BOSCH

Installation and operating instructions

Smart radiator thermostat
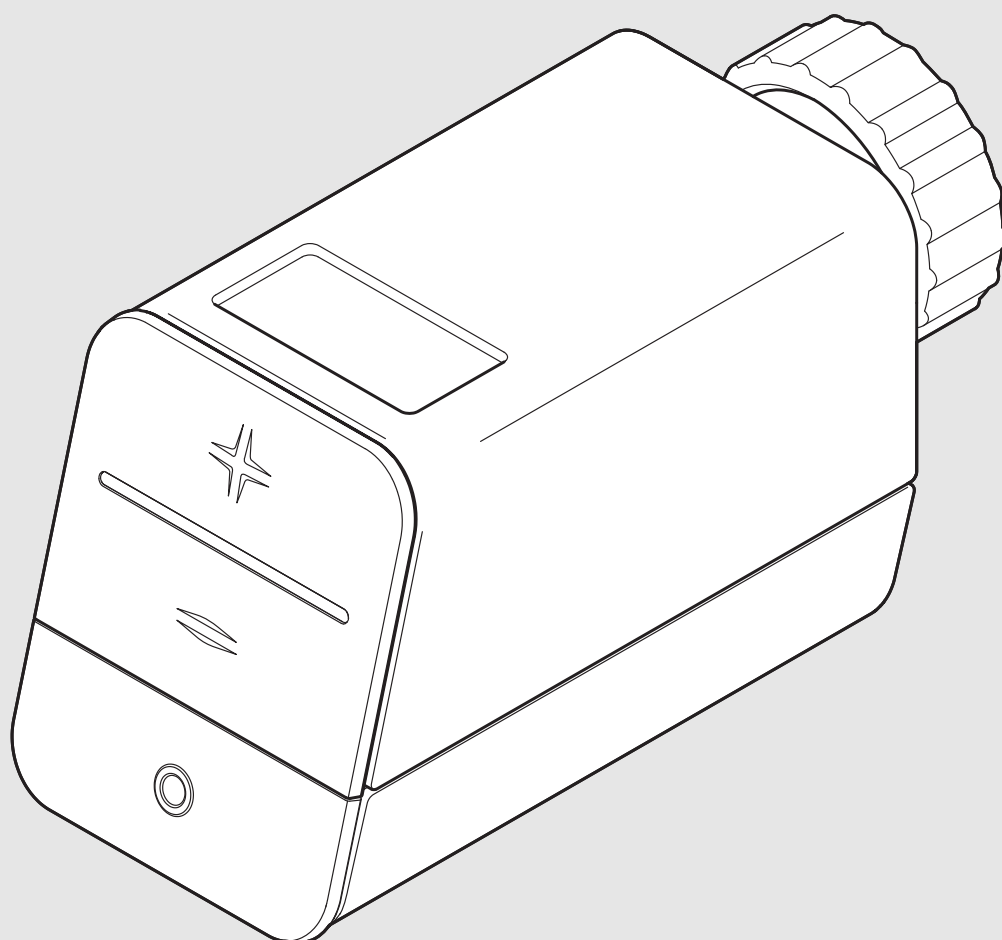# **EasyControl**

BOSCH

Table of contents

1   Explanation of symbols and safety instructions

1.1   Explanation of symbols

Warnings

In warnings, signal words at the beginning of a warning are used to indicate the type and seriousness of the ensuing risk if measures for minimising danger are not taken.

The following signal words are defined and can be used in this document:

> ⚠ **DANGER:**
>
> **DANGER** indicates that severe or life-threatening personal injury will occur.

> ⚠ **WARNING:**
>
> **WARNING** indicates that severe to life-threatening personal injury may occur.

> ⚠ **CAUTION:**
>
> **CAUTION** indicates that minor to medium personal injury may occur.

> *NOTICE:*
>
> **NOTICE** indicates that material damage may occur.

Important information

> **i**
>
> The info symbol indicates important information where there is no risk to people or property.

Additional symbols

Symbol	Meaning
▶	a step in an action sequence
→	a reference to a related part in the document
•	a list entry
–	a list entry (second level)

Table 1

1.2   Safety instructions

> ⚠ **DANGER:**
>
> **Risk of explosion when charging batteries.**
>
> The batteries supplied are not (re)chargeable. If you attempt to charge these batteries they may explode.
>
> ▶ Recycle used and empty batteries.

