ST IO-Link Products Introduction

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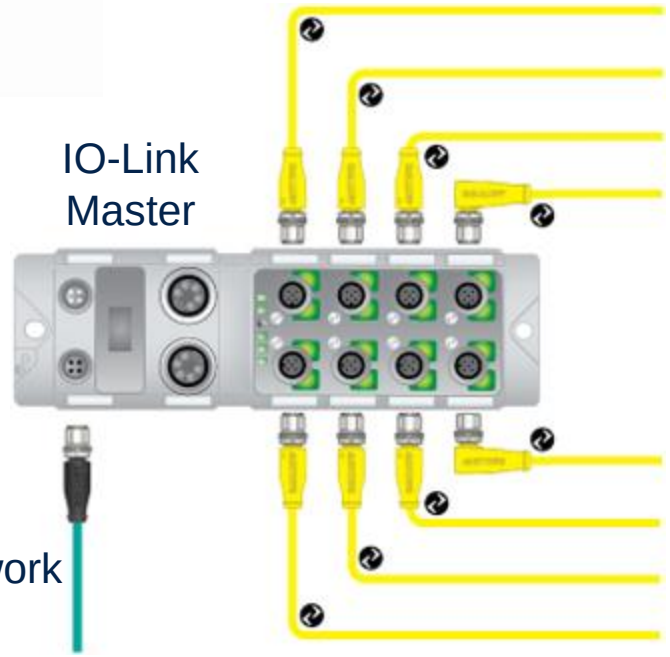
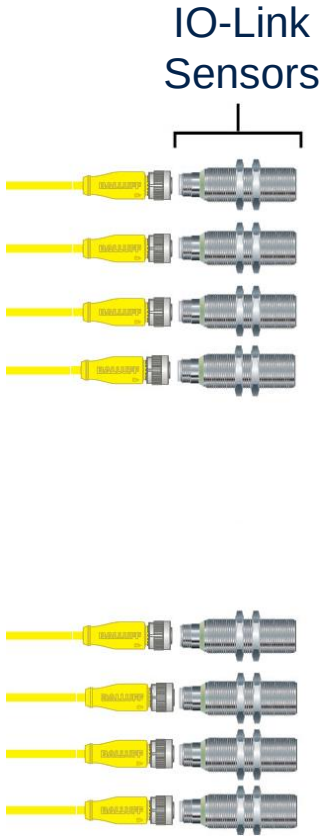
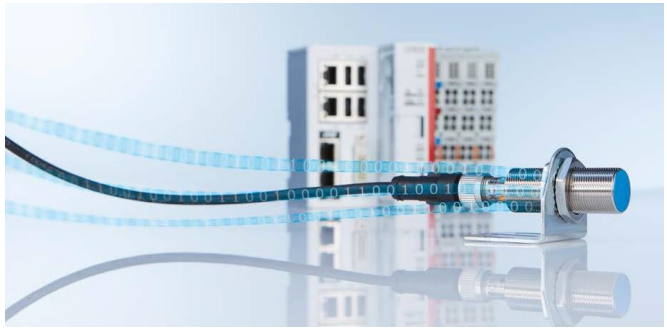
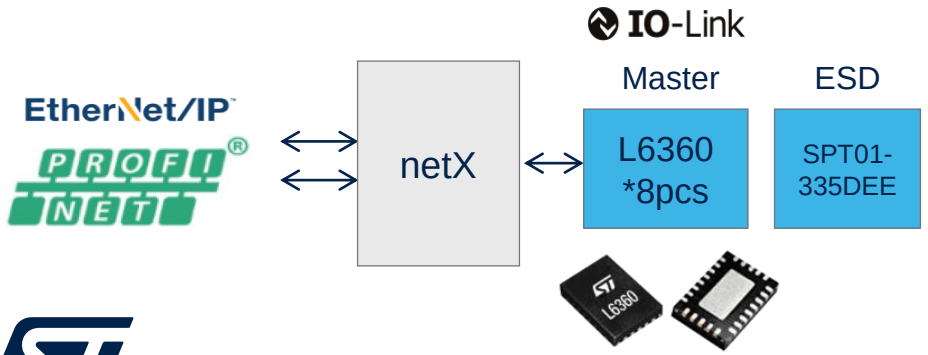
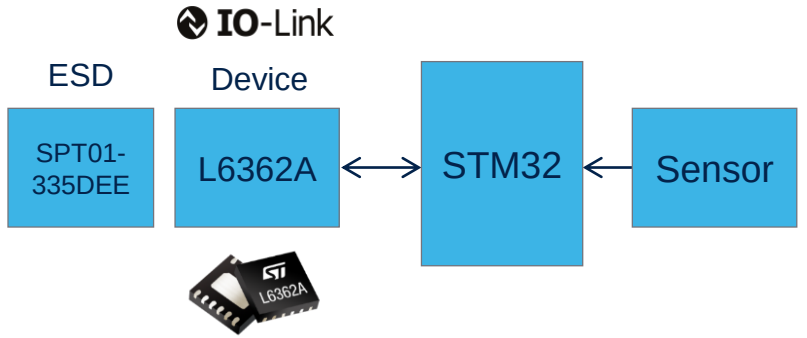
IO-Link application











