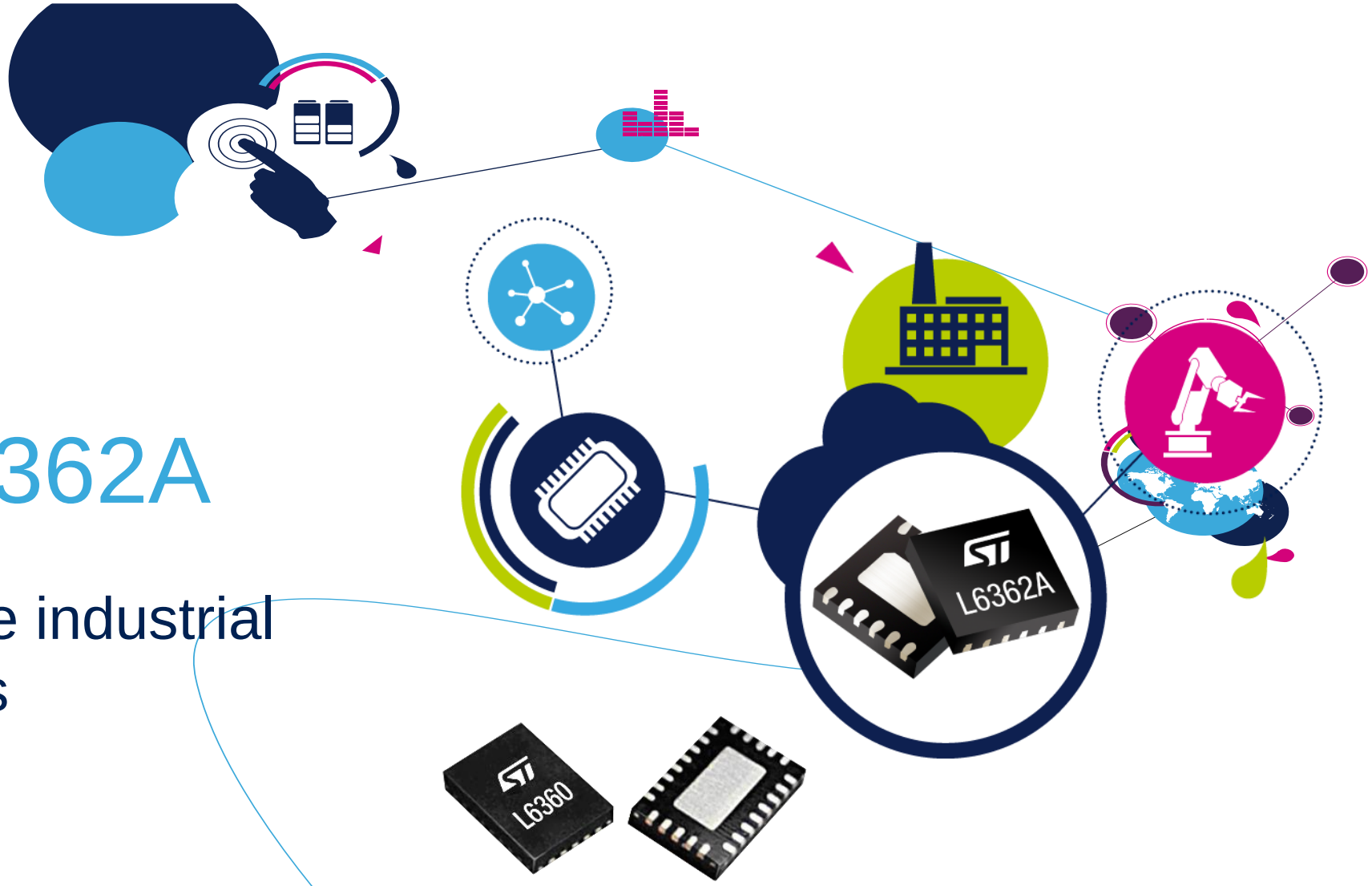
L6360 & L6362A

A smart way to drive industrial sensors & actuators



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Drivers for industrial sensors & actuators

