A Guide to RoHS Compliance at Dialogic
Scope
This document provides information about RoHS compliance for Dialogic® hardware products. RoHS applies only to the European Union (EU) and the European Economic Area (EEA).

What is RoHS?
RoHS is an acronym for the Restriction of the use of certain Hazardous Substances and originates in EU legislations. The original RoHS Directive 2002/95/EC\(^{(1)}\) came into force on 1 July 2003 and applied to most electrical and electronic equipment sold in the EU, thus encompassing Dialogic® hardware products within its scope. The original RoHS Directive has been replaced by the recast RoHS Directive 2011/65/EU\(^{(2)}\), which came into force on 2 January 2013; and Dialogic® hardware products remain within the scope of the recast Directive.

The objectives of the original RoHS Directive include(d):
- Restricting use of substances in products which are considered harmful to life or the environment
- Limiting use of these substances to applications where there are no technical or (reasonable) commercial alternatives – these applications are specified and are termed ‘RoHS exemptions’
- Minimizing these substances in the recycling and waste stream by restricting their use in products
- Ensuring a single market for electrical and electronic equipment across the EU by establishing common requirements

These objectives have been extended in the recast RoHS Directive:
- The roles and responsibilities of parties are more strictly defined
- The range of electrical and electronic equipment has been expanded
- RoHS compliance is now part of ‘CE marking’ alongside Safety and Electromagnetic Compatibility

Other countries (states in the US and provinces in Canada) are working on their own versions of RoHS-type legislation and may use other standards or terms such as ‘ewaste’ and ‘covered products’. RoHS-type systems in operation include:
- China – Electronic Information Products Decree No. 39 of 2006
- Korea – Resource Recycling Act No. 6319 of 2007

The original and recast RoHS Directives restrict 'the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)' in electrical and electronic products. For some applications for which there are no technical or (reasonable) commercial alternatives, application-specific exemptions permit the use of the restricted substances. Like other manufactures of electrical and electronic equipment, Dialogic uses permitted exemptions in its products. For ongoing compliance, Dialogic monitors expiry dates of exemptions and updates its products accordingly.
**Products which Dialogic ships in the EU, and January 2013 Directive changes**

Two changes came into effect relating to the original RoHS Directive in January 2013:

- Two RoHS exemptions 7ciii) & 11b) expired - some Dialogic® hardware products used these
- The recast RoHS Directive brought RoHS compliance under the CE marking regulations

Dialogic® hardware products which have been placed on the EU market and are currently in the EU distribution channel comply with the original RoHS Directive 2002/95/EC (27 January 2003) and may continue to be sold by distributors.

Dialogic® hardware products manufactured and distributed in the European Union (EU) after 2 January 2013 do not use the expired exemptions, are CE marked and comply with the requirements of the recast RoHS Directive (2011/65/EU).

**Identifying Compliant Dialogic® Products**

The main RoHS exemption which applies to electrical and electronic products and is still permitted is exemption 7b) - ‘Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications’. In the industry, products which use this exemption are termed RoHS 5/6 and products which do not use this exemption are termed RoHS 6/6 – note that these terms do not exist in the original or recast RoHS Directive (see Appendix below for further details).

The following currently shipping (i.e., shipping as of the date of publication of the current version of this document) Dialogic® hardware products use the permitted EU RoHS exemption 7b) – RoHS 5/6:

- Dialogic® CG 6060 Series Media Boards
- Dialogic® CG 6565 PCI Media Boards
- Dialogic® I-Gate® 4000 EDGE Media Gateway
- Dialogic® I-Gate® 4000 PRO Media Gateway
- Dialogic® ControlSwitch™ System (x4270 servers with I-Gate 4000 PRO or I-Gate 4000 EDGE)

Some currently shipping (i.e. shipping as of the date of publication of the current version of this document) Dialogic® hardware products have a "W" in their product names and/or product codes to identify them as using exemption 7b), including the following:

- Dialogic® 1000 Media Gateway Series (DMG1000)
- Dialogic® HMP Interface Boards (DNI Boards)
- Dialogic® JCT Media Boards

At least the following currently shipping (i.e., shipping as of the date of publication of this document) Dialogic® hardware products do not use the exemption 7b) – RoHS 6/6:

