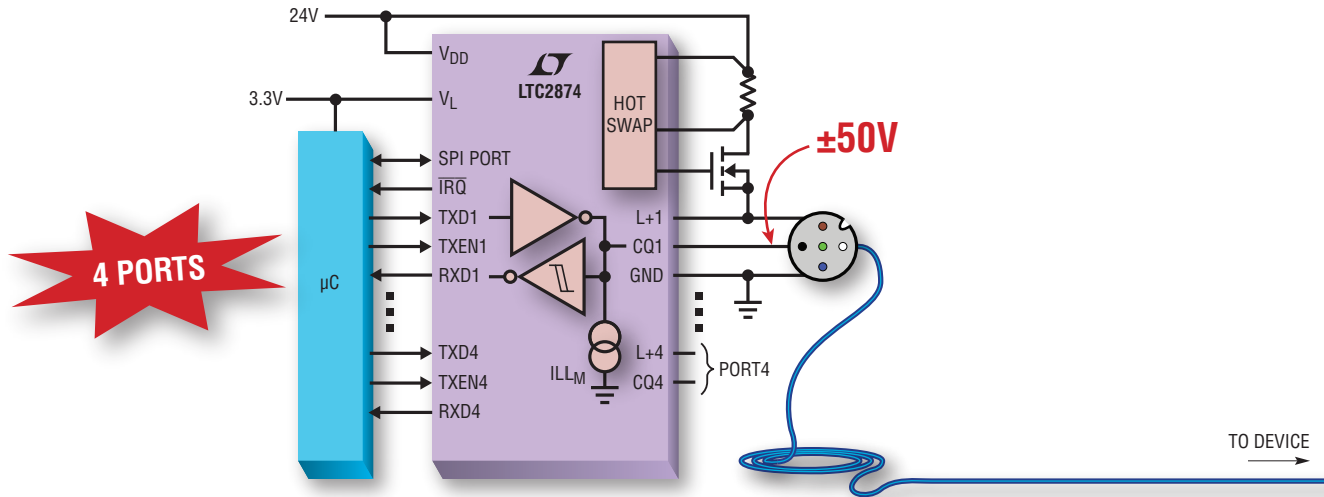


Quad IO-Link PHY Master Solution



Robust Transceiver and Hot Swap Power Controller

The LTC[®]2874 provides a rugged, 4-port IO-Link[®] power and communications interface to remote devices connected by cables up to 20m in length. Output supply voltage and inrush current are ramped up in a controlled manner using external N-channel pass transistors, providing improved robustness compared to fully integrated solutions. The LTC2874 features wake-up pulse generation, line noise suppression, connection sensing and automatic restart after fault conditions. Many parameters are register-programmable, including CQ slew rate, ILL_M, ISIR_M, V_{DD} monitor thresholds, and fault retry times. Configuration and fault reporting are exchanged using a SPI-compatible 4-wire interface that operates at clock rates up to 20MHz.

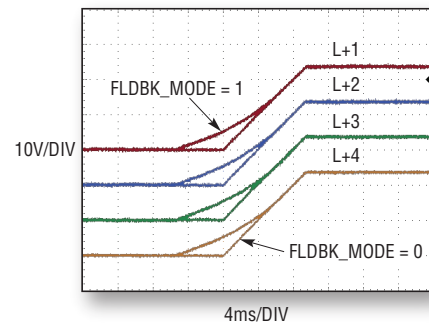
Features

- IO-Link PHY Compatible (COM1/COM2/COM3)
- ±50V Line Protection
- 8V to 30V Operation
- Hot Swap[™] Protected Supply Outputs with Discrete Power MOSFETs for Ruggedness and Flexibility
- Rugged CQ Line Drivers with Adjustable Slew Rate
- Configurable 100mA (4-Port), 200mA (2-Port), or 400mA (1-Port) CQ Drive Capability
- Automatic 500mA 80µs Wake-Up Pulse Generation
- Automatic Cable Sensing
- Programmable L+ Current Limit with Foldback
- Programmable ILL_M, ISIR_M, and Noise Suppression
- Short-Circuit, Input UVLO/UV/OV and Thermal Protection
- Optional Interrupt and Auto-Retry after Faults
- 2.9V to 5.5V Logic Supply for Flexible Digital Interface
- 4-Wire 20MHz SPI-Compatible Serial Interface
- Small 38-Pin 5mm × 7mm QFN and TSSOP Packages

