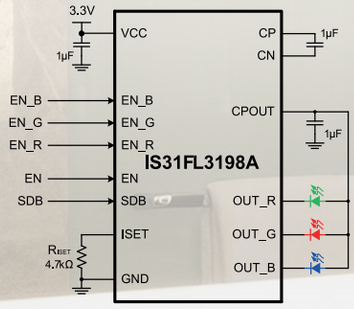


IS31FL3198/A - 3 Ch

- 3.3V±5% input
- Up to 80mA/Ch
- 2x operating mode
- 4-bit DC
- LED current rise/fall time <1µs
  - (IS31FL3198A only)
- 0.5µA shutdown current
- Auto breath function
- LED current rise/fall time <1µs
  - (IS31FL3198A only)



QFN-16



IS31FL3298A - 9 Ch

- 2.5V to 5.5V input
- 1x, 1.5x operating modes
- Up to 20mA/Ch
  - 1MHz I2C
- 12-bit PWM dimming
  - 8-bit DC
  - 7-bit global current adjust
- 0.5µA shutdown current
- Auto breath function



WLCSP-25

Inductive Boost

IS31FL3713

- 2.2 to 5.5V
- Inductive boost with 1MHz switching
- 0.8mA (Typ.) operational current
- 6+4-bit PWM for each LED
- 8-bit DC current
- 1MHz I2C
- 12 auto patterns
- Sync pin for multi-device synchronization
- Spread-spectrum & 180 phase delay



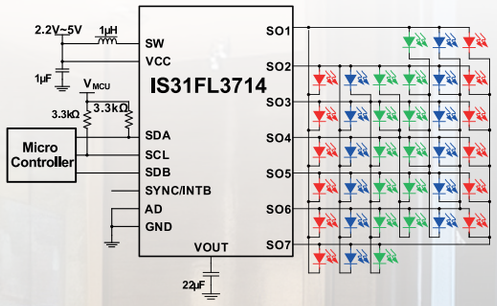
WLCSP-12

IS31FL3714

- 2.2 to 5V
- 7x6 matrix configuration
  - @50mA per Ch
- 1MHz I2C
- 12 auto patterns
- Sync pin for multi device
- Spread-spectrum
- Sampling Q2 2027



WLCSP-16

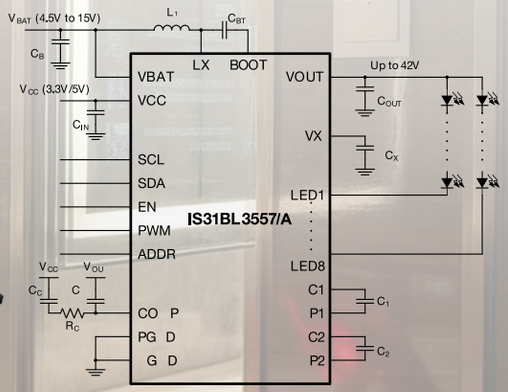


IS31BL3557/A

- Hybrid - Inductive boost with 2x charge pump 2nd stage selectable boost frequency:
  - 179kHz~1.43MHz
  - Supports 2-3 cell Li-ion input (4.5 - 15V)
- 1MHz I2C
- 8 Independent current sinks, up to 33mA each
- Boost output up to 42V
- 12+3-bit dithered PWM
- Spread-spectrum
- MTP non-volatile memory
- Telemetry VMON/IMON/TMON + ADC
  - (IS31BL3557A only, sample Q1 2027)



WLCSP-30



Industrial

Industrial equipment relies on LEDs to communicate operating status, warnings, and service needs. Lumissil matrix and multi-channel constant-current LED drivers deliver accurate brightness control for control panels, status towers, displays, access systems, and robotic equipment. Matrix architectures efficiently control dense, individually addressable LED arrays, while multi-channel devices provide direct-drive control for smaller lighting groups. Selected devices add de-ghosting for clean LED off states, spread-spectrum to reduce EMI, phase-staggered outputs to lower peak current and supply ripple, and open/short LED diagnostics.

Lumissil LIN and CAN transceivers complement these drivers by linking distributed lighting, sensing, and actuator nodes. Differential CAN signaling provides robust, noise-resistant communication over industrial cabling, while LIN offers economical single-wire connectivity for shorter, lower-speed local networks. Together, these technologies simplify communication across factory automation and robotic platforms.

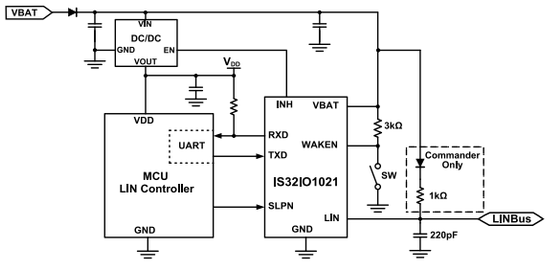
LIN Transceivers

IS32IO1021



SOP-8-EP

- LIN 2.X/SAE J2602 compliant (20kbaud)
- VBAT 5.5 to 30V
- INH output controls ext LDO or DC/DC
- RXD open drain output,
- TXD internal pull-down
- Sleep mode with LIN remote wake-up and local wake-up through WAKEN or SLPN

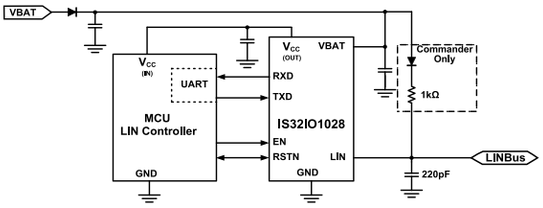


IS32IO1028A/B



SOP-8-EP

- LIN 2.X/SAE J2602 compliant (20kbaud)
- VBAT 6 to 30V
- Integrated LDO @ 100mA output
- - IS32IO1028A (5V) , IS32IO1028B (3.3V)
- RXD push–pull output, referenced VCC
- TXD internal pull-up to VCC
- RSTN open-drain reset output with internal pull-up
- Sleep mode with LIN remote wake-up local wake-up through EN



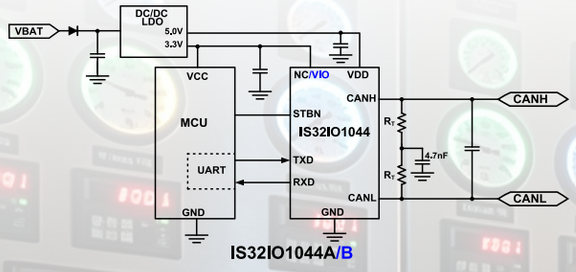
CAN Transceivers

IS32IO1044



SOP-8-EP

- ISO 11898-2 & SAEJ2284 compliant
- CAN-FD up to 5Mbps
- ± 12V common mode, up to 40V tolerance
- VDD 4.75 to 5.25V
  - 1044A 5V interface, pin 5 NC
  - 1044B independent VIO pin 5 (2.9 to VDD)
- Low-standby with CAN bus remote wake-up



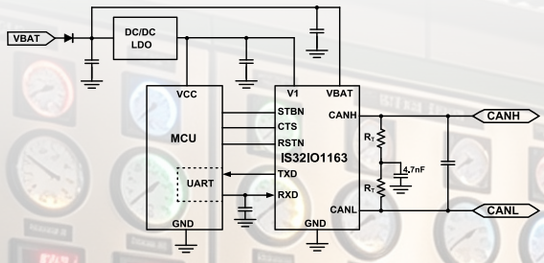
IS32IO1044A/B

IS32IO1163A/B



eTSSOP-14

- ISO 11898-2/5 compliant, -6 low power wake up
- CAN-FD up to 5Mbps
- ± 12V Common mode, up to 40V tolerance
- Built-in LDO 5V @ 100mA max
- IS32IO1163A internal VIO connects to V1 (5V logic)
- IS32IO1163B internal VIO on pin 11 (3.3V~5V logic)
- Low-standby with CAN bus remote wake-up
- Bidirectional RSTN reset and CTS ready output



MCU Solutions

IS31CS8977

- 32MHz 1-cycle 8-bit MCU
- 2KB ECC SRAM
- 64KB ECC eFLASH
- Up to 27 touch keys
- Up to 28 GPIO
- LIN 2.2A controller
- Melody maker
- Temperature sensor
- I2C, SPI, UART, PWM, timers, ADC, etc.
- Multiple package options



TSSOP-20



TSSOP-24



TSSOP-28



QFP-32



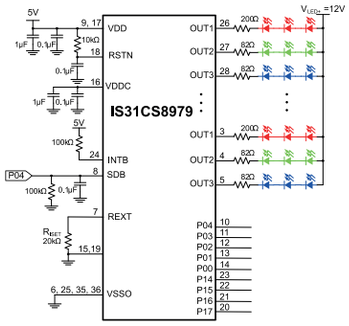
QFN-32

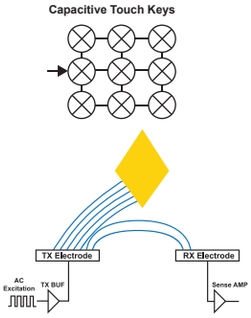
IS31CS8979

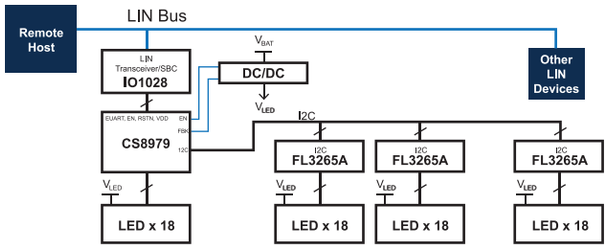
- 1-cycle 8051 CPU core up to 32MHz
- 2KB ECC SRAM, 64KB ECC e-FLASH
- 18-channel LED Driver, 60mA
- Constant-current/dimmable, 40V tolerant