- Dialogic® Brooktrout® TR1034 Fax Boards
- Dialogic® Brooktrout® TruFax® Fax Boards
- Dialogic® CG 6565C CompactPCI Media Boards
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- Dialogic® CG 6565E PCI Express Media Boards
- Dialogic® Diva® Media Boards
- Dialogic® DN12410AMCTEHMP Digital Network Interface Board
- Dialogic® Eiconcard™ Serial Protocol Adapters
- Dialogic® I-Gate® 4000 Session Bandwidth Optimizer Backhaul (SBO-MB)
- Dialogic® I-Gate® 4000 Session Bandwidth Optimizer Backhaul (SBO-MBX)
- Dialogic® I-Gate® 4000 Session Bandwidth Optimizer Core (SBO-CX)
- Dialogic® I-Gate® 4000 SIP Gateway
- Dialogic® BorderNet™ 2020 Session Border Controller
- Dialogic® BorderNet™ 4000 Session Border Controller
- Dialogic® Integrated Media Gateways (IMG)
- Dialogic® 4000 Media Gateway Series
- Dialogic® TX 5000E PCI Express SS7 Boards

Some currently shipping (i.e., shipping as of the date of publication of the current version this document) Dialogic® hardware products have a “Q” in their product names and/or product codes to identify them as not using exemption 7b), including the following:

- Dialogic® 2000 Media Gateway Series (DMG2000)
- Dialogic® HMP Interface Boards (DNI Boards)
- Dialogic® Digital Signaling Interface (DSI) Components

Should you have any questions about which specific Dialogic® hardware products fall within which of the above categories, or regarding compliance of Dialogic hardware products with the original RoHS Directive or recast RoHS Directive, please contact EnvironmentalTeam@dialogic.com for assistance. You can find your local Dialogic contact information at www.dialogic.com/contact.

RoHS Declaration
EU Declarations of Conformity for products, including the recast RoHS, are available on the Dialogic website at http://www.dialogic.com/products/others/declarations.aspx. To find the Declaration of Compliance needed, select the product and country from the pull-down menus.

Dialogic has systems in place to verify conformance with applicable environmental requirements and to the best of Dialogic’s reasonable knowledge as of the date of publication of this document, the information set forth herein is true and correct.

Non-RoHS Product
Dialogic has some products which do not comply with the recast RoHS Directive (2011/65/EU); these products complied with the original RoHS Directive, but were not updated to comply with the recast. These products have the letter “N” as the last character in the part number, e.g., 99-001-001N. They are not intended for sale in the European Union or the European Economic Area.
Appendix . Definition and Declaration

RoHS Definition
The original and recast RoHS Directives restrict the use of six substances in electrical and electronic equipment at homogeneous material level (i.e., the point where an item cannot be mechanically separated further):

- Cadmium (Cd) – (0.01% by mass ie 100 PPM)
- Hexavalent chromium (Cr [VI]) – (0.1% by mass ie 1000 PPM)
- Lead (Pb) – (0.1% by mass ie 1000 PPM)
- Mercury (Hg) – (0.1% by mass ie 1000 PPM)
- Polybrominated biphenyls (PBB) – (0.1% by mass ie 1000 PPM)
- Polybrominated diphenyl ethers (PBDE) – (0.1% by mass ie 1000 PPM)

Based on Dialogic's understanding of the RoHS requirements as of the date of publication of the current version of this document, restricted substances are either (1) below all applicable substance thresholds as defined by the EU or (2) an approved exemption applies.

RoHS 5/6 and RoHS 6/6

Although not formally adopted by the EU legislation or by any recognized standards organization, RoHS 5/6 and RoHS 6/6 are abbreviations commonly used in the industry to designate components or products that comply with the RoHS directive in the following manner:

- RoHS 5/6 – used to identify products or components that meet substance limits with exemption 7b), with or without other exemptions
- RoHS 6/6 – used to identify products or components that meet substance limits without use of exemption 7b), with or without other exemptions

For more information about the recast RoHS Directive, please see the EU website at the following link:
http://ec.europa.eu/environment/waste/rohs_eee/

References
(2) DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment
(3) RoHS Exemption 7ciii) Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC
(4) RoHS Exemption 11b) Lead in other than C-press compliant pin connector systems
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Date of Publication: 14 June 2013