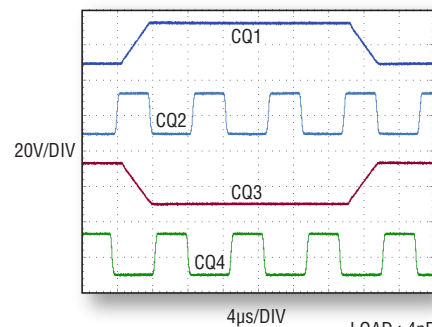


Scan to
Learn More

L+ Start-Up with 100µF Loads



CQ Operation at COM2 and COM3 Rates

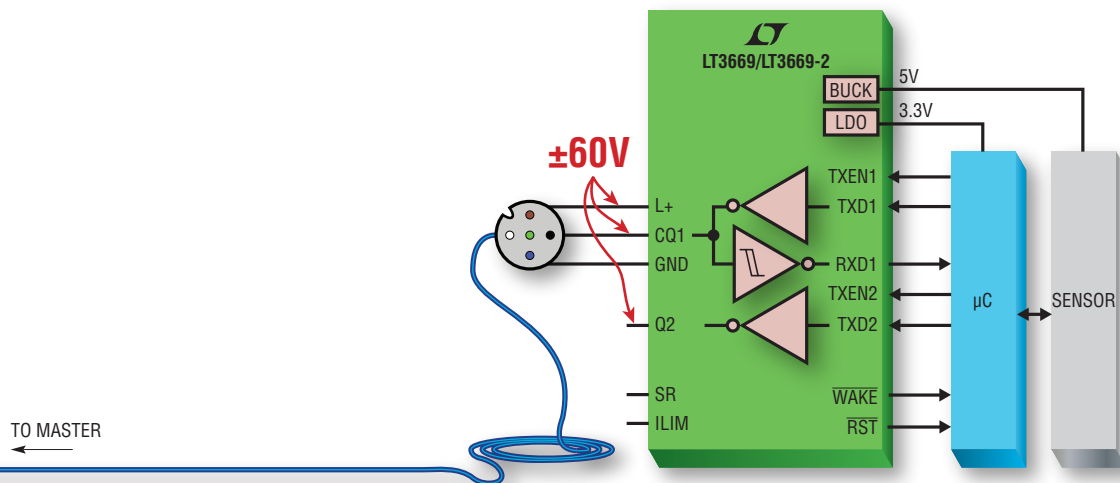


LOAD : 4nF
CQ1, CQ3: COM3 = 0
CQ2, CQ4: COM3 = 1



LT, LT, LTC, LTM, Linear Technology and the Linear logo are registered trademarks and Hot Swap is a trademark of Linear Technology Corporation. IO-Link is a registered trademark of PROFIBUS User Organization. All other trademarks are the property of their respective owners.

Robust IO-Link PHY Device Solution



Industrial Transceiver with Integrated Step-Down Regulator and LDO

The LT[®]3669 is an IO-Link compatible industrial transceiver. Its high operating voltage of 40V and line drivers' output current of up to 250mA allows sensor manufacturers to implement IO-Link without sacrificing robustness or features. Integrated buck and LDO regulators with programmable output voltages and switching frequency provide efficient power for the microcontroller and sensor or actuator. Wake-up detect functionality, as well as a programmable power-on reset timer are also included. The current limit and slew rate of the transmitters are externally adjustable for optimizing EMC performance. An internal adaptive pulsing scheme allows the drivers to safely switch heavy capacitive loads and incandescent bulbs. Thermal shutdown provides additional protection.

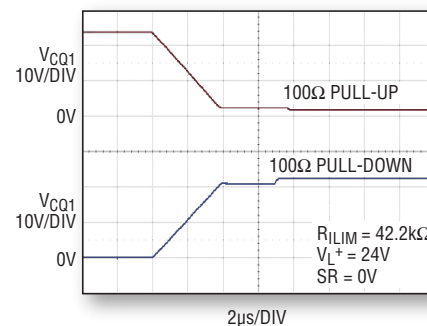
Features

- IO-Link PHY Compatible (COM1/COM2/COM3)
- ±60V Line Protection
- Second 250mA Driver Q2 for Increased Current Capability
- Wide Operating Range from 7.5V to 40V
- Integrated Step-Down Switching Regulator
 - Max Load Current: 100mA (LT3669)/300mA (LT3669-2)
 - Sync. and Adj. Switching Frequency: 250kHz to 2.2MHz
 - Output Voltage: 0.8V to 16V
- Integrated 150mA LDO Linear Regulator
- Rugged Line Drivers with Adjustable Slew Rate and Current Limit
- Configurable as Push-Pull, Pull-Up or Pull-Down
- Line Drivers High Impedance Mode (< 3µA)
- Adaptive Pulsing Scheme to Switch Heavy Loads Safely
- Adjustable Power-on Reset Timer
- Programmable EN/UVLO Function
- Short-Circuit and Thermal Shutdown Flags
- Small 28-Pin 4mm × 5mm QFN Package



Scan to
Learn More

Precise Slew Rate Control (COM2)



LT3669 Driving a 28V/2.2W Light Bulb