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IO-Link Device PHY

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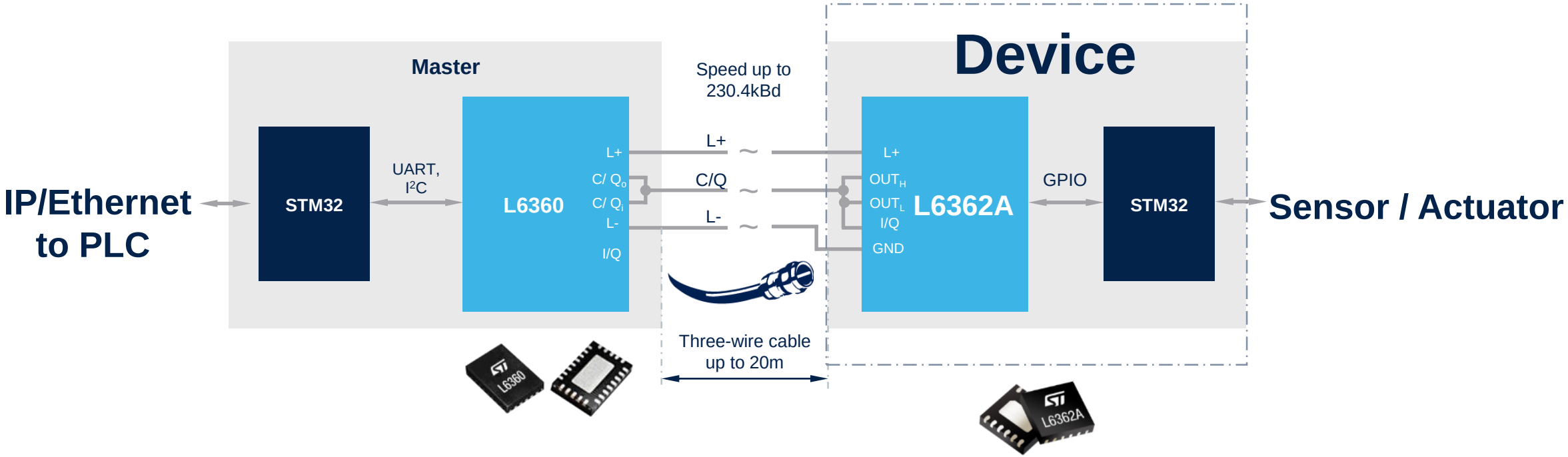
IO-Link device PHY