QFN-40





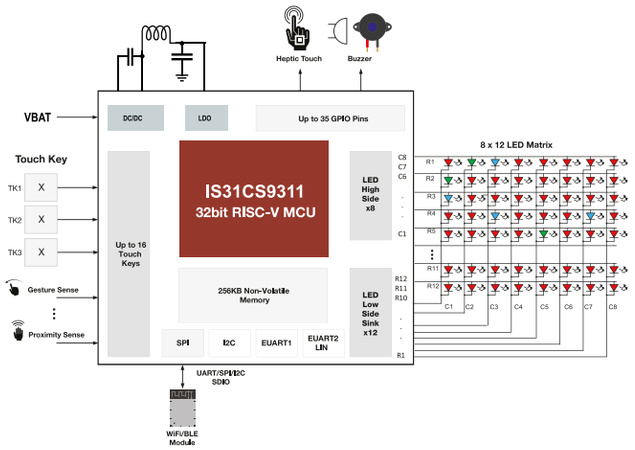


IS31CS9311

- IS31CS9310 + DC/DC converter + LDO
- 8 to 18V Vin with under voltage lockout
- 1 – 16V Vout adjustable
- 1.2A output
- 400KHz switching frequency
- Thermal shutdown
- LDO for MCU power supply



eLQFP-64





Digital Signage & Public Information Displays

Public information displays such as stadium scoreboards, roadside message signs or airport and transit boards must remain bright, uniform, and easy to read. Lumissil constant current LED drivers with serial-shift interfaces are available in configurations from 16 to 48 channels, with family options delivering up to 60mA per channel. Tight channel-to-channel and device-to-device current matching maintains consistent brightness across cascaded panels, while serial interfaces operating up to 33MHz support fast display updates.

Selected devices combine high-voltage current sinks with high-resolution, high-frequency PWM for smooth dimming from daylight to nighttime levels with minimal visible flicker. Open and short-LED diagnostics support remote monitoring, while spread-spectrum operation, phased output timing, thermal protection, and current derating help manage EMI and protect the display. Wide operating temperature options support extreme outdoor installations.

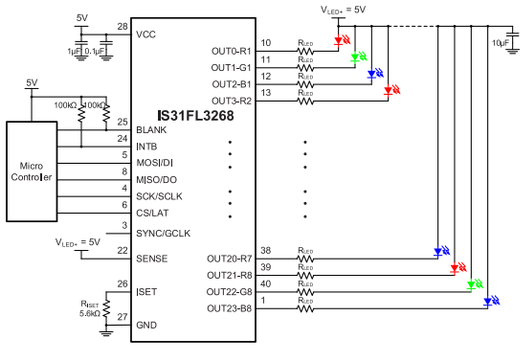
Serial Shift

IS31FL3268 - 24Ch

- PWM 16/8-bit, dithered (8+8 / 8+4)
- 8-bit x 3 global current adjust
- RGB group programming



QFN-40

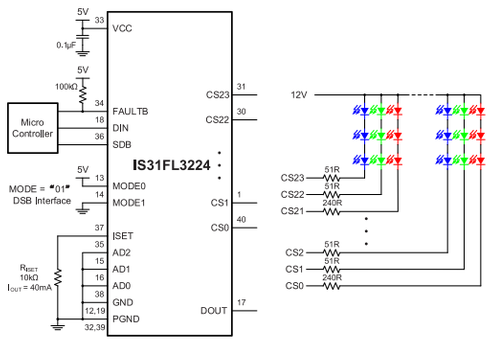


IS31FL3224 - 24Ch

- PWM 8-bit
- 8-bit x 3 global current adjust
- Group programming (RGB, delay)



QFN-40

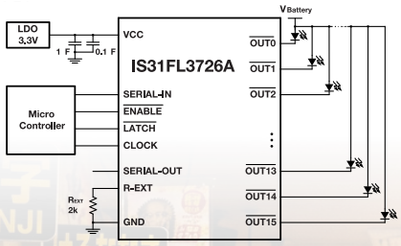


IS31FL3726A

- 3 to 5.5V
- 60mA x 16 Ch
- Current Accuracy
  - Bit to bit: < ±4%
  - Device to device: < ±2%
- Serial Shift @ 30MHz



QFN-24

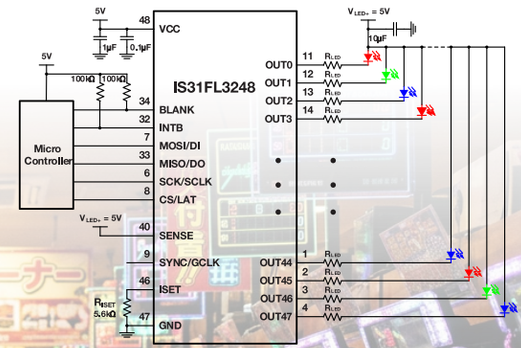


IS31FL3248

- PWM 16/8-bit, dithered (8+8 / 8+4)
- 8-bit x 3 global current adjust
- RGB group programming eTQFP-64



QFN-64



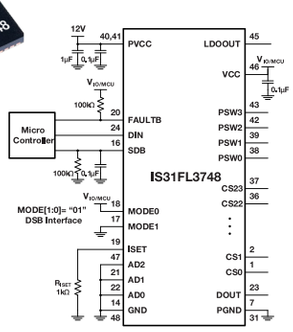
Matrix

IS31FL3748



QFN-48

- 4.5 to 28V Input
- 24xn (n=1~4) matrix configuration @43mA per Ch
- Built-in LDO (4.8V)
- Serial shift, SPI 12MHz), I2C (1MHz)
- 8-bit PWM, 8-bit DC scaling
- Spread-spectrum, 4 groups delay

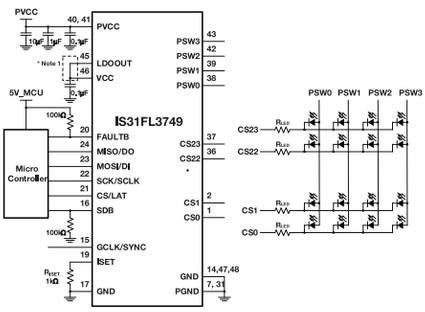


IS31FL3749



QFN-48

- 4.3 to 16V input
- 24xn (n=1~4) matrix configuration @ 60mA per Ch
- Built-in LDO (4.8V)
- Serial Shift, SPI (33MHz)
- 8+4-bit dithered PWM, 8-bit DC scaling
- Spread-spectrum, 4 groups delay

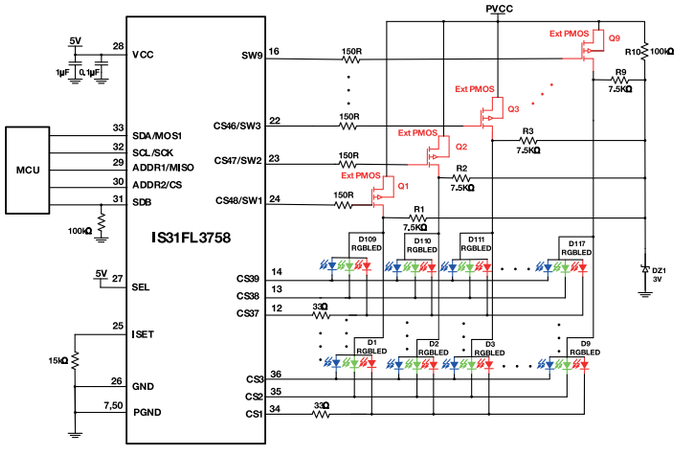


IS31FL3758



QFN-60

- 2.7 to 5.5V input
- Up to 60mA/Ch
- I2C (1MHz), SPI (12MHz)
- External PMOS control for matrix
- 6+2-bit PWM @260KHz
  - 8-bit DC
  - 3-bit GCC
- Spread-spectrum & 180 phase delay
- OTP, OCP, UVLO, thermal shutdown





Multimedia & LCD Backlighting

Display quality depends heavily on backlight uniformity, dimming depth, and timing. Lumissil LED backlight drivers provide the channel density needed for fine-grained local dimming. High voltage constant current outputs support series connected LEDs from a common LED supply, while tight channel-to-channel current matching helps maintain uniform luminance across the panel.

Up to 16-bit PWM provides fine brightness control and deep local dimming, while high PWM frequencies reduce visible flicker and prevents artifacts that can occur when backlight timing interacts with the LCD frame rate. Spread-spectrum EMI reduction, open and short-LED detection, and thermal derating help protect both the panel and the driver.

