TIDA-00796 Automotive Resolver Frontend Block Diagram

- **EXT. SUPPLY CONNECTOR**: 7 - 42 V
  - Sheet 2

- **DC-DC**: 7 - 42 V to 5 V
  - Sheet 2

- **LDO**: 5 V to 3.3 V
  - Sheet 2

- **STATUS LED**
  - PWR. GOOD, FAULT
  - Sheet 2

- **SYSTEM CONNECTOR**
  - SPI (4)
  - Sheet 2

- **SPI (4)**
  - 5 V
  - 3.3 V

- **PGA411-Q1**

- **RESOLVER CONNECTOR**
  - EXC
  - SIN
  - COS

- **PARALLEL INTERFACE HEADER**
  - (ORD[0..13], OMODE, INHB, VA0, VA1)
  - Sheet 2

- **Vusb**

- **Fault RES**

- **FaIL**

- **Fault**

- **EXC+**
- **EXC-**
- **SIN+**
- **SIN-**
- **COS+**
- **COS-**
**EXTERNAL POWER / USB (CONTROLSTICK)**

**SYSTEM CONNECTOR**

Piccolo F28069 controlSTICK pinout

<table>
<thead>
<tr>
<th>(TDF view, USB connector on left)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>1. P0.00</td>
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<td>3. P0.02</td>
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<td>8. P0.07</td>
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Mirroring needed for PIN to PIN compatibility with control stick

**PARALEL INTERFACE**

**FAULTRES HANDLING**

**POWERS GOOD SIGNALIZATION**

Alternate part: TPS763 family (higher Vin & cost)

Little Logic (noninverting buffer topology)

“I(led) = 1 mA”

Used LEDs (Wurth) are very bright even at 1 mA!
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