> ⚠ **CAUTION:**
>
> **Risk of corrosion due to leaking batteries**
>
> If the product is not in operation for several weeks, there is a risk that the batteries start leaking. The battery fluid can cause corrosion.
>
> ▶ Remove the batteries during longer periods of absence.
>
> ▶ Use a corrosion resistant means of protection when removing leaking batteries.

> ⚠ **CAUTION:**
>
> **Damage due to incorrect connection.**
>
> The device may be damaged if this product is connected incorrectly.
>
> ▶ Only have the product installed by an authorised professional.

2 Product information

2.1 EU Declaration of Conformity

CE The design and operating characteristics of this product comply with the european and national requirements. Its conformity with harmonised European standards is declared by the CE marking.

You can request the EU Declaration of Conformity for the product. See the contact address on the back cover of these instructions.

2.2 Product Description

You can set the required temperature of a room easily and precisely (to the nearest half degree) using the Control app. Thanks to the sensors integrated in the thermostat, you can quickly set a temperature in each room that is comfortable for you. A time-controlled temperature program can also be set for every room. An automatic frost protection program starts at temperatures below 4 °C. The smart radiator thermostat also regularly opens the radiator valve to prevent calcification.

2.3 Usage

The product is intended exclusively for installation on radiators (including convectors and skirting heating) indoors. To ensure the product works properly, it must be used together with the EasyControl.

▶ Make sure the product is adjusted correctly by following the safety instructions and other directions in these operating instructions and in the EasyControl app.
▶ The technical data must be taken into account.
▶ Avoid installation in areas exposed to intense sunlight or in dust-laden environments.
▶ Do not make any modifications to the product.
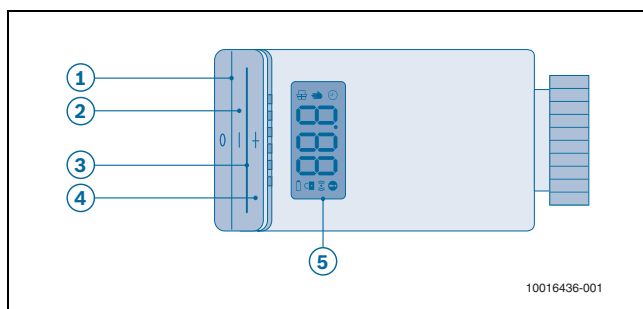
2.4 Product overview

Fig. 1

Articles	Explanation
1. Mode key "0"	Operation mode setting
2. Minus key "-"	Reduction of set temperature
3. LED display	Display of operation and fault displays
4. Plus key "+"	Increase setting temperature
5. Display	Display of settings, values, processes, operating and fault displays

Table 2

2.5 Specifications

Model of MS	Thermostat AA
Batteries	2 x LR6/AA
Battery service life	≥ 2 years
Power consumption	≤ 120 mA
Receive category	SRD category 2
Transmit frequency	868.3 MHz, 869,525 MHz
Transmit strength	≤ 10 mW
Wireless range (outdoors)	≤ 100 m
Duty cycle	@ 868.3 MHz < 1% per hour @ 869,525 MHz < 10% per hour
Radiator valve connection	M30 x 1.5 mm
Protection	IP20
Mode of operation	Type 1
Pollution degree	2
Environment temperature	0 °C to 50 °C
Humidity	5% to 80%
Dimensions (width x height x depth)	48 mm x 57 mm x 103 mm
Weight (excluding batteries)	140 g

Table 3

2.6 Wireless connection faults

Faults in the wireless connection (due to electric motors or faulty electrical appliances, for example) cannot be entirely ruled out. The transmission range indoors may deviate significantly from the transmission range outdoors. In addition to the transmitter power and receiver properties, environmental effects such as moisture and structural aspects can impair the performance of the wireless connection.
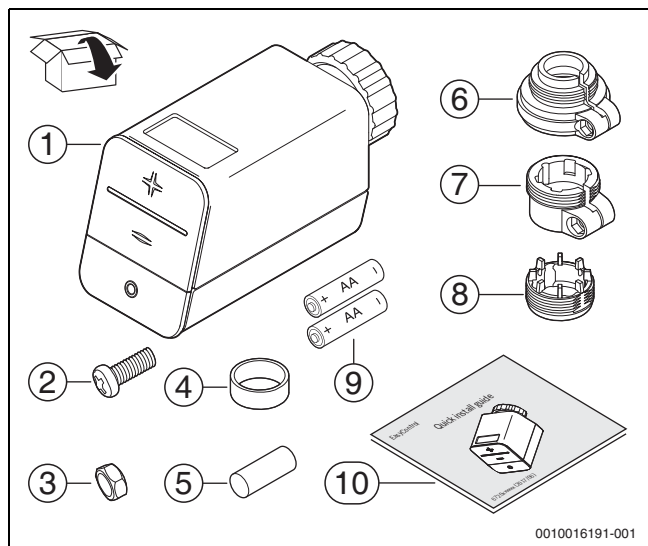
3 Installation