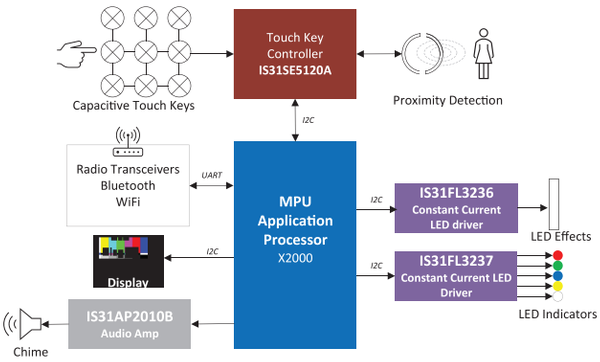
MPU Solution

X2000



BGA-270

- Dual-core 1.2GHz XBurst CPU
- Up to 128MB on-chip RAM
- Security co-processor
- H.264 coding & decoding, 2 ISPs, audio CODEC
- Interface up to 3 cameras: MIPI-CSI, DVP
- Display interface: MIPI-DSI, SLCD, RGB
- Memory interface: Quad SPI, Octal SPI, eMMC
- USB 2.0, RMII, GPIO, UART, I2C, SPI



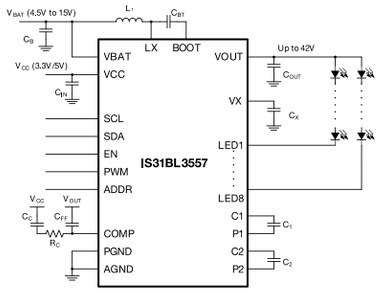
Backlight Solution

IS31BL3557



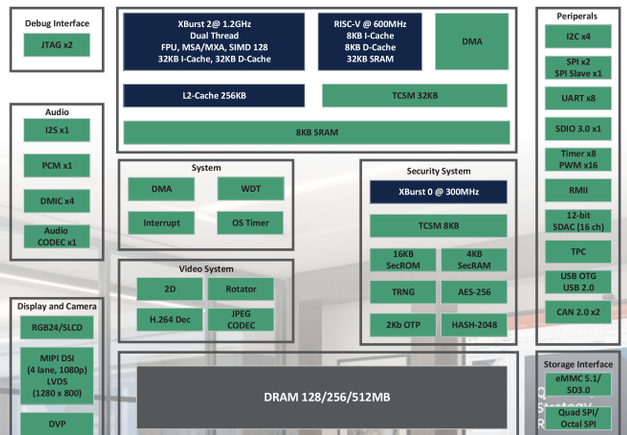
WLCSP-30

- Hybrid - Inductive boost with 2x charge pump 2nd stage selectable boost frequency:
  - 179kHz~1.43MHz
  - Supports 2-3 cell Li-ion input (4.5 - 15V)
- 1MHz I2C
- 8 Independent current sinks, up to 33mA each
- Boost output up to 42V
- 12+3-bit dithered PWM
- Spread-spectrum
- MTP non-volatile memory
- Telemetry VMON/IMON/TMON + ADC
  - (IS31BL3557A only, sample Q1 2027)



X2600N/E/H

- Dual-core 1.2GHz XBurst CPU
- Up to 512MB on-chip RAM
- RISC-V co-processor
- Security co-processor
- H.264 coding & decoding, 2D graphics engine, audio CODEC
- Display interface: MIPI-DSI, SLCD, RGB, LVDS, DVP
- Memory interface: Quad-SPI, eMMC 5.1/ SD 3.0
- USB 2.0, GPIO, UART, I2C, SPI, CAN, TPC



Audio

Lumissil offers a broad range of audio amplifiers and headphone drivers for portable, industrial, and automotive applications, with output power ranging from tens of milliwatts to 3W, depending on operating conditions. The choice between amplifier architectures depends on system requirements such as efficiency, power dissipation, audio performance, and EMI considerations.

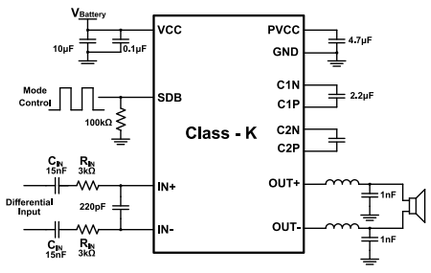
Class AB amplifiers use linear output stages, avoiding output-stage switching noise, but generally operate at lower efficiency than Class D amplifiers. Class D amplifiers offer higher efficiency through a switching architecture, which requires attention to high-frequency switching noise and EMI.

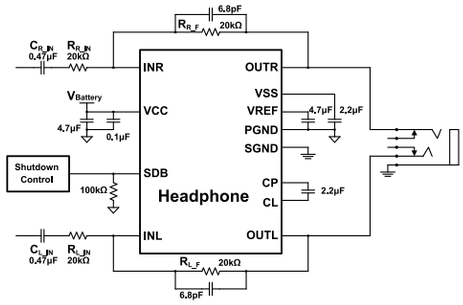
- Class AB, Class D, and Class K architectures; mono and stereo options
- Low quiescent and shutdown current on selected devices
- High-efficiency Class D speaker amplifiers
- Integrated click-and-pop suppression on selected devices
- Solutions for portable, industrial, and automotive applications
- Low-voltage speaker amplifiers: approximately 1–3 W, with 2.7–5.5 V operation on selected devices
- Stereo headphone drivers with bass and 3D enhancement options

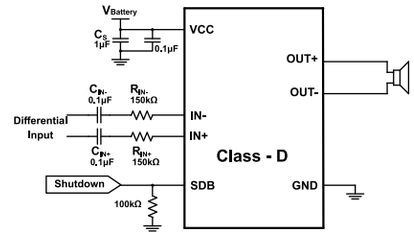


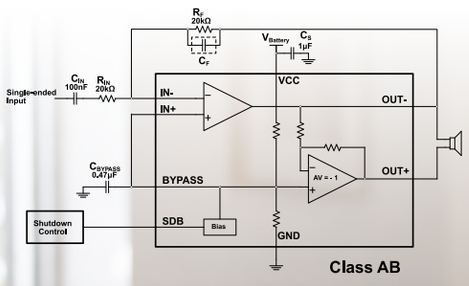


Part Number	Channels	Power(W)	Vdd(V)	Package
Class-AB				
IS31AP4990	1	1.2	2.7-5.5	UTQFN-9L
IS31AP4991	1	1.2	2.7-5.5	MSOP-8,SOP-8
IS31AP4991A	1	1.1	2.7-5.5	MSOP-8,SOP-8
IS31AP4996	1	1.1	2.7-5.5	MSOP-8,SOP-8
Class-D				
IS31AP2005	1	2.7	2.5-5.5	DFN-8, MSOP-8
IS31AP2006	1	3	2.7-5.5	DFN-8
IS31AP2010B	1	3	2.7-5.5	UTQFN-9
IS31AP2145E	1	2.7	2.7-5.5	UTQFN-9
Class-K				
IS31AP2036A	1	2	3.0-5.0	FCQFN-16
Headphone Driver				
IS31AP4912	2	30mW	2.7-5.5	UTQFN-12
IS31AP4913	2	30mW	2.7-5.5	QFN-20









Outdoor, Environmental & Recreational Lighting

Outdoor and recreational equipment lighting, from pool, landscape, architectural, horticultural, and stage fixtures to security cameras, and illuminated sporting products, must perform reliably despite heat, moisture, electrical noise, supply variation, and limited service access. Lumissil addresses these diverse requirements with a broad portfolio of high-brightness switching, linear, multi-channel, and matrix LED drivers for powerful illumination, status indicators, and dynamic RGB effects.

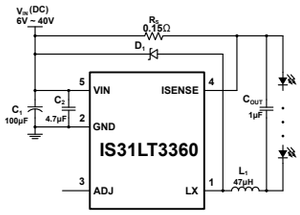
For high-power designs, selected integrated-switch buck drivers operate from 4.5V to 38V and regulate up to 3A of LED current, helping reduce power loss and thermal stress in compact or sealed enclosures. Across the portfolio, analog and PWM dimming, adjustable switching frequency, spread-spectrum operation, wide-temperature capability, and integrated fault protection provide efficient, consistent illumination with the diagnostics and electrical robustness required for demanding outdoor applications.

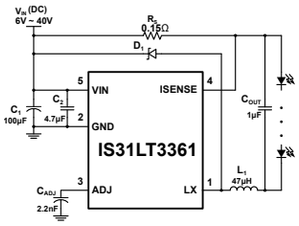
IS31LT3360/61

- Up to 1.3A output current
- Internal 40V switch
- 6 to 40V input
- 1MHz switching frequency
- Fault detection (LT3361)



SOT89-5





IS31LT3350/53/54

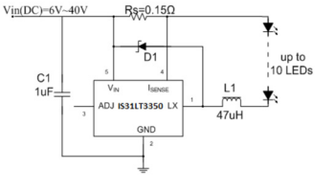
- 6 to 40V input
- Buck
- External gate control (LT3554)
- Up to 750mA / 1A / 2A+ output (3350 / 3353 / 3354)
- High-side current sense set by external resistor
- 1MHz switching frequency
- Up to 98% efficiency

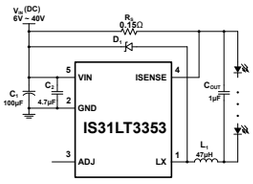


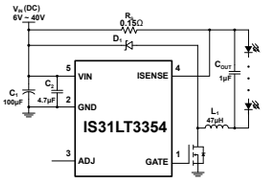
SOT89-5



SOT23-5





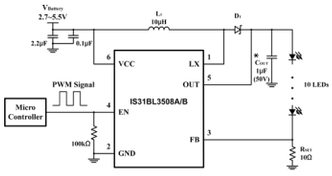


IS31BL3508A/B

- 2.7 to 5.5V input
- Boost
- Drive Up to 10 LEDs in a string
- 1MHz switching frequency
- Up to 500kHz PWM dimming
- Built-in soft start



