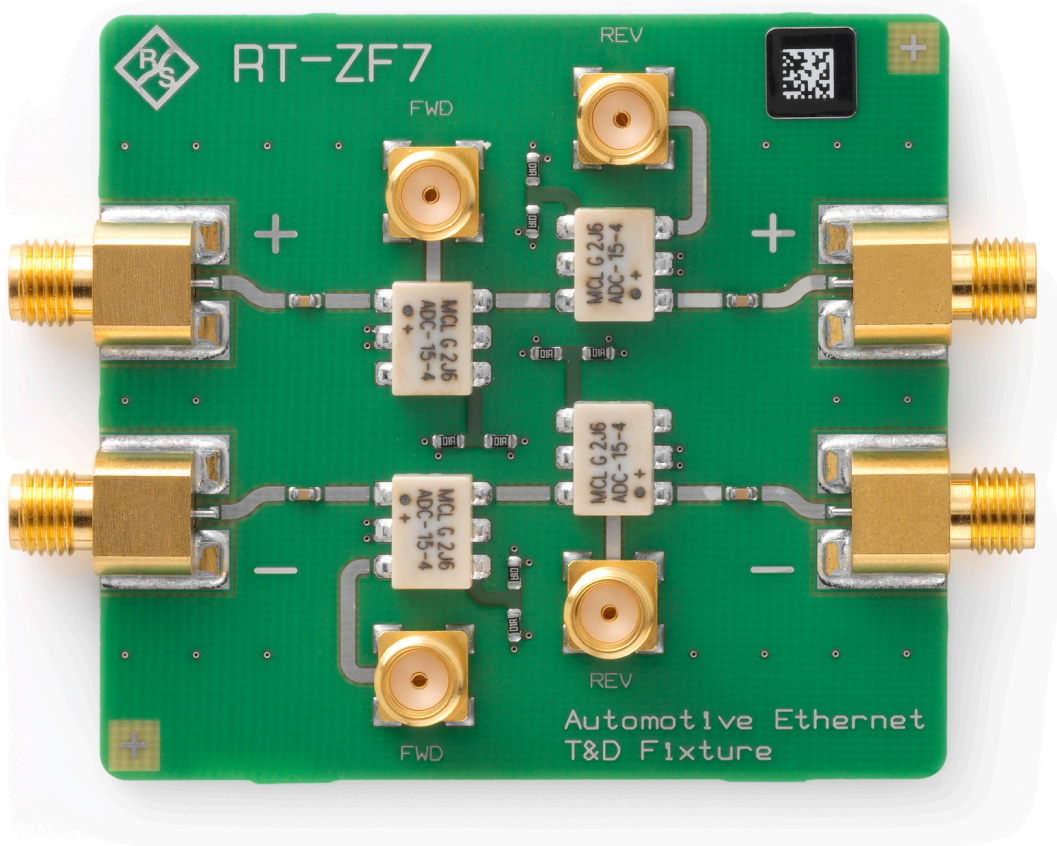# R&S®RT-ZF7
Automotive Ethernet T&D Fixture
Manual

ROHDE&SCHWARZ

This manual describes the R&S RT-ZF7 Automotive Ethernet triggering and decoding test fixture (1801.3688.02).

1   Safety Information

The product documentation helps you to use the product safely and efficiently. Keep the product documentation nearby and offer it to other users.

Safety information warns you about the potential dangers and gives instructions how to prevent personal injuries or damage caused by dangerous situations. Throughout the documentation, safety instructions are provided when you need to take care during setup or operation.

Intended use

The equipment under test (EUT) is a signal quality test and development board, indented to be used at laboratory or test and measurement areas. These areas are used for analysis, testing and servicing and where equipment is operated by trained personnel.

Operating site

Only use the product indoors, and keep it dry. The product has no casing and is sensitive to moisture and humidity.

The product is suitable for pollution degree 2 environments where nonconductive contamination can occur. For more information on environmental conditions such as ambient temperature, see the specifications.

Installation

Connect only Ethernet devices with interface that are designed according to 100BASE-T1 IEEE Std 802.3bw™-2015 (Amendment to IEEE Std 802.3™-2015), 1000BASE-T1 (IEEE Std 802.3bp™-2016).

Disposal

In line with EN 50419, the product cannot be disposed of in the normal household waste. Even disposal via the municipal collection points for waste electrical and electronic equipment is not permitted.

Rohde & Schwarz has developed a disposal concept for the ecofriendly disposal or recycling of waste material. Rohde & Schwarz fully assumes its obligation as a producer to take back and dispose of electrical and electronic waste. Contact your local service representative to dispose of the product.

2   Product Description

The R&S RT-ZF7 automotive Ethernet T&D fixture is a product for triggering and decoding of the 100BASE-T1 and 1000BASE-T1 standard.

It is used in combination with:

- R&S RTO/R&S RTP oscilloscope
- 100BASE-T1: R&S RTO-K57 (1333.0596.02), R&S RTP-K57 (1800.6548.02)

For data, see the "R&S RT-ZFxx Oscilloscope Test Fixtures - Specifications" at www.rohde-schwarz.com/brochure-datasheet/rto.
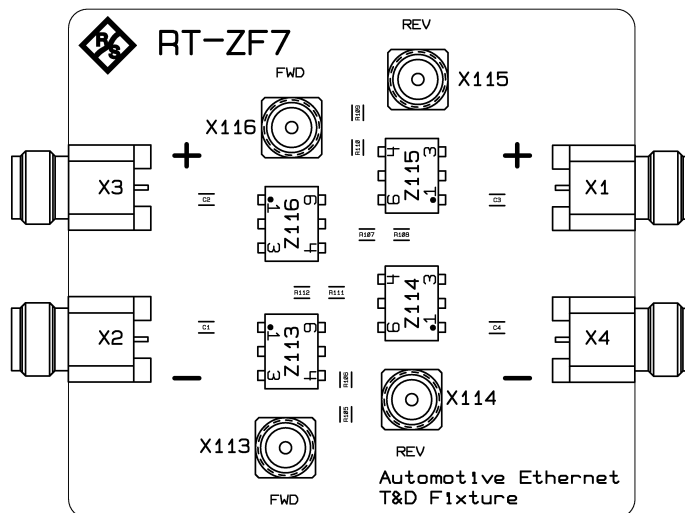
2.1   Deliveries

The R&S RT-ZF7 delivery package contains the following items:

- R&S RT-ZF7 test board
- Two R&S RT-ZF7A SMA adaptor
- Manual

2.2   Board Description

The R&S RT-ZF7 automotive Ethernet T&D fixture has the following connectors.

X1, X2, X3, X4

Connectors for Ethernet device under test (DUT).

X113

Connector for an oscilloscope, negative signal from X2 to X4 (forward signal).

X114

Connector for an oscilloscope, negative signal from X4 to X2 (reverse signal).

X115

Connector for an oscilloscope, positive signal from X1 to X3 (reverse signal).

X116

Connector for an oscilloscope, positive signal from X3 to X1 (forward signal).

Z113, Z114, Z115, Z116

Directional coupler.

3   Connecting the Board

Test setup

1. Connect the Ethernet devices to the SMA plugs (X1, X2, X3, X4) on the sides of the fixture.

2. Connect the oscilloscope channels to the FWD and / or REV SMA plugs (X113, X114, X115, X116).

3. Follow the instructions of the software option. For more details, refer to the user manual of your R&S RTO/R&S RTP oscilloscope.