Fig. 2   Scope of delivery

[1]   Smart radiator thermostat
[2]   Screw
[3]   Nut
[4]   Washer
[5]   Sleeve
[6]   Danfoss RAV locking ring
[7]   Danfoss RA locking ring
[8]   Sleeve bolt
[9]   Battery
[10]   Brief installation instructions

3.1 Connection of heating water pipes

Fitting a pressure differential controller

▶ Fit a pressure differential controller if there is a possibility of the heating system fully or partially filling up.

For the type and installation location of the pressure differential controller, refer to the installation instructions for your wall mounted boiler.
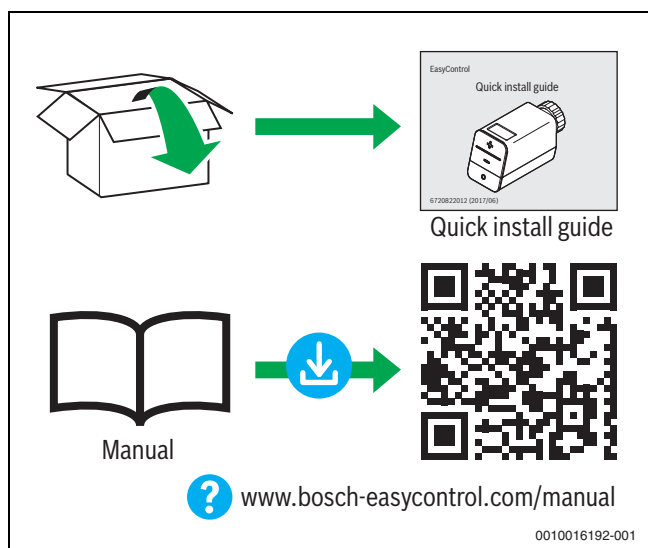
3.2 Software installation

Fig. 3

▶ Installing EasyControl.
▶ Make sure that the EasyControl and also the EasyControl app have been successfully installed.