SOT23-6

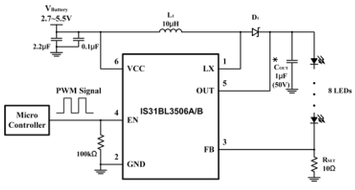


IS31BL3506A/B

- 2.7 to 5.5V input
- Boost
- Drive Up to 8-9 LEDs in a string
- 1MHz switching frequency
- Up to 500kHz PWM dimming frequency
- Built-in soft start



SOT23-6

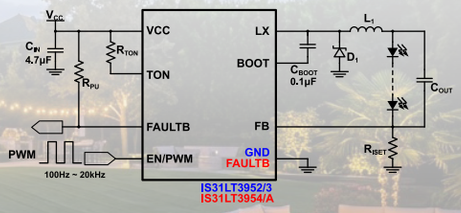


IS31LT395x

P/N	mA/Ch max	Pin 5	Special Features
IS31LT3952	1.5A	GND	Spread-spectrum, 2μA shutdown, fault reporting, internal loop compensation
IS31LT3953	3A	GND	Spread-spectrum, 2μA shutdown, fault reporting, internal loop compensation
IS31LT3954	3A	FAULTB	Spread-spectrum, dedicated fault Pin, 2μA shutdown, internal loop compensation
IS31LT3954A	3A	FAULTB	Spread-spectrum, dedicated fault pin, 2μA shutdown, internal loop compensation, OFAF



SOP-8-EP



Low Power Family



QFN-20



QFN-28

P/N	# of Ch	mA/Ch max	Pkg	Special Features
IS31FL3099	9	40	QFN-20	Auto breath 4 patterns
IS31FL3242	2	48	QFN-20	64kHz 8-bit PWN
IS31FL3252	12	27.5	QFN-20	PWM 16-bit
IS31FL3258	18	27.5	QFN-28	PWM 16-bit
IS31FL3292	12	40	QFN-20	Auto breath 4 patterns



UTQFN-9



UTQFN-12



QFN-20

P/N	# of Ch	mA/Ch max	Pkg	Special Features
IS31FL3293	4	20	UTQFN-9	Auto breath 3 patterns
IS31FL3294	4	40	UTQFN-12	Auto breath 3 patterns
IS31FL3296	6	40	QFN-20, UTQFN-12	Auto breath 3 patterns
IS31FL3299	9	40	QFN-20	Auto breath 3 patterns

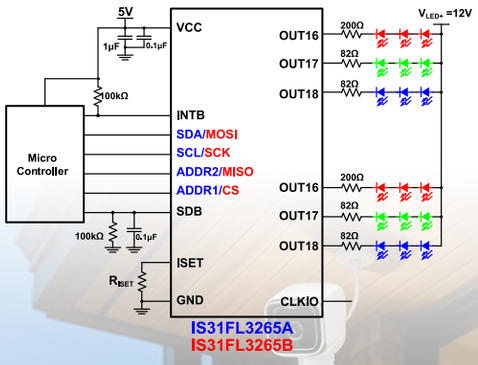
High Power

IS31FL3265A/B

- 1MHz I2C (IS31FL3265A)
- 12MHz SPI (IS31FL3265B)
- 18 constant-current outputs
- Up to 60mA per channel
- 40V output tolerance
- 8-bit PWM and 8-bit current adjustment per channel
- 32-step global current control
- Selectable PWM frequency: 200 Hz or 25 kHz
- Programmable group blinking
- 256-step blink timing and duty-cycle control multi-device synchronization through CLKIO
- Spread-spectrum and selectable phase delay



eTSSOP-28

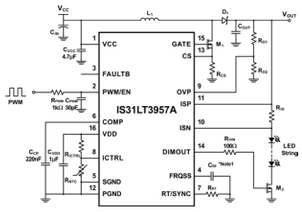


IS31LT3957A

- 5 to 75V Input
- Boost, buck-boost, SEPIC & buck topology
- 100kHz ~ 1MHz switching frequency
- Programmable soft start
- Frequency sync with external clock
- Analog/PWM dimming
- Spread-spectrum



eTSSOP-16



PLC Network

IS31CG5317 - HomePlug Green PHY

The IS31CG5317 is Lumissil's HomePlug Green PHY modem for EV charging stations (EVSE). EVSEs implementing ISO 15118 / DIN 70121 require Green PHY communication with the vehicle, and CG5317 provides this function for both AC and DC charging.



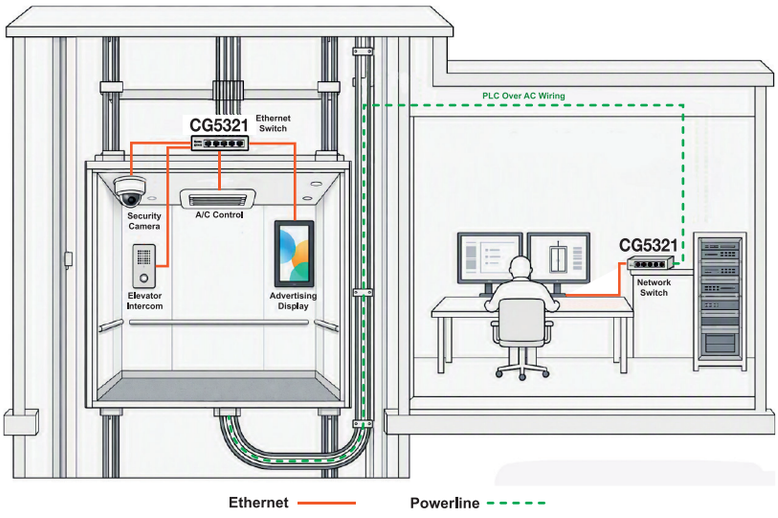
EP-LQFP-80

- Operating ambient temperature of -40°C to 105°C
- ISO 15118 / DIN 70121 compliant
- HomePlug Green PHY compliant
- HomePlug AV and IEEE 1901 capable
- Low power
- Single 25MHz crystal
- Single 3.3V power rail – internal DC/DC stepdown converters integrated
- Communication Frequency Band 2 to 30 MHz
- Integrated AFE, transmit power of 0dBm, ±1dB flatness accuracy and ability to add external line driver for additional boost
- Can operate over lines with AC or DC power
- Zero-crossing synchronization
- SPI Interfaces
  - 1 SPI Slave interface
  - 1 SPI Master interface
- Ethernet PHY interface
  - MII 10/100Mbps
  - RMII 100Mbps
- Boot from host or from external (optional) flash
- General Purpose I/Os
- JTAG
- UART
- EP-LQFP 80-pin package

CG5321 - G.hn High-Speed PLC

The CG5321 is Lumissil's robust, high-speed G.hn PLC networking modem for home and industrial applications. It enables reliable, high-speed communication between multiple endpoints over existing power lines or other existing wiring, avoiding the need to install new network cabling.

- Compliant with ITU-T G.hn (G.9960/ G.9961/G.9963/G.9964)
- Single-chip mixed-signal solution
- OFDM modulation
- MIMO support
- Mesh and partial mesh networking
- Secure network
- Up to 120 nodes per domain
- Up to 128 domains
- Relay support up to 15 hops
- QoS support





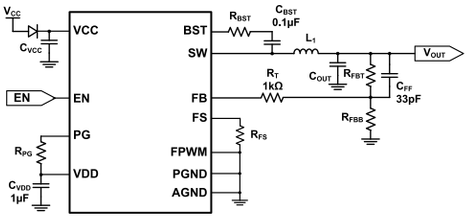
Power Management

IS31PM3426/27



WFCQFN-14

- Synchronous buck voltage regulator
- Input voltage range (3.8V to 36V)
- Adjustable output voltage (1V to 24V)
- Resistor-set frequency (100kHz to 2.2MHz) with external clock synchronization and spread spectrum
- Pin selectable FCCM or PFM operation efficiency (up to 95% @ 5V/2A)
- <1μA shutdown and 25μA quiescent
- Selectable FCCM or PFM for light load with power good
- IS31PM3426: 2A, IS31PM3427: 4A



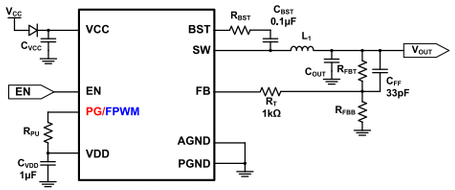
IS31PM3426/7

IS31PM3420A/B



SOP-8-EP

- Synchronous buck voltage regulator
- Input voltage range (3.8V to 36V)
- Adjustable output voltage (1V to 24V)
- 400kHz switching with spread spectrum
- High efficiency (up to 91% @ 5V/3A), <1μA quiescent
- Forced continuous conduction mode (FCCM) and pulse frequency modulation mode (PFM) at light load condition (IS32PM3420B)



