

OFF-THE-SHELF REMOTE TUNER MODULE

A READY TO USE RADIO TUNER FOR IN-VEHICLE INFOTAINMENT SYSTEMS



DIGITALIZATION OF BROADCAST RADIO RECEPTION ALLOWS SIMPLIFIED SYSTEM ARCHITECTURE

Hirschmann Car Communication presents an innovative approach in radio tuner technology: The Remote Tuner Module (RTM) for radio broadcast reception – now also available as Off-the-Shelf (OTS) product.

In a typical in-vehicle entertainment system, the radio is located inside the head unit, along with many other electronic functions. As more functionality is integrated in this space, issues such as packaging, heat dissipation and EMI become a challenge for the OEM.

The RTM concept addresses these challenges by moving the function of radio reception out of the head unit, towards the antennas. This optimizes overall system cost by eliminating antenna amplifiers and reducing coaxial cable needs.

The Off-the-Shelf RTM is a very cost-effective solution. Additional effort for development and adaptation to individual architectures is reduced to a minimum.

PRODUCT VARIANTS

The Off-the-Shelf Remote Tuner Module is available in three population variants for global coverage of broadcast radio:

EUROPE	US	GLOBAL
AM, FM Phase-Diversity, DAB MRC Diversity, Data Tuner, Seamless Linking	AM, FM Phase-Diversity, HD MRC Diversity, Data Tuner, Seamless Linking (SDARS support on request)	AM, FM Phase-Diversity, Data Tuner
Part Number 920-787-101	Part Number 920-787-131	Part Number 920-787-161

KEY BENEFITS

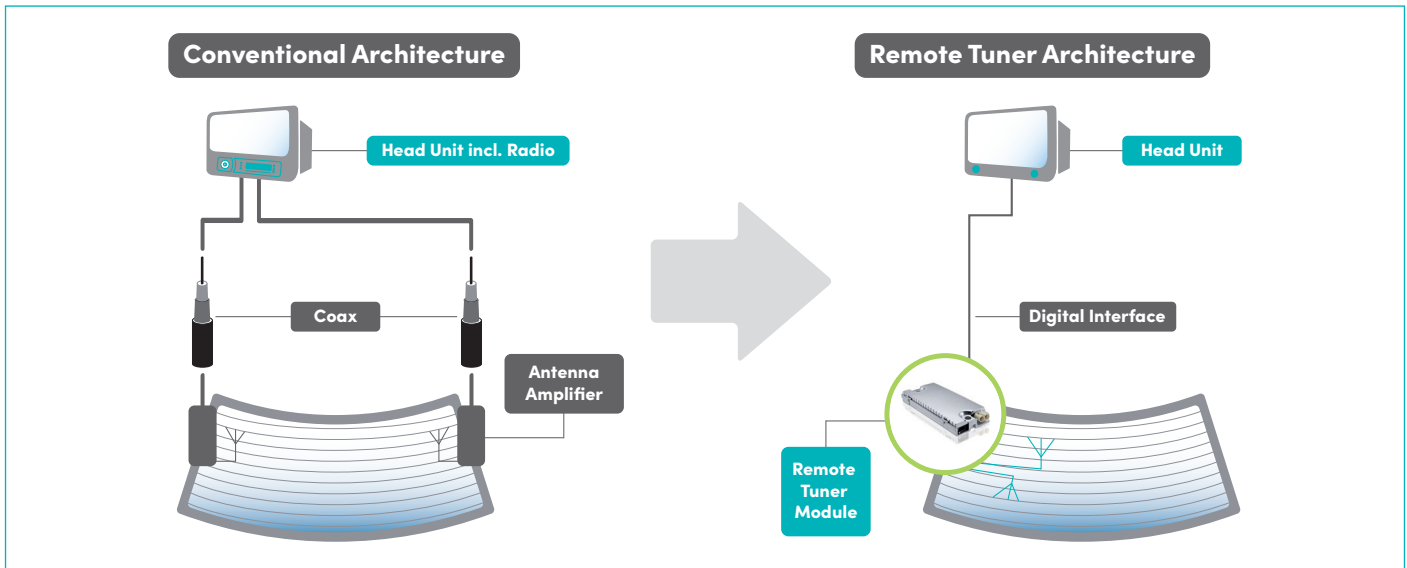
Lower System Cost

- Reduction of coaxial cables and connectors
- Reduction of antenna amplifiers
- Less expense in general assembly
- Simplified API to reduce integration time
- Plug and play principle means minimum development effort and cost

TECHNICAL BENEFITS

- Proximity to the antenna optimizes RF performance
- Resolves issues in a head unit like heat dissipation, EMI, packaging and especially part number variants
- Digital audio transmission
- Footprint similar to an antenna amplifier allows easy drop-in replacement

COMPARISON OF CONVENTIONAL AND REMOTE TUNER ARCHITECTURE



PRODUCT FEATURES

Lower System Cost

- AM, FM, DAB and HD Radio Reception
- FM Phase-Diversity, DAB MRC and HD MRC
- Seamless Linking (in Module): FM-FM, FM-DAB, DAB-DAB, FM-HD
- Data services TMC and TPEG
- Background search on dedicated tuner
- A2B Interface (Ethernet interface on request) for control, audio, data and firmware update
- Software API to control entire functionality of RTM

ANTENNA CONNECTIONS

There are several options depending on the mounting location of the RTM in the vehicle:

Standard:

- Dual FAKRA for distant antenna input

Optional:

- MQS 3pos for direct antenna input, plus
- Single FAKRA for distant antenna input

TECHNICAL DETAILS / SPECIFICATION

- Power supply input voltage 9.0 – 18.0 V
- Reverse polarity protection
- Phantom supply 8.0 – 10.0 V for distant antennas
- Integrated antenna diagnosis
- Typical power consumption 3.2 – 5.0 W w/o phantom supply, depending on variant
- Ground connection via M6 bolt with vehicle body

Operating temperature range:

-40°C to +85°C full functionality *
+85°C to +95°C reduced functionality **

IP rating: IP5K0

Weight: approx. 190 g

Dimensions: 120 mm x 54 mm x 15 mm

*) given a reliable thermal connection to the vehicle body

**) RTM may gradually turn off features to avoid overheating

In addition to the Off-the-Shelf RTM Hirschmann Car Communication offers customized solutions according to your requirements. Please contact us for more details.