Fig. 4

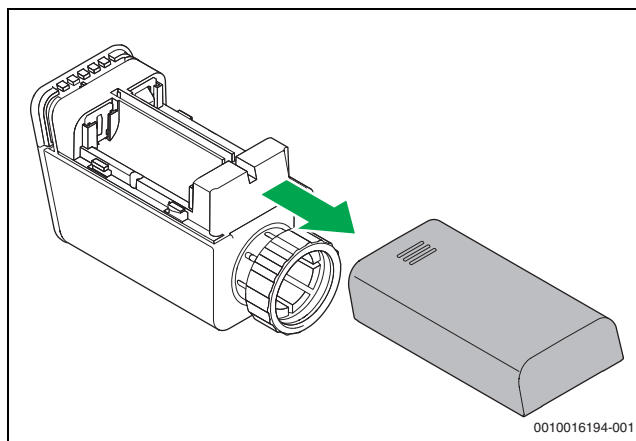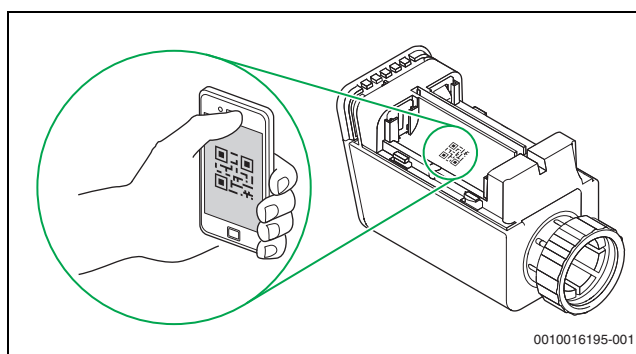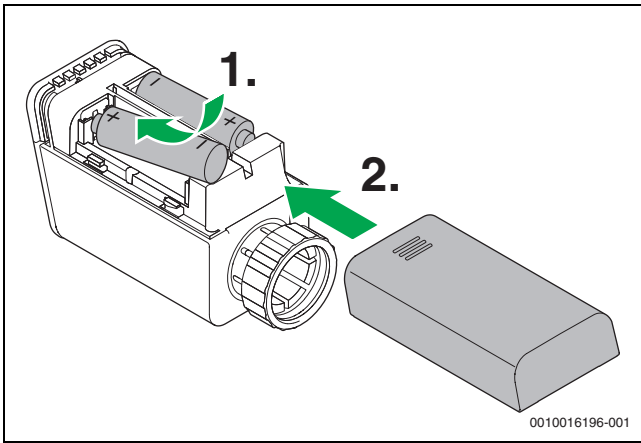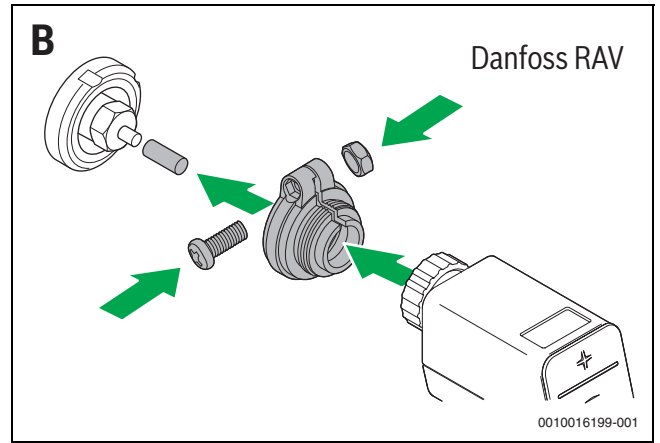### 3.3 Installing the smart radiator thermostat

Fig. 5

Fig. 6

0010016196-001

Fig. 7

www.bosch-easycontrol.com/install

1.   2.

0010016197-001

Fig. 8

A   Hemeier, Honeywell-Braukmann, Jaga,Junkers, Landis&Gyr "Duodyr", Mertik-maxitrol, MNG, Oventrop, R.B.M., Schlosser, Simplex, Tiemme, Vlaf Sanayii, Watts, Wingenroth (Wiroflex)