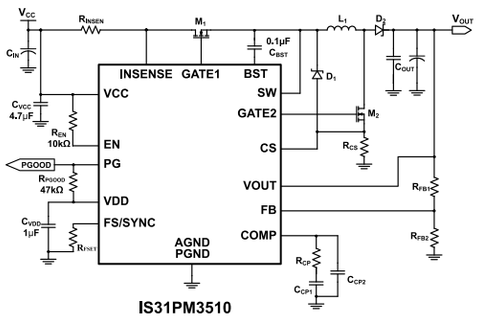
IS31PM3420A/B

IS31PM3510



eTSSOP-16

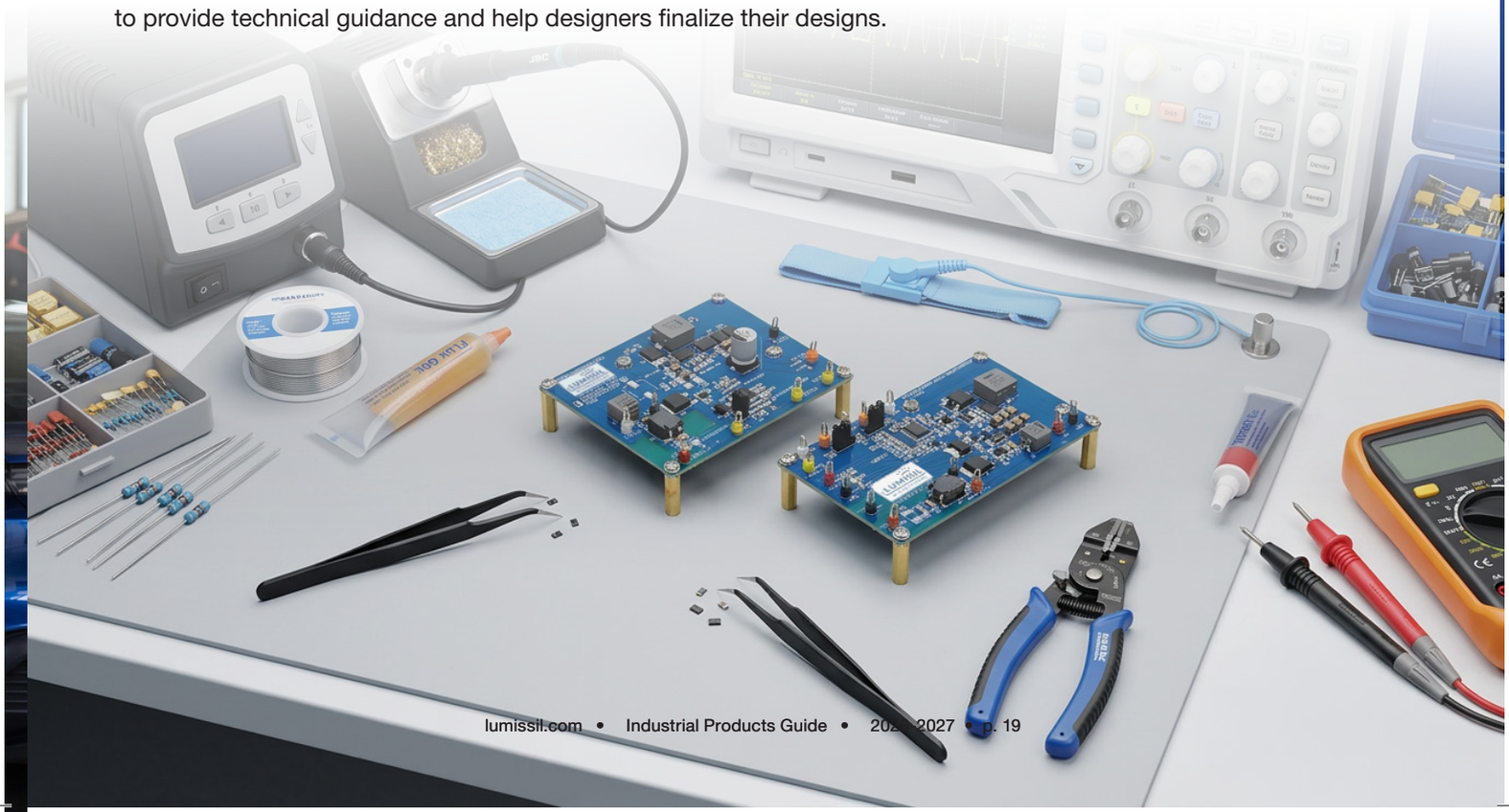
- High voltage asynchronous multi-topology DC/DC voltage controller
- Wide input voltage range (3.8V to 36V)
- Ultra-low power consumption <1μA
- High efficiency (Up to 93% @ 5V/3A)
- Adjustable output voltage (1V to 24V)



IS31PM3510

Evaluation Boards

Evaluation boards and IC samples are available to help designers accelerate circuit development and shorten time to market. Downloadable application notes, software code, eCAD models, and datasheets help engineers understand product capabilities, simplify integration, and optimize circuit performance. Our application engineers are also available to provide technical guidance and help designers finalize their designs.



Industrial Product Selection

Matrix LED Driver Selector Guide (FxLED)

P/N	# of Ch	Array Size	mA/Ch max	Avg mA/Ch when scanning	Interface	PWM Freq max (kHz)	PWM Res (bits)	Global Cur Adj (Bits)	AEC-Q100	De-ghost	ANR	Dot Cor	SS	Breathing	Fault Detect	Cascade Sync	Package/ Pin	Special Features
IS31FL3740	12	4x3	84	26.3	I2C 400kHz	8	10	8	•	•				3	•	•	eTSSOP-20, QFN-20	Hi side PWM source
IS31FL3752	24	12x2	48	24	I2C 1MHz	64	12	8		•	•	•	•		•		QFN-20	Low Iq
IS31FL3756	36	12x3	48	16	I2C 1MHz	64	12	8		•	•	•	•		•		QFN-20	Low Iq
IS31FL3738	48	8x6	84	13.2	I2C 1MHz	8	9	8	•	•				3	•	•	eTSSOP-28, QFN-28	Hi side PWM source
IS31FL3713	12	4x3	50		I2C 1MHz	93.75	6+4	6		•	•	•	•	12	•	•	WLCSP-12	Inductive Boost, Low Iq, p-p LP5813
IS31FL3714	42	7x6	84		I2C 1MHz		8+4	6						12			WLCSP-16	Inductive Boost, Low Iq
IS31FL3716	56, 50	8x7, 9x6, 10xn (n=1~5)	40	5	I2C 1MHz	175		7		•					•		QFN-20	Improved IS31FL3728
IS31FL3717	64	8xn (n=1~8) or 7x9	34.6	4.21 *	I2C 1MHz	256	8	7		•	•				•		SOP-24	Improved p-p IS31FL3739, Imp De-ghost, No Noise
IS31FL3728	64	8x8, 5x11, 6x10, 7x9	42.8	5	I2C 400kHz	3.8	4	4									QFN-24	Audio EQ mode
IS31FL3739	64	8xn (n=1~8)	35	4.22 *	I2C 1MHz	80	8	6		•	•	•	•		•		SOP-24	Also has 7x9 mode
IS31FL3746B	72	18xn (n=4~1)	29	8.33 *	SPI 12MHz	29	8	8	•	•	•	•	•		•		QFN-32	
IS31FL3751	72	9x8	20	2	I2C 1MHz	62	12	2		•	•	•	•		•		QFN-20	Low Iq, Crossplex, RISET
IS31FL3746A	72	18xn (n=1~4)	29	8.33 *	I2C 1MHz	29	8	8		•	•	•	•		•		QFN-32	
IS31FL3736B	96	12x8	42	3.29	I2C 1MHz	26.7	8	8		•				3	•	•	QFN-40	Hi side PWM source
IS31FL3748	96	24xn (n=1~4)	39.6	9.67 *	I2C/SPI/ Serial Shift	32	8-I2C/SPI, 7-Serial	8+3		•		•	•		•		QFN-48	28V, Fault reports on I2C & SPI only, Temp Roll-off
IS31FL3749	96	24xn (n=4~1)	60	14.3 *	SPI or VSB 33MHz	125	16	8	•	•	•	•	•		•		QFN-48, eTQFP-48	16V, Internal LDO, Temp Roll-off, Automotive LCD Backlight, Inst Clusters
IS31FL3766	108	18xn (n=1~6)	40	6.4 *	I2C/SPI	288	12, 8+4, 6+2	8		•	•	•	•		•		QFN-32	Low Iq, Improved De-ghost
IS31FL3729	128	16xn (n=1~8) or 15x9	35	4.22 *	I2C 1MHz	55	8	6		•	•		•		•		eTQFP-32, QFN-32	
IS31FL3719	128	16xn (n=1~8) or 15x9	34.6	4.21 *	I2C 1MHz	256	8x8: 8 8x8: 1	7		•	•				•		eTQFP-32, QFN-32	Improved p-p IS31FL3729, Imp De-ghost, No Noise
IS31FL3731	144	16x9	34	3.4	I2C 400kHz	8.26	8							8			QFN-28, SSOP-28	Audio Sync, Auto Dim
IS31FL3732A	144	16x9	34	3.4	I2C 1MHz	21.2	8	8						8			QFN-40	Audio Sync, Auto Dim
IS31FL3737B	144	12x12	42	3.29	I2C 1MHz	26.7	8	8		•				3		•	QFN-40	Imp Breathing & De-ghost
IS31FL3745	144	18xn (n=1~8)	34	4.21 *	I2C 1MHz	29	8	8		•			•		•	•	WLCSP-36	Small Package
IS31FL3747	144	12xn (n=1~12) Dual for 24x24	47.8	3.55 *	SPI, VSB	53	12	8		•	•	•	•		•	•	QFN-40, WLCSP-36	30MHz VSB, Game Keybd, MiniLED, Temp Roll-off, 576
IS31FL3742A	180	30x6 (n=1~6)	38	6.4	I2C 1MHz	29	8	8		•		•	•		•		QFN-48	Gaming High Current/Dot
IS31FL3723	192	16x12	42	3.29	I2C 1MHz	26.7	8	8		•				3	•	•	QFN-48	Improved p-p IS31FL3733B
IS31FL3733B	192	16x12	42	3.29	I2C 1MHz	26.7	8	8		•				3	•	•	eTQFP-48, QFN-48	Imp Breathing & De-ghost
IS31FL3743A	198	18xn (n=1~11)	34	3.03 *	I2C 1MHz	24	8	8		•	•	•	•		•	•	UQFN-40	Temp Roll-off
IS31FL3743B	198	18xn (n=1~11)	34	3.03 *	SPI 12MHz	24	8	8		•	•	•	•		•	•	UQFN-40	Temp Roll-off
IS31FL3763	216	18xn (n=1~12)	40	3.2 *	I2C/SPI	288	6+2.7+7, 12+4	3x8		•	•	•	•		•		QFN-40	Low Iq, Improved De-ghost
IS31FL3762	288	24xn (n=1~12)	30	2.2 *	I2C/SPI	260	6+2	8		•	•	•	•		•		QFN-78	Mini-LED B-Lite, RGB K-Bd
IS31FL3741A	351	39x9 (n=1~9)	38	3.2	I2C 1MHz	29	8	8		•		•	•		•		QFN-60	Gaming Keyboard Driver
IS31FL3758	360	40x9, 44ch	60	6.3 *	I2C/SPI	137	8, 6+2	8		•	•	•	•		•		QFN-60	External High Side FETs
IS31FL3761	396	33xn (n=12~2)	30	2.5 *	I2C-1MHz, SPI-12MHz	312	12	8	•	•	•	•	•		•		WFQFN-60	Low Iq, Improved De-ghost, Automotive LCD Backlight, Instrument Cluster