- Easy Installation
- Easy Configuration
- Diagnostic Function

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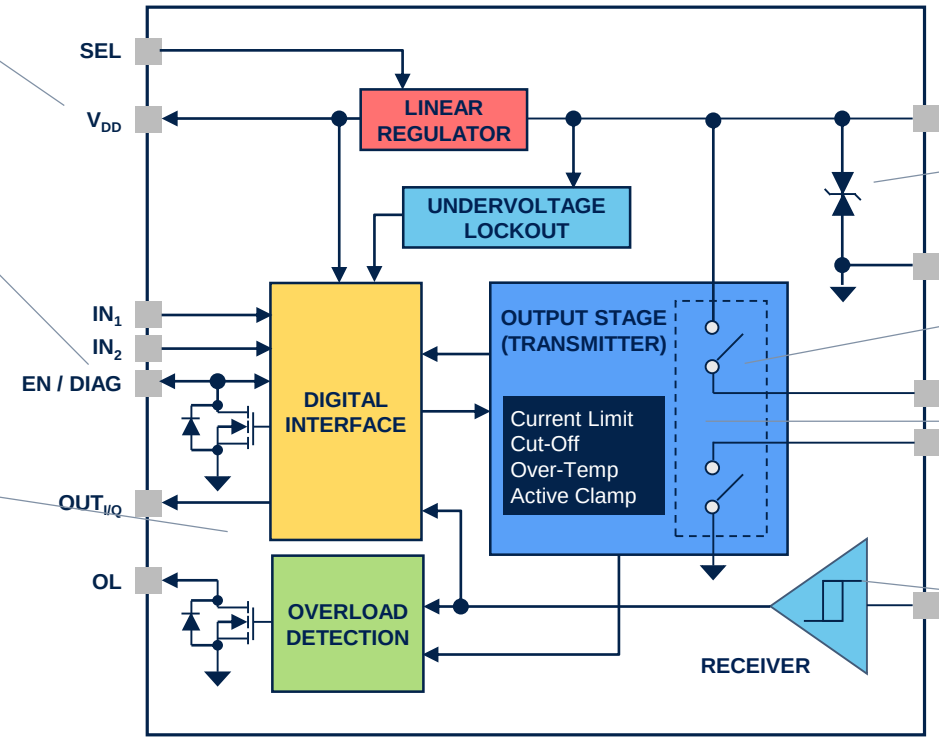
L6362A IO-Link device

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)

Tiny package: DFN 3×3×1 mm

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L6362A

- Key Benefits

- Best in class for power losses
  - Low R_{DSON} 1 Ω + 0.8 Ω @ 25°C

Low Power Dissipation
Reduced power losses

- Optimized for simple solutions

Cheap Interface

- Fast switching (up to COM3)

High Frequency
Operation

- Selectable Output Stage:
  - High Side
  - Low Side
  - Push/Pull

High flexibility
Customer customization

- Fully protected
  - Reverse Polarity
  - Over-current / short-circuit
  - Thermal protection
  - Non dissipative short circuit (cut-OFF delay time)
  - Under-voltage

High reliability

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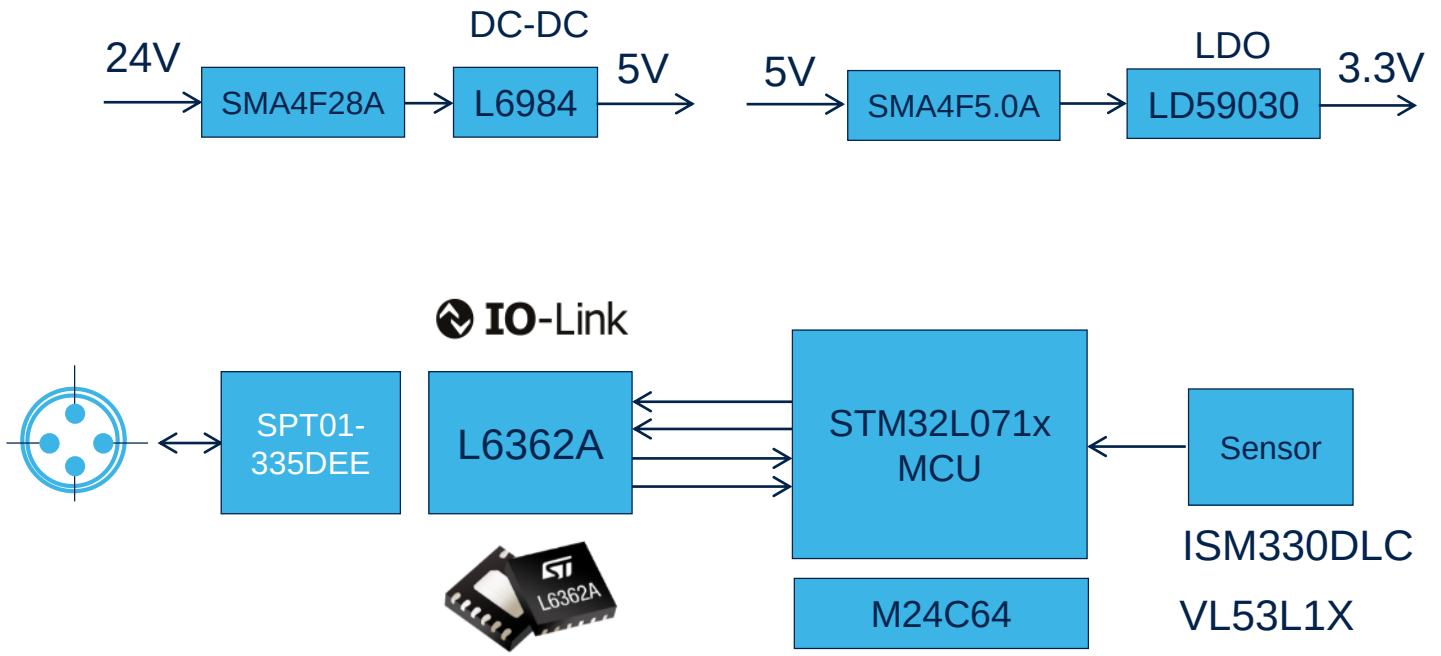
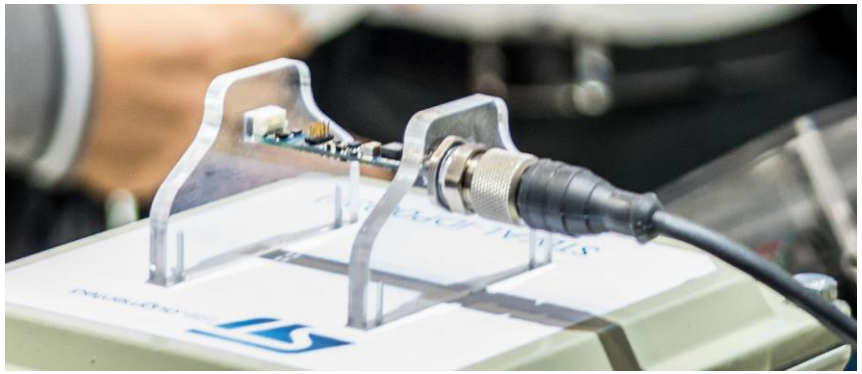
Key specs for L6362A

