



## HIRSCHMANN MOBILITY Remote Tuner Module

### A new Radio Tuner Architecture for In-Car Infotainment Systems

#### Digitalization of Broadcast Radio Reception allows simplified System Architecture

TE Connectivity presents a new approach in radio tuner technology: The HIRSCHMANN MOBILITY Remote Tuner Module (RTM) for radio broadcast reception.

By moving the tuner closer to the antenna, several major advantages are uncovered.

In a typical in-car entertainment system, the radio is located in the head unit, along with many other functions. As more functionality gets integrated, issues such as space, heat, and EMC have to be solved.

The RTM concept addresses these challenges by moving the radio reception part close to the antennas. This optimizes system costs: antenna amplifiers and expensive coaxial cables can be saved.

#### KEY FEATURES

##### System cost savings

- Reduced number of antenna amplifiers
- Reduction of coaxial cables and connectors
- Low development effort due to simple API interface

##### Technical

- Optimal RF performance due to close location to antenna
- Ideally packed into the already existing location of an antenna amplifier
- Free up space in fully packed headunits
- Designed for 105° C ambient temperature environments

##### Environmental

- Less material due to reduction in coaxial cables and antenna amplifiers

## Product Variants

The Remote Tuner Module is available in region-specific variants. Furthermore, the exact feature set, mechanical package and interfaces can be adjusted in customer specific projects.

## Product Features

- AM, FM, DAB and HD reception
- FM-Phase Diversity, DAB MRC and HD MRC
- Seamless linking (on module): FM-FM, FM-DAB, DAB-DAB, FM-HD
- Data services TMC and TPEG
- Background search on dedicated tuner
- A2B Interface for control, audio, data and firmware update
- MQS connector for direct antenna connection
- FAKRA connector for coax cables
- Software API over A2B available to control entire functionality
- Operating temperature range
  - 40°C to +95°C full functionality\*
  - +95°C to +105°C power saving modes

\*) given a reliable thermal connection to the car body

## Technical Details

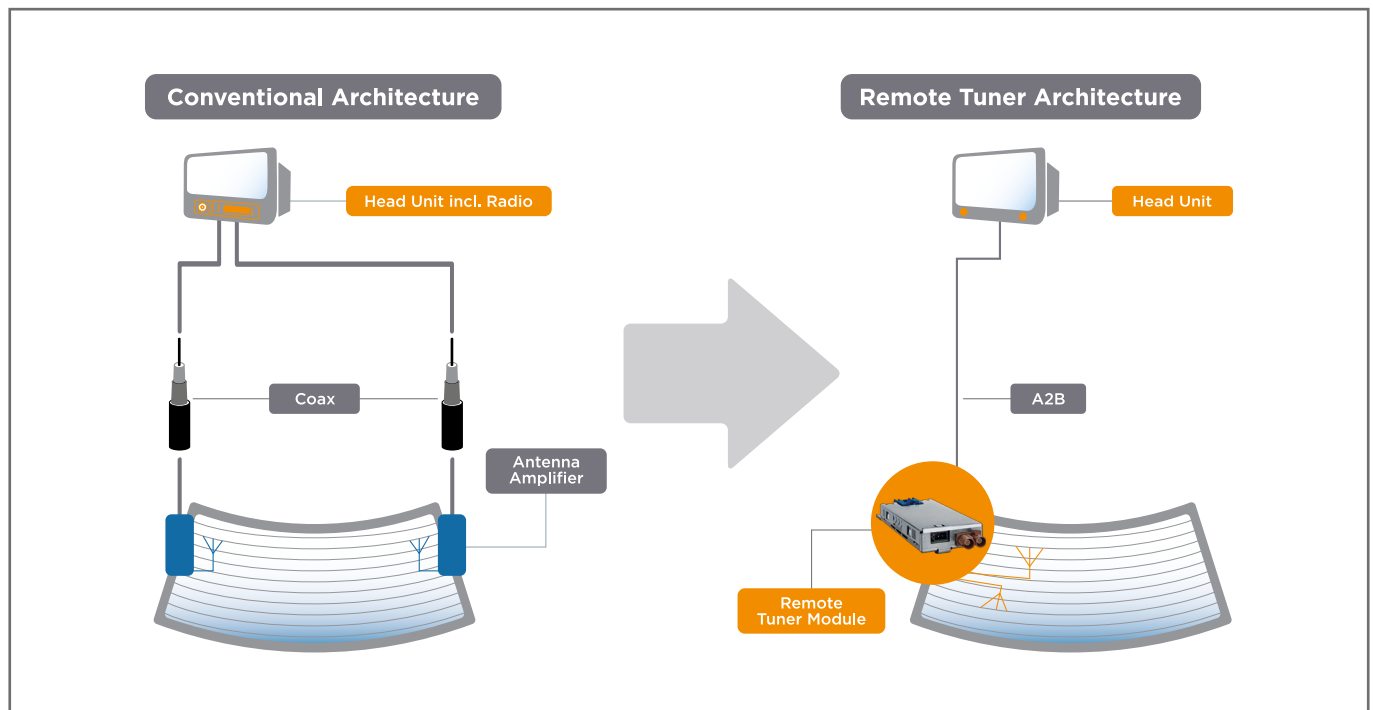
- Cortex-M7 Architecture
- Size: 86.36 x 42.8 x 16 mm
- Modular tuner chipset allows specific adjustments
- Phantom supply for remote antennas
- Integrated antenna diagnosis
- Input voltage optionally adjustable via Software API
- Ground connection via screw and car body

## Antenna Connections

Depending on the location of the RTM, different options how to connect to the antenna exist:

- Option 1: Direct connection to antenna via MQS-3 connector. No amplifier necessary.
- Option 2: Coaxial connection to antenna via FAKRA connector. No amplifier necessary.
- Option 3: Coaxial connection to antenna via FAKRA connector. Phantom supply for amplifier provided.

## Comparison of Conventional and Remote Tuner Architecture



TE Connectivity's HIRSCHMANN MOBILITY products, formerly Hirschmann Car Communication (HCC), provide some of the world's leading antenna, tuner, infotainment, M2M and telematics technologies, primarily for automobile communications and connectivity.

**Hirschmann Car Communication GmbH,**  
a TE Connectivity Company  
Stuttgarter Strasse 45-51  
72654 Neckartenzlingen | Germany  
Phone 0049-7127 14-0  
[www.te.com](http://www.te.com)

© 2019 TE Connectivity | All rights reserved.  
MQS, TE, TE Connectivity, and TE connectivity (logo)  
are trademarks.  
Hirschmann, Hirschmann Car Communication and FAKRA  
are a trademarks.  
1-1773961-6 | Published 09-2018 | PoD • RRD

For further information please contact  
[www.te.com/support-center](http://www.te.com/support-center)