ANR = Audible Noise Reduction Dot Cor = Single LED Current Adjust SS = Spread Spectrum * = Avg Current for Max Columns

New Soon to be released

Industrial Product Selection

Multi-Channel LED Driver Selector Guide (FxLED)

P/N	# of Ch	mA/Ch max	Interface	V_{LED} Max	PWM Freq. Max (kHz)	PWM Resolution (bits)	Global Current Adj (bits)	AEC-Q100	ANR	Dot Cor	SS	Breathing	Low Iq	Fault Detect	Temp-Det Roll	Package/Pin	Special Features
IS31FL3190	1	42	I2C 400kHz	5.5	4	8	5-steps					1				UTQFN-9	
IS31FL3193	3	42	I2C 400kHz	5.5	3.8	8	5-steps					1				DFN-10	
IS31FL3194	3	40	I2C 400kHz	5.5	2	for Autodim	2			•		3				WLCSP-8	
IS31FL3293	3	20	I2C 1MHz	5.5	0.2, 0.4	12	6			•		1	•			UTQFN-9	Improved IS31FL3193, SDB pin
IS31FL3198	3	80	3-PWMs	6.6	-	-	8-steps									QFN-16	Charge Pump (3.3V)
IS31FL3198A	3	80	3-PWMs	6.6	-	-	8-steps									QFN-16	Better Rise/Fall time <1us
IS31FL3195	4	20	I2C 400kHz	5.5	2	for Autodim	2			•		3				WLCSP-16, QFN-16	Charge Pump (2.7-5.5V)
IS31FL3197	4	12	I2C 400kHz	3.7	2	8	2					3				WLCSP-16, QFN-16	Charge Pump (2.0-3.7V)
IS31FL3294	4	20	I2C 1MHz	5.5	23, Adj	8,12	6			•		3	•			UTQFN-12	
IS31FL3196A	6	40	I2C 400kHz	5.5	25	8	3					1				QFN-20	Audio Sync
IS31FL3296	6	40	I2C 1MHz	5.5	23, Adj	8,12	6			•		3	•			QFN-20, UTQFN-12	p-p w/ IS31FL3196A
IS31FL3199	9	40	I2C 400kHz	5.5	25	8	3					1				QFN-20	Audio Sync
IS31FL3299	9	40	I2C 1MHz	5.5	23, Adj	8+4,12	6			•		3	•			QFN-20	p-p w/ IS31FL3199
IS31FL3094/6/9	4/6/9	40	I2C 1MHz	5.5	23, Adj	8+4,12	6			•		4	•			QFN-20	2nd Fab IS31FL3299 & p-p family
IS31FL3298A	9	20	I2C 1MHz	5.5	24, Adj	8,8+4,12	7			•		3	•	•		WLCSP-25, QFN-24	Charge Pump (2.5-5.5V)
IS31FL3206	12	38	I2C 400kHz	5.5	24	8										QFN-20	
IS31FL3205	12	38	I2C 1MHz	5.5	62	8, 10,12,16	8		•	•	•			•	•	QFN-20	
IS31FL3242	12	48	I2C 1MHz	5.5	64	8,12	8						•	•		QFN-20	p-p w/ IS31FL3752 (2x12)
IS31FL3252	12	25	I2C 1MHz	5.5	128	8,10+4,12,16	8, 3-Groups		•		•		•	•		QFN-20	Improved LP5012 ~p-p
IS31FL3292	12	40	I2C 1MHz	5.5	23	8+4,12	6					4	•			QFN-20	p-p with IS31FL3094/6/9
IS31FL3216A	16	33.6	I2C 400kHz	5.5	26	8						8				QFN-28	Audio Sync & GPIO Modes
IS31FL3018	18	27.5	I2C 1MHz	5.5	32	8,10+4,12,16	8, 3-Groups		•		•		•	•		QFN-28	Improved LP5018 ~p-p
IS31FL3218	18	38	I2C 400kHz	5.5	3	8										QFN-24, SOP-24	
IS31FL3207	18	38	I2C 1MHz	5.5	62	8,10,12,16	8	•	•	•	•			•	•	WFQFN-28	p-p w/ IS31FL3208A
IS31FL3208A	18	38	I2C 400kHz	5.5	23	8										QFN-28	p-p w/ IS3xFL3207
IS31FL3209	18	76	I2C 400kHz	5.5	23	8	-	•								WFQFN-28, eTSSOP-28	1/24 DC Current Adj
IS31FL3238	18	76	I2C 1MHz	5.5	62	8,10,12,16	8	•	•	•	•			•		eTSSOP-28	
IS31FL3258	18	27.5	I2C 1MHz	5.5	32	8,10+4,12,16	8, 3-Groups		•		•		•	•		QFN-28	p-p w/ IS31FL3208A
IS31FL3254	24	25.5	I2C 1MHz	5.5	128	8,10,12,14	8, 3-Groups		•		•		•			QFN-32	Improved LP5024 ~p-p
IS31FL3239	24	38	I2C 1MHz	5.5	62	8,10,12,16	8		•	•	•			•	•	QFN-32	
IS31FL3235A	28	38	I2C 400kHz	5.5	22	8										QFN-36	
IS31FL3240	30	38	I2C 1MHz	5.5	62	8,10,12,16	8	•	•	•	•			•	•	WFQFN-40	
IS31FL3236A	36	38	I2C 1MHz	5.5	22	8	-	•	•							eTQFP-48	
IS31FL3246	36	25	I2C 1MHz	5.5	128	8,10	8, 3-Groups		•							QFN-44	p-p w IS3xFL3236A
IS31FL3246A	36	25	I2C 1MHz	5.5	128	8,10	8, 3-Groups	•	•							QFN-44, WFQFN-44	3 Group Dim, 2nd Fab for IS31FL3246
IS31FL3237	36	38	I2C 1MHz	5.5	62	8,10,12,16	8	•	•	•	•			•	•	WFQFN-44, eTQFP-48	Feature Rich, p-p IS3x-FL3236A
IS31FL3265A/B	18	60	I2C/SPI	40	25	8	5	•	•	•	•			•	•	eTSSOP-28	4% ch-ch 6% dev-dev
Serial Shift																	
IS31FL3224	24	40	DSB, HSB, SPI, I2C	18	31.5	8	8, 3-Groups		•		•			•		QFN-40	
IS31FL3268	24	51	SPI or VSB	16	62.5	8, 8+4, 8+8, 16	8, 3-Groups		•	•	•			•		WQFN-40	3% Matching
IS31FL3248	48	33	SPI or VSB	16	62.5	8, 8+4, 8+8, 16	8, 3-Groups		•	•	•			•		eTQFP-64, QFN-64	3% Matching

Industrial Product Selection

Linear (High Brightness - HBLED)

P/N	# of Ch	mA/Ch max	Sink or Source	Operating Vin (V) Min	Operating Vin (V) Max	Interface	Head-room (V) @ (mA)	Open Detect	Short Detect	External NTC	Thermal Shunt	ASIL-B	Package/ Pin	Special Features
IS31LT3177	1	200	Sink	5.0	40	PSM	1.5 @ 200						SOT23-6 eSOP-8-EP	Low cost simple control
IS31LT3178	1	200	Sink	2.9	40	PWM EN	1.5 @ 200						SOT23-6 eSOP-8-EP	Logic level PWM input
IS31LT3176	1	200	Sink	3.0	40	PWM	1.5 @200						DFN-6	LED short. Latch off, up to 10kHz PWM input