Maximum supply voltage of L6362A	36V
IOHS max Spec for L6362A	310mA
IOHS-PEAK max Spec for L6362A	450mA
Output Voltage of integrated LDO	3.3V or 5V
L6362A internal LDO output Current Capability	10mA
L6362A internal LDO Output Short-circuit limitation	20mA
Typical Rds(ON) for L6362A High-Side Switch (Iout=0.1A, Tj=25°C)	1Ω
Typical Rds(ON) for L6362A Low-Side Switch (Iout=0.1A, Tj=25°C)	0.8Ω

IO-Link sensor





- Position
- Pressure
- Flow
- Level
- Temperature
- Proximity
- Inclination
- Encoder, Linear Position
- Cabinet Condition Monitoring
- Ultrasonic/Photoelectric
- Inductive Couplers…

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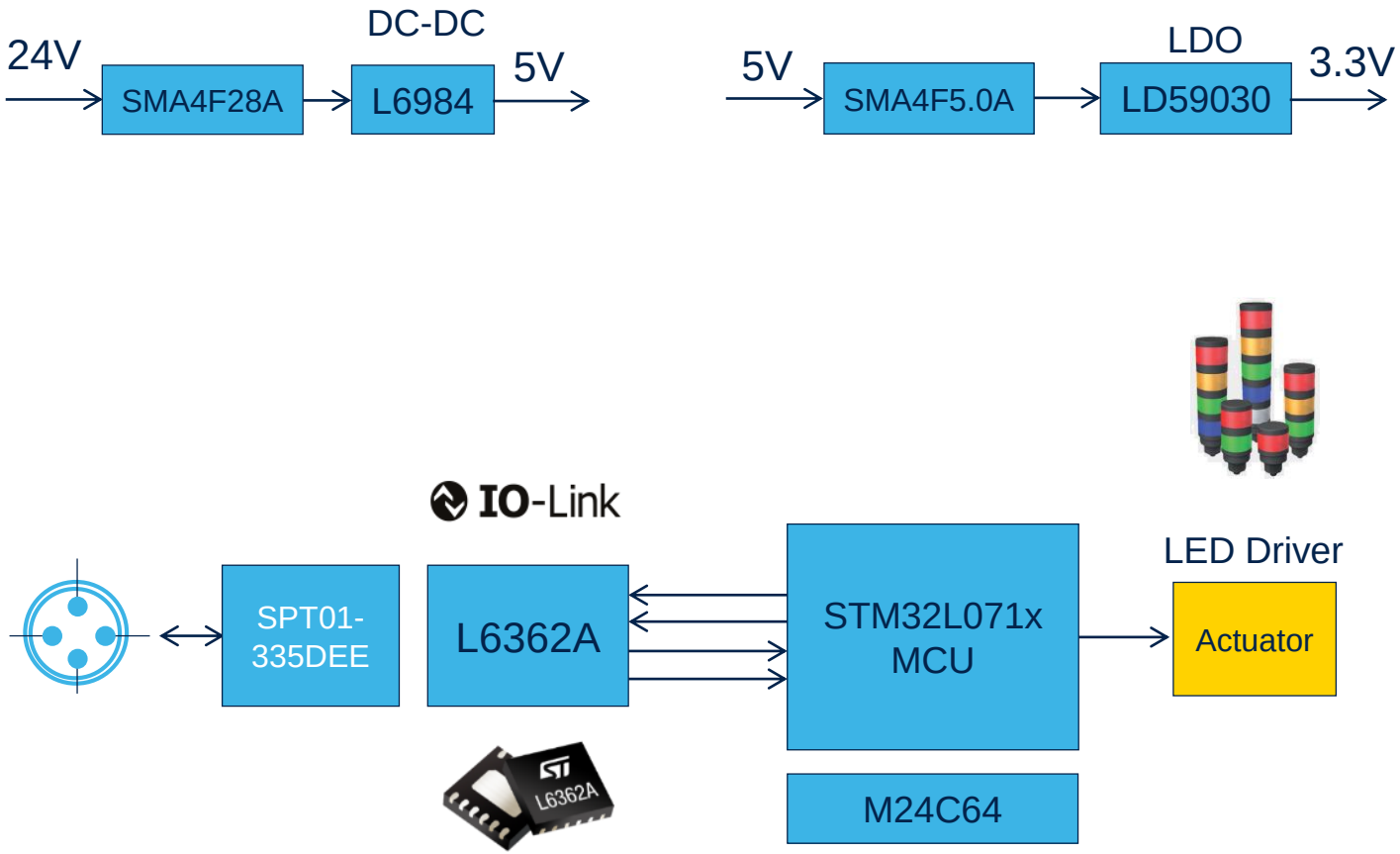
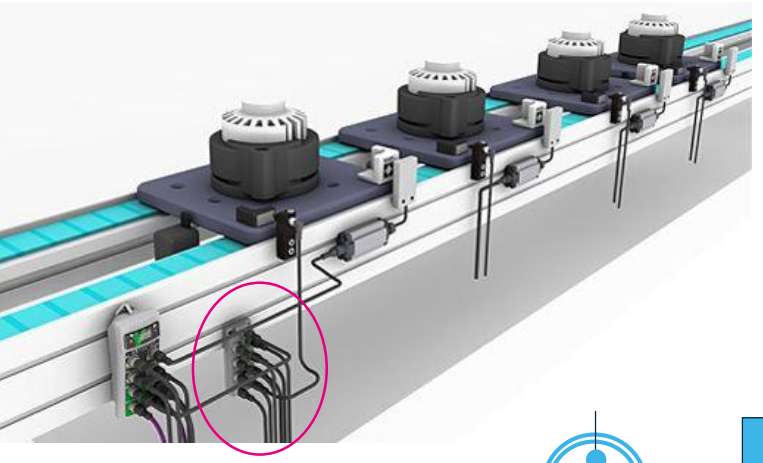
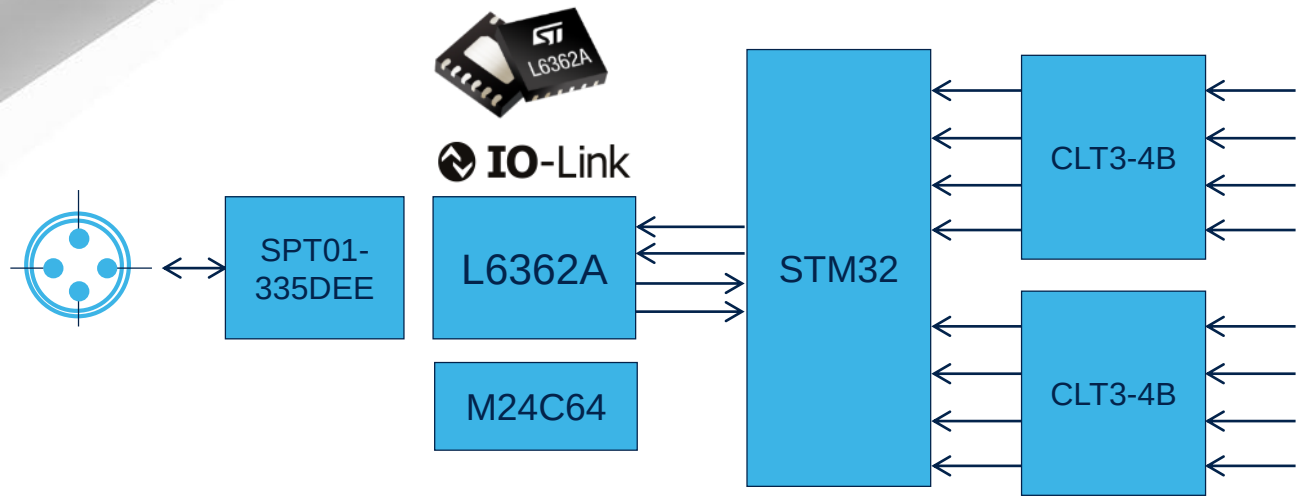
IO-Link actuator