L6360 & L6362A- Master & device for IO-Link and general purpose transceivers

- Transmit / receive digital data via a single 3-wire connection (PHY2)
- Support COM1 (4.8 kbaud), COM2 (38.4 kbaud) and COM3 (230.4 kbaud) modes
- Meet all the requirements of modern sensors and actuators:
  - Fast and easy configurability
  - Wide application spectrum
  - Minimum power dissipation for maximum efficiency
  - Full diagnostic and protection functions for enhanced reliability
- Enable Industry 4.0

IO-Link

Applications

- **Drivers for digital sensors & actuators**
- **Input-output for programmable logic controllers (PLC)**

Drivers for Industrial Sensor and Actuators

L6360 & L6362A- Master & device for IO-Link and general purpose transceivers

IO-Link

What's IO-Link?

- Standard input-output (IO) technology worldwide (IEC 61131-9) for the communication with sensors and actuators based on the 3-wire connection
- Transmission of process and service data between control unit and sensors/ actuators

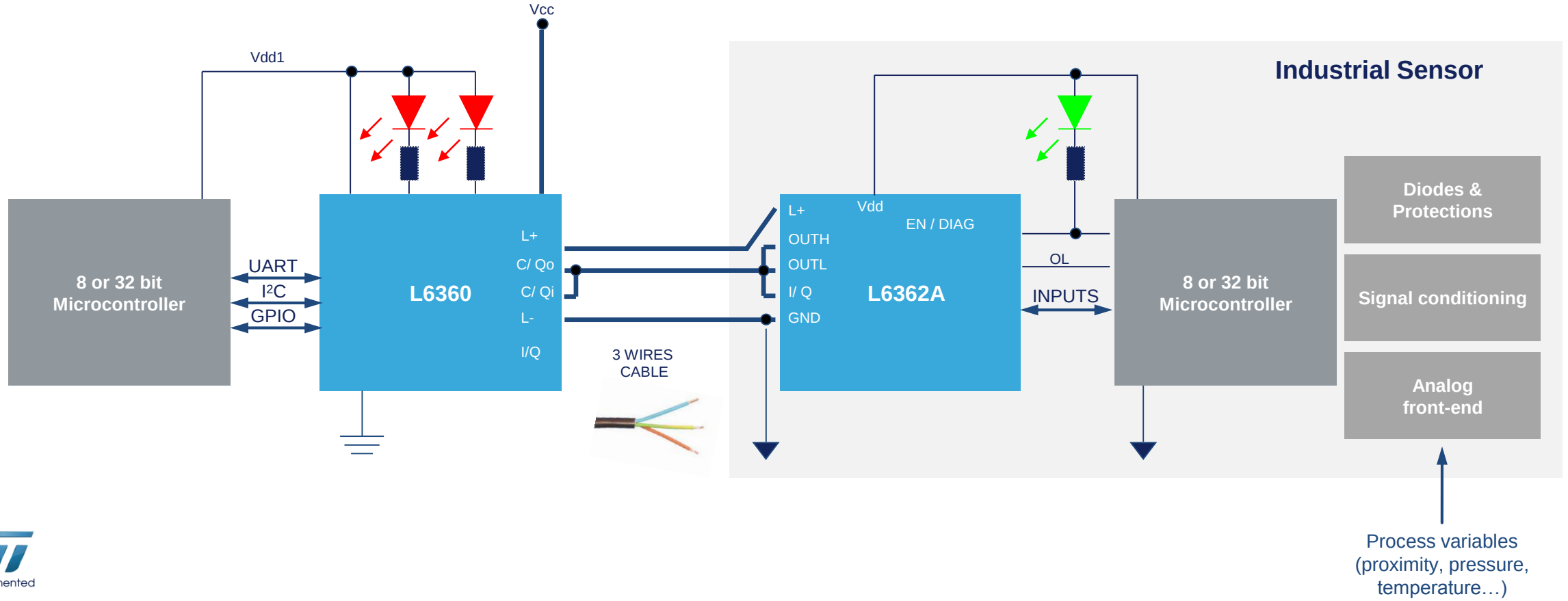
Why IO-Link?

