The IFLEXRAY.1 is an interface module for recording FlexRay cluster bus communication. Both complete bus traces and the targeted acquisition of selected signals are supported.

**Areas of Application**
- Acquisition of ECU signals (measured values, status information, etc.)
- Recording of the entire communication of a FlexRay cluster

**Advantages**
- Extraction of signals from FlexRay messages directly in the interface module
- Logging of a cluster up to the full bus bandwidth
- Cold start of a cluster without additional nodes
- Recovery after disconnection
- Wake-Up of the entire measuring system through bus communication
- Combined acquisition of ECU signals and physical measured values

**Interfaces**
The two nodes of the module are galvanically isolated from one another and from the system. In addition, each FlexRay node is led through via two ports. This enables the connection of additional bus subscribers, such as classical monitoring tools, reduces cabling and also helps to avoid stubs.

**Data Processing**
The module supports up to 250 freely usable measurement channels which can be selected from the FIBEX file of the connected cluster. The total number of supported signals can be spread over the two FlexRay nodes as necessary. It is also possible to trace a cluster's communication in full at frame level.
## Technical Data

### General
- **Number of nodes**: 2
- **Number of channels per node**: 2 (A&B)
- **Bit rate**: 10 MBit/s
- **Network description**: FIBEX 3.1.0
- **Number of signals**: ≤250 measurement channels per module
- **Data types**: 1 … 32 bit, 64 bit
- **Data rate**: 1 SPS … 500 SPS online, can be set per module

### Nodes
- **Physical layer specification**: FlexRay V2.1 Revision A
- **Transceiver**: NXP TJA1080A
- **Protocol specification**: FlexRay V2.1 Revision A
- **Controller**: Freescale MFR4310
- **Cold-start-capable**: Yes
- **Termination**: Split termination, 2x47 Ω / 2x1.3 kΩ, can be connected
- **Galvanic isolation**: Per node

### Wake Output
- **Supply voltage**: 7 … 48 V, external
- **Current consumption**:
  - ≤1.0 mA (normal power mode, supply voltage ≤15 V)
  - ≤3.0 mA (normal power mode, supply voltage >15 V)
  - ≤0.1 mA (low power mode)
- **Output voltage**: ≤15 V (supply voltage, limited)
  - High-active, current-limited, short-circuit-proof

### Environmental Conditions
- **Storage**: -30 °C ... +85 °C, 10 % ... 90 % rel. humidity, non-condensing
- **Operation**: -30 °C ... +70 °C, 10 % ... 90 % rel. humidity, non-condensing

### Order Numbers
<table>
<thead>
<tr>
<th>Order Numbers</th>
<th>Description</th>
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<tbody>
<tr>
<td>IFLEXRAY.1</td>
<td>Communication module for SMT systems for connecting to FlexRay clusters (2 nodes)</td>
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