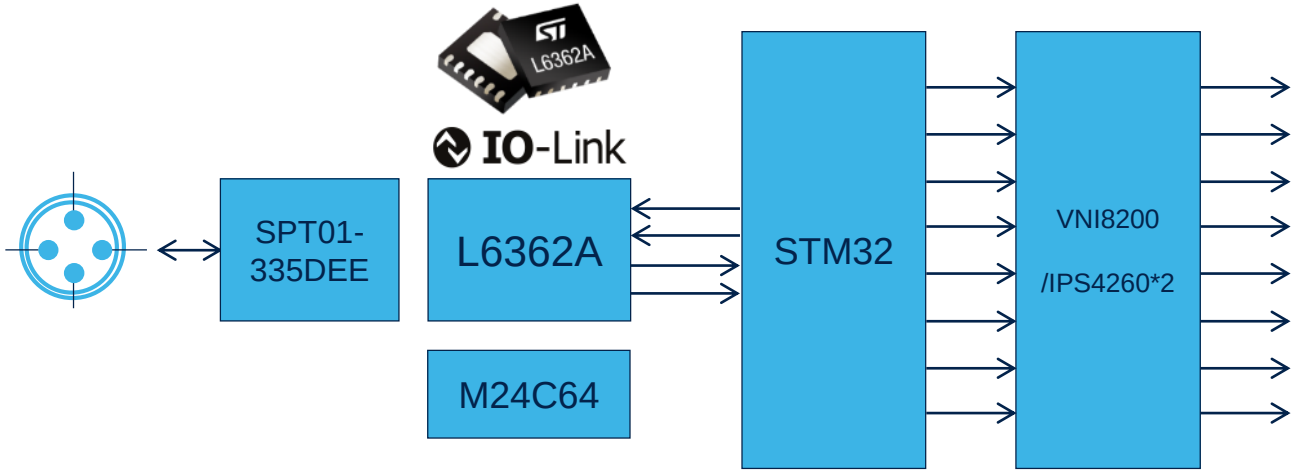
- RGB LED Indication
- Relay Drive
- Motor Drive
- Switch ON/OFF
- Pressure Relief Valve
- Solenoid Valve