- Easy and compatible (universal): does not require special cables, fully compatible with existing networks, no field bus required
- High functionality: high performing process data transfer, automated parameter setting and extended diagnosis
- Easy handling with error detection & correction

Drivers for Industrial Sensor and Actuators

L6360 & L6362A- Master & device for IO-Link and general purpose transceivers

A smart way of driving 3 wires digital sensors



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Drivers for Industrial Sensor and Actuators

L6360 & L6362A- Master & device for IO-Link and general purpose transceivers

Features & Benefits

Wide application spectrum
- wide supply voltage range : 18- 32.5 V (L6360), 7-36 V(L6362A)
- high output current capability up to 500 mA (L6360) 220 mA (L6362A)

Maximum design flexibility
- selectable output stage: high/ low side, push-pull
- easy access and full configurability with I2C mode in L6360
- selectable linear regulators 3.3/ 5 V 50mA (L6360), 10mA (L6362A)

Minimum power dissipation & maximum efficiency
- best-in-class Rds (on) <1.6 Ω (L6362A); <2 Ω (L6360)

Maximum reliability
- full set of protection functions
- LED diagnostics sequence for fast reaction to fault conditions

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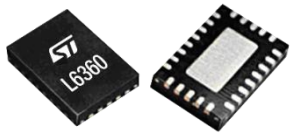


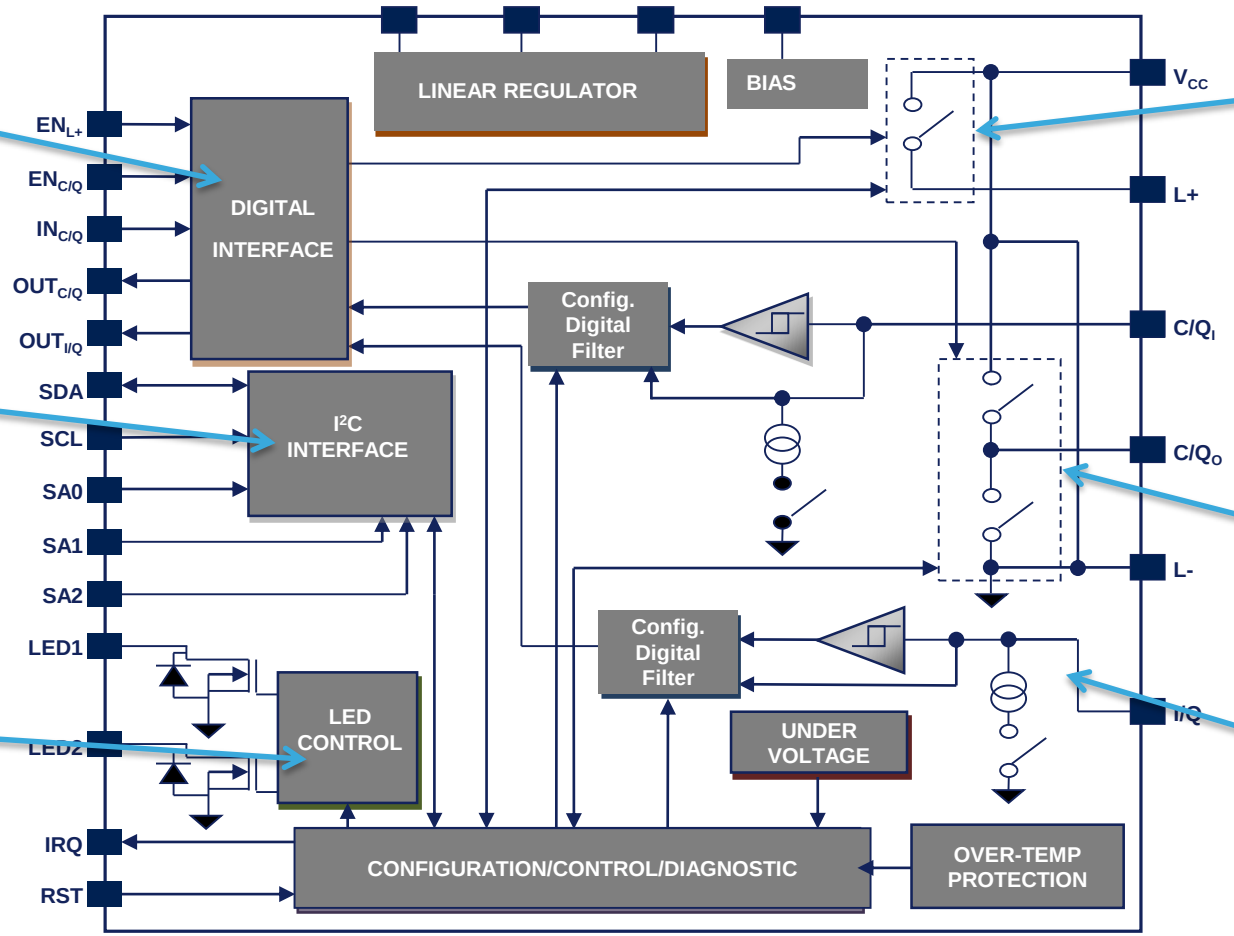
Drivers for Industrial Sensor and Actuators