Switching LED Driver, Point of Load, & Boost LED

P/N	LED Current Max (A)	Operating Vin (V) Min	Operating Vin (V) Max	Integrated FET	Synchronous	Switching Freq (Hz)	RDS_{ON} (Ohms)	Dimming	LED Open Protect	LED Short Protect	Fault Pin	Spread Spectrum	Soft Start	OVP	Thermal Roll-off	Package/Pin	Special Features
Buck LED Drivers																	
IS31LT3350	0.750	6.0	40	Y		Up to 1M	0.9	PWM ADJ Pin	•	•						SOT23-5 SOT89-5	Low-side Hysteretic, 1200:1 Dimming, Low Cost, pin-pin
IS31LT3353	1.0	6.0	40	Y		Up to 1M	0.5	PWM ADJ Pin	•	•						SOT23-5 SOT89-5	Low-side Hysteretic, 1200:1 Dimming, Low Cost, pin-pin
IS31LT3360	1.2	6.0	40	Y		Up to 1M	0.27	PWM ADJ Pin	•	•						SOT89-5	Low-side Hysteretic, 1200:1, Dimming, Low Cost, p-p upgrade to IS31LT3350/53
IS31LT3354	Design Driven	6.0	40			Up to 1M	Ext MOSFET	PWM ADJ Pin	•	•						SOT23-5	Low-side Hysteretic, 1200:1, Dimming, Low Cost
IS31LT3361	1.3	6.0	40	Y		Up to 1M	0.25	PWM or Ana	•	•	•	•	•			eSOP-8	Low-side Hysteretic, 2000: 1 Dimming
IS31LT3952	1.5	4.5	38	Y		200K - 2.2M	0.20	PWM or Ana	•			•				eSOP-8	p-p family, COT, Temp Monitor (IS3xLT3952), Internal LDO pin (IS3xLT3953B)
IS31LT3953/B	3.0	4.5	38	Y		200K - 2.2M	0.20	PWM or Ana	•			•					
IS31LT3954/A	3.0	4.5	38	Y		200K - 2.2M	0.20	PWM or Ana	•		•	•					
Multi-Topology LED Drive (Buck, Boost, Buck/Boost)																	
IS31LT3957A	Design Driven	5.0	75			100K - 1M	Ext MOSFET	PWM or Ana	•	•	•	•	•	•		eTSSOP-16	Architectural lighting, high power LED
Voltage Regulator, Point of Load (POL)								**Vout Range**									
IS31PM3420A	3.0	3.8	36	Y	Y	400K	HS=0.13 LS=0.08	1V - 24V			•	•	•	•		eSOP-8	COT
IS31PM3420B	3.0	3.8	36	Y	Y	400K	HS=0.13 LS=0.08	1V - 24V				•	•	•		eSOP-8	Pin selectable FCCM or PFM mode
IS31PM3426	2.0	3.8	36	Y	Y	100K - 2.2M	HS=0.08 LS=0.04	1V - 24V			•	•	•	•		WFCQFN-14	Pin selectable FCCM or PFM mode
IS31PM3427	4.0	3.8	36	Y	Y	100K - 2.2M	HS=0.08 LS=0.04	1V - 24V			•	•	•	•		WFCQFN-14	p-p w IS31PM3426, “Flip Chip”, no Bond wires
IS31PM3510	3.0	4.5	55			150K - 650K	Ext MOSFET	1.2V - 55V			•	•	•	•		eTSSOP-16	Multi-Topology, COT
Boost LED Drivers								**Dimming**									
IS31LT3505	0.750	6.0	30	Y		400K	HS=0.8	PWM					•	•		MSOP-10	
IS31BL3506 A/B	0.250	2.7	5.5	Y		1M	HS=0.8	PWM					•	•		TSOT23-6 (A), SOT23-6, DFN-8 (A)	Over Temp/Voltage Protection
IS31BL3508 A/B	0.250	2.7	5.5	Y		1M	HS=0.7	PWM					•	•		SOT23-6, TSOT23-6 (A)	Over Temp/Voltage Protection
IS31LT3948	Design Driven	5.0	100			400K	Ext MOSFET	PWM						•		SOP-8	PFM Mode
IS31BL3228 A/B	0.020 per ch	2.8	5.5	Y		1M	Charge Pump	SET pin					•			UTQFN-12	Single cell, charge pump
IS31BL3557	0.033	4.5	15	Y	Y	230K - 1.2M	Hybrid	PWM	•	•		•	•	•		WLCSP-30	Notebook/tablet backlight, p-p w PE23108

New Soon to be released

Industrial Product Selection

8-bit & 32-bit MCU

P/N	CPU	Clock (MHz)	SRAM (KB)	FLASH (KB)	Touch Keys	Active Proximity Sense	LED	GPIO	LIN UART	LIN PHY	CAN FD UART	I2C	SPI	UART	LumiBus™	Tone/Melody	Temp Sense	Analog Comparators	Timers	ADC	DAC	PWM	LDO	AEC-Q100	Package
32-bit MCU																									
IS31CS9201	RISC-V	32	8	64	27	•		28	•			M/S	M/S	2	S	•		4	3	•		•		•	WQFN-32, WQFN-24, TSSOP-20
IS31CS9202	ARM M0+	50	16	256	39	•		42	•		•	M/S	M/S	2	M	•		4	4	•	•	•		•	WQFN-32/48, QFN-48, LQFP-48
IS31CS9208	ARM M0+	50	16	256	39	•		42	•		•	M/S	M/S	2	M	•		4	3	•	•	•		•	WQFN-32/48
IS31CS9310	RISC-V	32	32	256	16	•	8x12	35	•			M/S	M/S	2		•		3	3	•	•	•		•	eLQFP-64
IS31CS9311	RISC-V	32	32	256	16	•	8x12	35	•			M/S	M/S	2		•		3	3	•	•	•		•	
8-bit MCU																									
IS31CS8974A	1T 8051	25	2	32	19	•		20	•			M/2S	M/S	2		•			6			•		•	QFN-24
IS31CS8975	1T 8051	32	1	16	11			12	•			M/S	M/S	2		•	•	4	6	•	•	•		•	SOP-8, TSSOP-16, QFN-16
IS31CS8976	1T 8051	32	1	16	9			10	•	•		M/S	M/S	1		•	•	2	6	•	•	•		•	eTSSOP-24
IS31CS8977	1T 8051	32	2	64	27	•		28	•			M/S	M/S	2		•	•	4	6	•	•	•		•	TSSOP-20/24/28, QFN-32, LQFP-32
IS31CS8979	1T 8051	32	2	64	8	•	18	9	•			M/S	M/S	2		•	•	4	6	•	•	•		•	QFN-40

Touch Sensor

Capacitive Touch/Proximity Sensors											
P/N	Keys/ Channels	Self-cap	Mutual-cap/ APS	Shield	Buzzer/ Melody	Auto Sleep/ Wake	Configurable GPIO	Multi-Key	Press and Hold	AEC-Q100	Package
IS31SE5117B	16	•		•	•	•	•	•	•	•	QFN-24
IS31SE5118A	8	•		•	•	•		•	•	•	TSSOP-16, QFN-16
IS31SE5120A	24	•		•	•	•	•	•	•	•	QFN-32

New Soon to be released

Industrial Product Selection

MPU

P/N	XBurst® MIPS-Based CPU	Co-Processor	Security Processor	On-Chip RAM	Multimedia	Camera Interface	Display Interface	Memory Interface	Comm Interface	Package
X2000	Dual-core 1.2GHz		XBurst® 240MHz	128MB LPDDR3	H.264 Coding & Decoding, 2 ISPs, Audio CODEC	Up to 3 cameras, MIPI-CSI, DVP	MIPI-DSI, SLCD, RGB	SFC, eMMC	USB 2.0, RMII, GPIO, UART, I2C, SSI	BGA-270
X2600N	Dual-core 1.2GHz	RISC-V 600MHz	XBurst® 300MHz	128MB DDR3 (L)	H.264 Decoding, Audio CODEC	DVP	MIPI-DSI, LVDS, SLCD, RGB	SFC, eMMC	USB 2.0, RMII, GPIO, UART, I2C, SSI	BGA-209
X2600E	Dual-core 1.2GHz	RISC-V 600MHz	XBurst® 300MHz	256MB DDR3 (L)	H.264 Decoding, Audio CODEC	DVP	MIPI-DSI, LVDS, SLCD, RGB	SFC, eMMC	USB 2.0, RMII, GPIO, UART, I2C, SSI	BGA-209
X2600H	Dual-core 1.2GHz	RISC-V 600MHz	XBurst® 300MHz	512MB DDR3 (L)	H.264 Decoding, Audio CODEC	DVP	MIPI-DSI, LVDS, SLCD, RGB	SFC, eMMC	USB 2.0, RMII, GPIO, UART, I2C, SSI	BGA-209
X2670N	Dual-core 1.2GHz	RISC-V 600MHz	XBurst® 300MHz	128MB DDR3 (L)	H264 Decoding, JPEG, 2D graphics engine, Audio CODEC		MIPI-DSI, LVDS, RGB, SPI	SPI, SD/ MMC/SDIO, eMMC	USB 2.0, GPIO, UART, I2C, SPI, CAN	QFN-128

Class-AB Audio Power Amplifier

P/N	Channel	Power (W)	THD+N (kHs)	PSRR (dB)	VDD (V)	IDD (mA)	Pkg-Pin	Key Feature	Status
IS31AP4990D	1	1.2	0.23%	-61	2.7~5.5	3.8	UTQFN-9L	1.2W Mono Audio Power Amplifier in UTQFN Package	Prod
IS31AP4991A	1	1.1	0.07%	-65	2.7~5.5	3	MSOP-8, SOP-8	1.1W Mono Audio Power Amplifier with active-low standby mode	Prod
IS31AP4996	1	1.1	0.07%	-68	2.7~5.5	3	SOP-8	1.1W Mono Audio Power Amplifier with active-high standby mode	Prod