IO-Link to DI/DO





8 Digital Inputs



8 Digital Outputs

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IO-Link Master PHY

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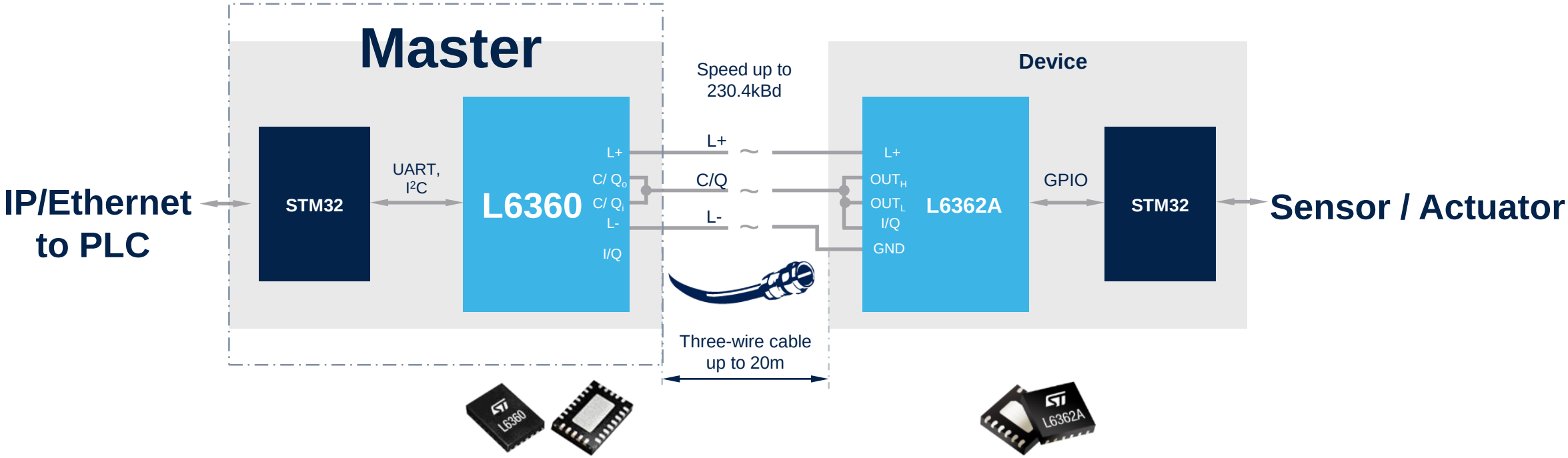
IO-Link master PHY



- Easy Installation
- Easy Configuration
- Diagnostic Function

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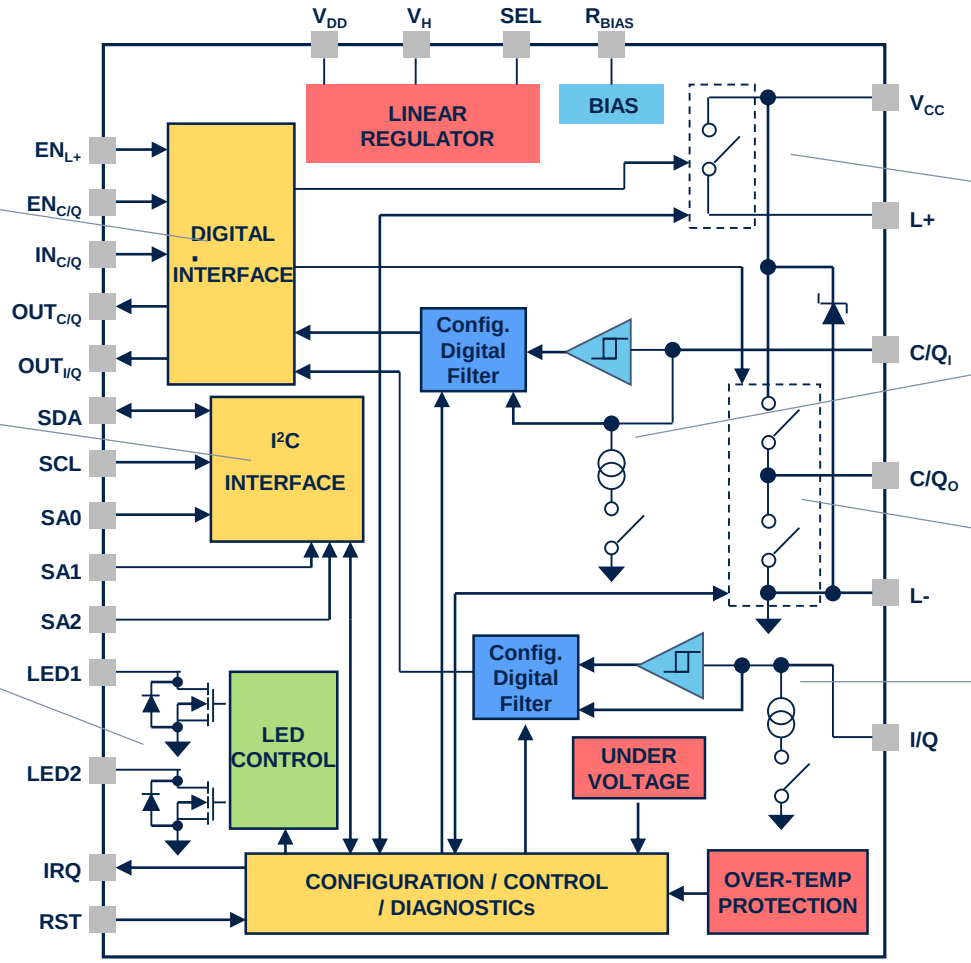
L6360 master PHY