0010016198-001

Fig. 9

B   Danfoss RAV

0010016199-001

Fig. 10

C   Danfoss RA

0010016200-001

Fig. 11

D   Danfoss RAVL

0010016201-001
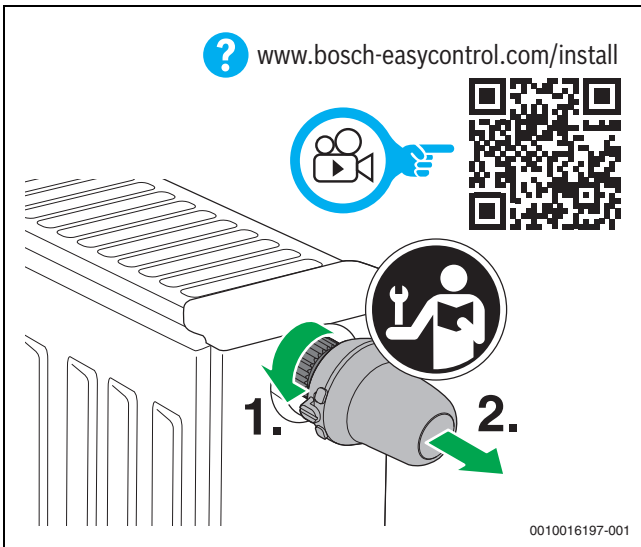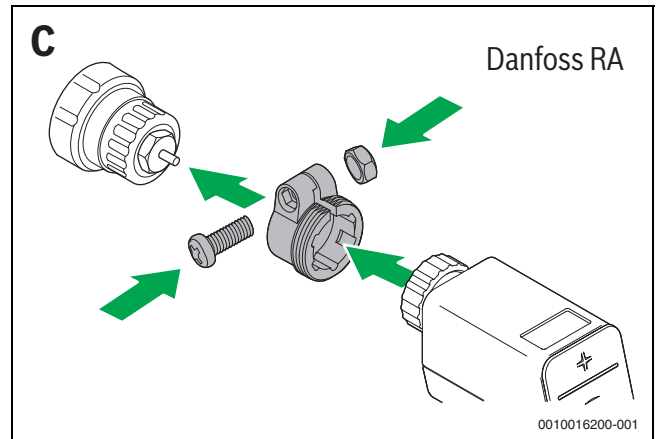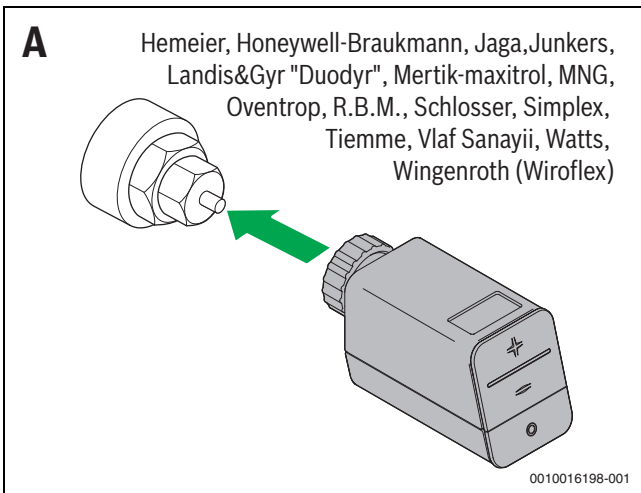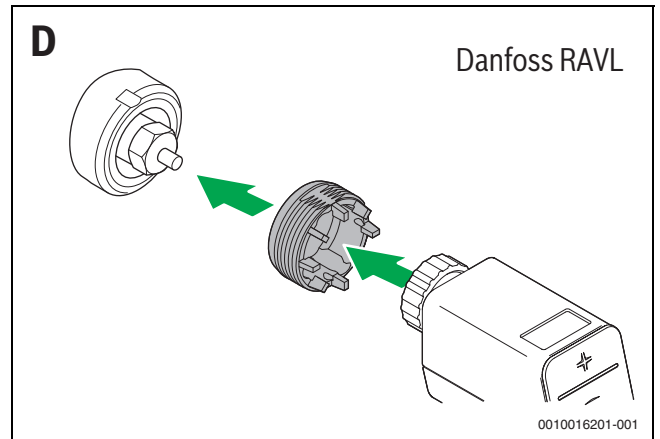
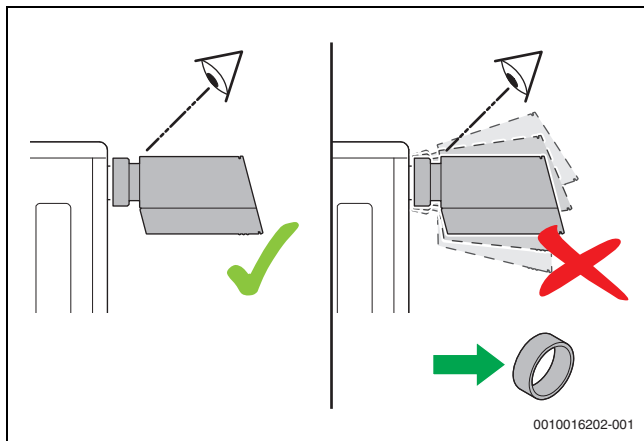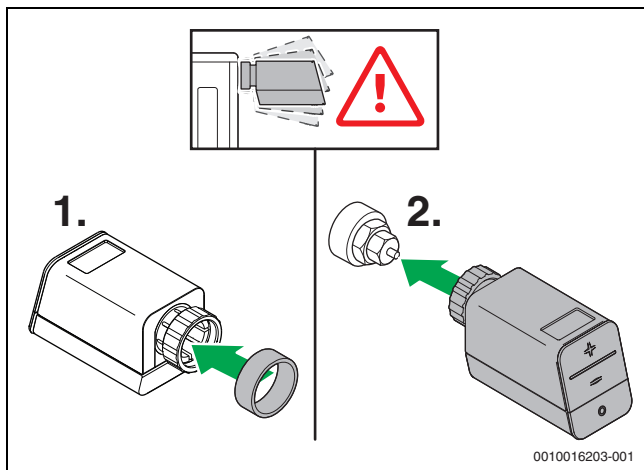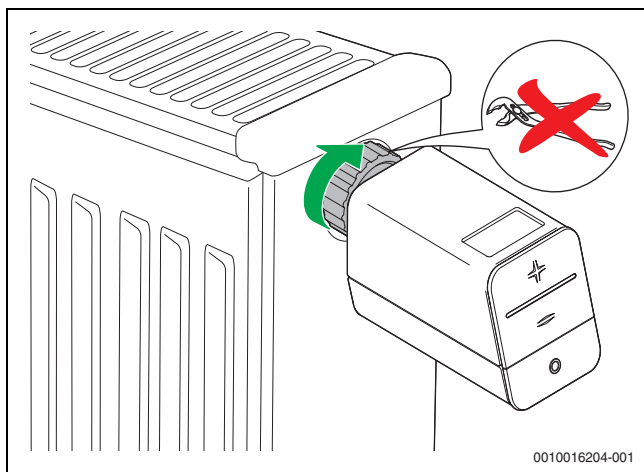*Fig. 12*