L6360 – Master for IO-Link and general purpose transceivers

Direct access to line drivers / receivers for transparent operation

Digital interface to 9 internal register for chip programmability & diagnostics

LED Drivers + sequence generators embedded



Configurable power switch with very low R_{DSON}: 2 Ω max.

Receiver with digital filter and very precise configurable current sink

Configurable line driver with very low R_{DSON}: 2 Ω max. (HS); 1.2 Ω max. (LS)

Additional digital input with digitlal filter & current sink

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Drivers for Industrial Sensor and Actuators

L6362A - Device for IO-Link and general purpose transceiver

- Best in class for power losses: Low RDSON 1 Ω (HS) + 0.8 Ω (LS) @ 25°C
- Fast switching (up to COM3)
- Selectable Output stage:
  - High Side/ Low Side/ Push-Pull
- Fully protected
  - Reverse Polarity
  - Over-current / Non dissipative short circuit (cut-OFF delay time)
  - Thermal protection
  - Surge protection on chip
  - Under-voltage

Drivers for Industrial Sensor and Actuators

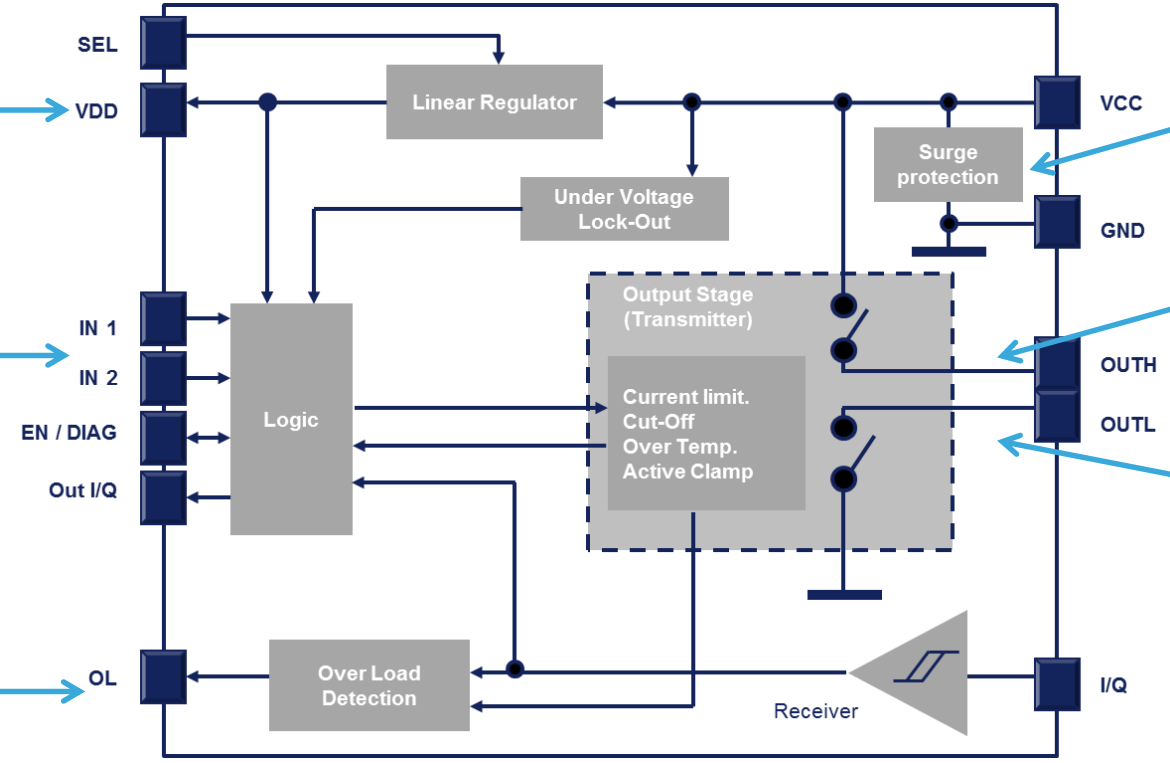
L6362A- Device for IO-Link and general purpose transceivers