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 digital filter & current sink

Tiny package: QFN 3.5×5×1 mm

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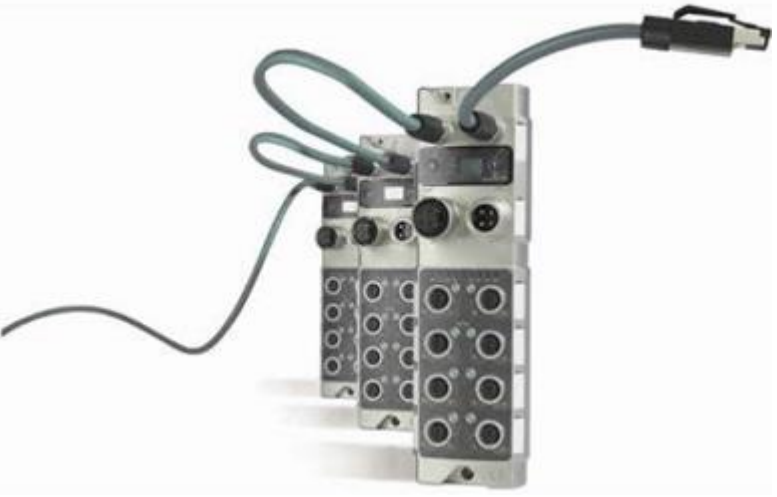
IO-Link

Key specs for L6360

Maximum supply voltage of L6360	32.5V
Output Voltage of integrated LDO	3.3V or 5V
L6360 internal LDO output current capability	50mA
L6360 internal LDO output current limitation	65mA
Max spec of C/QO Low-side & High-side limitation current	1600mA
Typical Rds(ON) for L6360 C/QO High-side Switch (Iout=0.2A, Tj=25°C)	1Ω
Typical Rds(ON) for L6360 C/QO Low-side Switch (Iout=0.2A, Tj=25°C)	0.6Ω
Max I2C clock frequency for L6360	400KHz

IO-Link master



IO-Link evaluation boards

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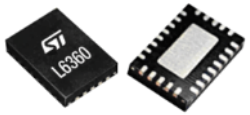
L6360 & L6362A evaluation boards

IO-Link



L6360: QFN 26L 3.5 x 5

L6362A: DFN 12L 3 x 3

L6360 Master	1 × L+, 1 × C/Q, 1 × DI	0.5	UM2421	kit P-NUCLEO-IOM01M1	
	1 × L+, 1 × C/Q, 1 × DI		DB3632, UM2430	STEVAL-IOM001V1	Stack included
	1 × L+, 1 × C/Q, 1 × DI		AN4075	STEVAL-IFP016V2	
	4 × L+, 4 × C/Q, 4 × DI		AN5041, UM2232	STEVAL-IDP004V1	New! IO-Link Stack coming soon
L6362A Device	1 × C/Q (HS+LS+DI)	0.3	UM2425	kit P-NUCLEO-IOD01A1	
			DB3634, UM2424	STEVAL-IOD003V1	Stack included
			AN4828	STEVAL-IFP017V3	
			AN5041, UM2232	STEVAL-IDP003V1	New! IO-Link Stack coming soon
			DB3663, UM2438	STEVAL-BFA001V1B	

P-NUCLEO-IOM01M1 kit

STEVAL-IFP016V2

STEVAL-IDP004V1

P-NUCLEO-IOD01A1 kit

STEVAL-IFP017V3

STEVAL-IDP003V1

STEVAL-BFA001V1B

New

L6364 Demo is Coming

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Thank you

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