Fig. 13

Fig. 14

Fig. 15

3.4 Calibration

▶ Calibrate the smart radiator thermostat directly following installation.

▶ To do so, follow the instructions provided by the app.

The servomotor now emits a humming noise. This means the smart radiator thermostat is performing the calibration.
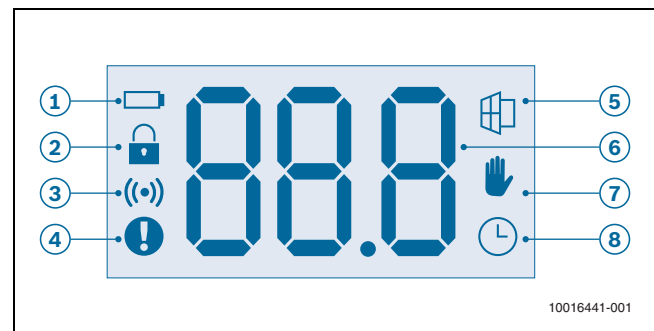
4 Operating the appliance

4.1 Display

Fig. 16

Articles	Symbol	Name	Display	Status
1		Battery status		The battery is low.
2	🔒	Parental lock		The device cannot be operated.
3	((•))	Status of wireless connection		A wireless connection exists.
4	❗	Fault display		The smart radiator thermostat is not connected to the controller.
5		Humidity sensor		The window or door is open, the radiator valve is closed.
6	88.8	Value display		
7	✋	Manual operation	Set temperature	
8	🕐	Automatic mode	Set temperature	

Table 4

4.2 Reset

If the radiator thermostat does not connect to the smart radiator thermostat, reset the room thermostat to the factory settings:

▶ Open the battery compartment.

▶ Remove one battery.

▶ Press and hold the mode key "0".

▶ Reinsert the battery.

▶ Hold down the mode key "0" and wait until "rES" appears on the display and the orange LED display flashes.

Fig. 17

▶ Briefly release the mode key "0".

▶ Hold down the mode key "0" again and wait until the display switches off and the orange LED display stops flashing.

▶ Release the mode key "0".

The factory settings of the smart radiator thermostat have been restored.

5 Environmental protection/disposal

Environmental protection is a fundamental corporate strategy of the Bosch Group.
The quality of our products, their economy and environmental safety are all of equal importance to us and all environmental protection legislation and regulations are strictly observed.
We use the best possible technology and materials for protecting the environment taking account of economic considerations.

Packaging

Where packaging is concerned, we participate in country-specific recycling processes that ensure optimum recycling.
All of our packaging materials are environmentally compatible and can be recycled.

Used appliances

Used appliances contain valuable materials that can be recycled.
The various assemblies can be easily dismantled. Synthetic materials are marked accordingly. Assemblies can therefore be sorted by composition and passed on for recycling or disposal.

Used electrical and electronic appliances

Electrical or electronic devices that are no longer serviceable must be collected separately and sent for environmentally compatible recycling (in accordance with the European Waste Electrical and Electronic Equipment Directive).

To dispose of old electrical or electronic devices, you should use the return and collection systems put in place in the country concerned.

Batteries must not be disposed together with your household waste. Used batteries must be disposed of in local collection systems.

6 List of used Open Source Components

The following open source software (OSS) components are included in this product:

core_cm3.h

Copyright (C) 2009-2013 ARM Limited. All rights reserved.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

▶Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

▶Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

▶Neither the name of ARM nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS „AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.