Full reverse polarity protection embedded on supply/ receiver & driver pins

3.3V/ 5V Linear Vreg embedded

Transparent interface

Wake-up call detection embedded



Surge protection on supply & communication line

Very Low R_{DSON} power stages 1Ω typ

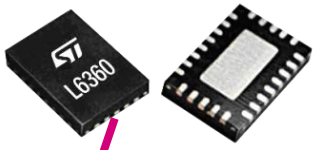
High side/ low side/ push-pull power stage with fast demagnetization of inductive loads

Fast communication COM3 supported (230.4kbps)

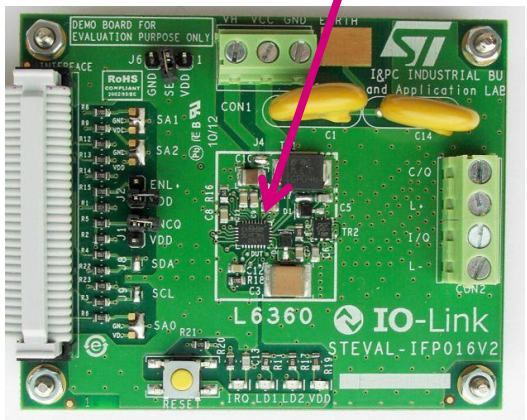
Drivers for Industrial Sensors and Actuators

L6360 & L6362A - Master & device for IO-Link and general purpose transceivers

Hands on development



8 or 32 bit Microcontroller



IO-Link communication master transceiver demonstration board based on the L6360
Order code: STEVAL-IFP016V2

Industrial Sensor

IO-Link communication transceiver demonstration board based on the L6362A
Order code: STEVAL-IFP017V3

- Diodes & Protections
- 8 or 32 bit Microcontroller
- Signal conditioning
- Analog front-end

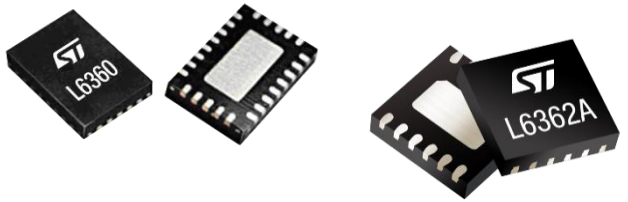
Drivers for Industrial Sensors and Actuators

L6360 & L6362A - Master & device for IO-Link and general purpose transceivers

- **Package and packing**

  L6360: QFN 26L 3.5 x 5

  L6362A: DFN 12L 3 x 3



- **Part numbers**

Part number	Supply Voltage (V)	V_{∞} (V)	Output current (A)	Max linear reg. (mA)	Output channels	Input channels
L6360 (Master)	18 to 32.5	3.3/5	0.5	65	2	2
L6362A (Device)	7 to 36	3.3/5	0.22	10	1	1

- **Support**

Order Code	Description	Application notes
STEVAL-IFP016V2	IO-Link communication master transceiver demonstration board based on the L6360	AN4075
STEVAL-IFP017V3	IO-Link communication transceiver demonstration board based on the L6362A	AN4828

Further information and full design support at: **www.st.com/iolink**