Class-D Audio Amplifier

P/N	Channel	Power (W)	THD+N (kHs)	PSRR (dB)	VDD (V)	IDD (mA)	Pkg-Pin	Key Feature	Status
IS31AP2005	1	2.95	0.20%	-65	2.5 ~ 5.5	2.6	DFN-8, MSOP-8	Class-D, 2.95W Mono filter-less Class-D audio power amplifier	Prod
IS31AP2006	1	3	0.28%	-55	2.7 ~ 5.5	2.6	DFN-8	Class-D, 3W Mono filter-less Class-D audio power amplifier	Prod
IS31AP2010B	1	3	0.22%	-75	2.7 ~ 5.5	2.6	UTQFN-9	Class-D, 3W Mono filter-less Class-D audio power amplifier	Prod

Headphone

P/N	Channel	Power (mW)	THD+N	PSRR (dB)	VDD (V)	IDD (mA)	Pkg-Pin	Key Feature	Status
IS31AP4912	2	30	0.024%	-95	2.7 ~ 5.5	3.0	UTQFN-12	Stereo headphone driver with high SNR and 7uV low output noise	Prod
IS31AP4913	2	30	0.05%	-92	2.7 ~ 5.5	3.0	QFN-20	Stereo headphone driver with high SNR and 8uV low output noise, 3D surround & bass enhanced stereo, pulse count control serial interface	Prod

Industrial Product Selection

Industrial Power Management

Part no.	Topology	VIN (V)	VOUT(V)	IOUT (mA)	Efficiency	Package	Key Feature	Status
IS31PM3510	Buck, Boost, Buck-boost, Buck	4.5 - 50	1.2 - 55	Ext. MOS	Up to 94%	eTSSOP-16	Asynchronous multi-topology with high efficiency, spread spectrum and fault protections, 150 to 650kHz operating frequency, external clock synchronization, soft start, 1.5uA shutdown current	Prod
IS31PM3420A	Buck	3.8~36	1~24	0 ~ 3000	Up to 91%	SOP-8-EP	Power Good output pin, 400kHz, Synchronous DC-DC step-down converter with constant on-time control for fast transient response, Force Continuous Conduction Mode (FCCM) during light loads to reduce output voltage ripple, Spread Spectrum, operating temp range -40°C ~ +150°C	Prod
IS31PM3420B	Buck	3.8~36	1~24	0 ~ 3000	Up to 91%	SOP-8-EP	Pin selectable FCCM or PFM operation mode, 400kHz, Synchronous DC-DC step-down converter with constant on-time control for fast transient response, Pin-selectable FCCM or PFM during light loads to reduce output voltage ripple, Spread Spectrum, operating temp range -40°C ~ +150°C	Prod
IS31PM3426	Buck	3.8~36	1~24	0 ~ 2000	Up to 95%	WFCQFN-14	100kHz to 2.2MHz, Synchronous DC-DC step-down converter with constant on-time control for fast transient response, Pulse-frequency Modulation (PFM) mode or Force Continuous Conduction (FCCM) mode selectable discontinuous conduction and auto frequency reduction at light loads, Spread Spectrum, operating temp range -40°C ~ +150°C	Prod

Multi-Function I/Os

Part No.	VDD (V)	Ctrl. Interface	I/O Port	ISD(uA)	Interrupt Output	Package	Status
IS31IO7325	2.4 - 5.5	I2C 400kHz	16	0.3	I/O state change	QFN-24	Prod
IS31IO7326	2.4 - 5.5	I2C 400kHz	16	0.3	Key pressed input	QFN-24	Prod
IS31IO7328	2.4 - 5.5	I2C 400kHz	8	0.3	I/O state change	QFN-16	Prod

Part Decoder

IS 32 LT 3154 A S - GR L C S2 - TR

- Lumissil Prefix
- Product Family
- Product Type
- Part Number
- Variant
- Country of Origin
- Package Code
- Solder Type
- Bonding Wire
- Temp. Grade
- Packaging Option

Product Family
31 = Commercial/Industrial
32 = Automotive

Product Type
AP = Audio Power Amplifier
AS = ASIC
BL = White LED Driver for LCD Backlight
CG= Connectivity
CS = MCU
FB = Fiber
FL = FxLED Driver
IO = Multi-Function I/O Expander, CAN, LIN
LT = Lighting LED Driver
NM = Networking
PM = Power Management
PS = Power Switch
SE = Sensor
SL = Smart Light

Temperature
S1 = Commercial (0°C to 70°C)
S2 = Industrial temp. (-40°C to 85°C)
S3 = Industrial temp. (-40°C to 105°C)
S4 = Industrial temp. (-40°C to 125°C)
A1 = Automotive Grade 3 (-40°C to +85°C)
A2 = Automotive Grade 2 (-40°C to +105°C)
A3 = Automotive Grade 1 (-40 to 125°C)
A4 = Automotive Grade 0 (-40 to 150°C)

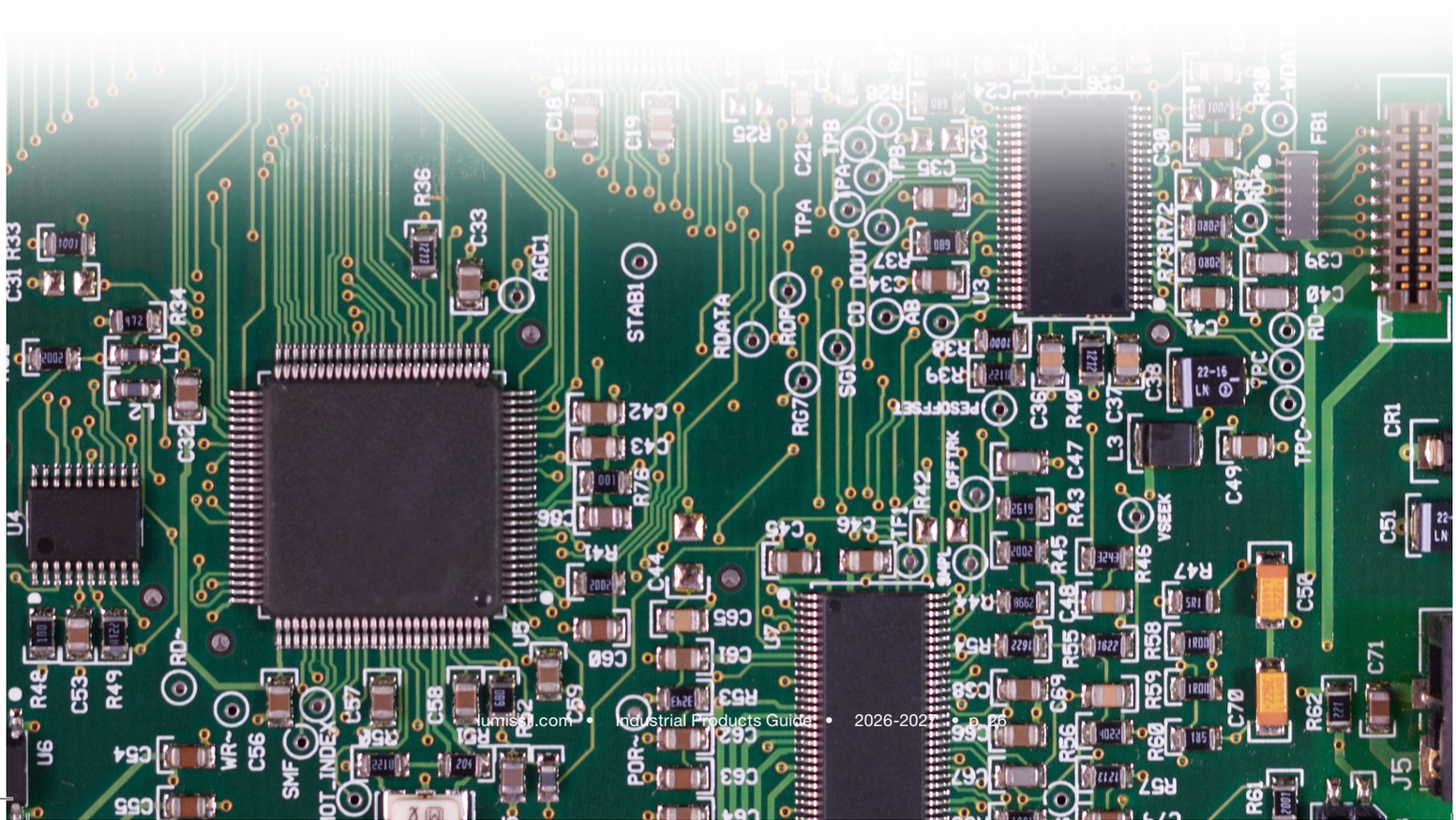
Solder Type
Blank = Sn/Pb
L = Lead-free (RoHS Compliant)

Bonding Wire
Blank = Gold (Au)
C = Copper (Cu)

Package Code
C = WCSP, FCQFN
D = DFN
DW = WFDFN
DWC = WFCDFN
GR = SOP/eSOP
LQ = eLQFP
QF = QFN
QU = UQFN
QW = Wettable flank QFN
QWC = WFCQFN
S = MSOP
SA = SSOP
SD = SOT89
ST = SOT23
TT = TSOT
TQ = eTQFP
UT = UTQFN
Z = eTSSOP
ZN = TSSOP
ZU = eTSSOP top thermal pad

Packaging Option
Blank = Tray or Tube
TR = Tape & Reel

Country of Origin
Blank = Mixed
S = Out of China



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