Material Compliance Declaration

EU RoHS, REACH Article 33 and REACH Annex XVII

Product	Ethernet FMC 2.5V
Part number	OP031-2V5
Description	4-port Gigabit Ethernet FPGA Mezzanine Card, LPC connector, RGMII interfaces, 2.5 V I/O
Product status	Active
Builds covered	serial numbers 312280 to 312409 (production bill of materials dated 2025-07-02)
Document number	MCD-OP031-2V5-20260917
Issue date	2026-09-17
Supersedes	Every earlier Opsero declaration for this product on the same subjects
Issued by	Opsero Electronic Design Inc., 8890 rue d'Urfé, Québec, QC G1G 6J5, Canada
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1. EU RoHS: Directive 2011/65/EU as amended by Delegated Directive (EU) 2015/863

Status: Compliant with exemption

The product does not contain any of the substances restricted by Annex II of the Directive above the maximum concentration value tolerated by weight in any homogeneous material, other than in the applications covered by the Annex III exemptions listed below, which are relied upon.

Restricted substance	Maximum concentration in homogeneous material
Lead (Pb)	0.1 %
Mercury (Hg)	0.1 %
Cadmium (Cd)	0.01 %
Hexavalent chromium (Cr VI)	0.1 %
Polybrominated biphenyls (PBB)	0.1 %
Polybrominated diphenyl ethers (PBDE)	0.1 %
Bis(2-ethylhexyl) phthalate (DEHP)	0.1 %
Butyl benzyl phthalate (BBP)	0.1 %
Dibutyl phthalate (DBP)	0.1 %
Diisobutyl phthalate (DIBP)	0.1 %

Annex III exemptions relied upon

Exemption	Annex III wording	Components concerned
6(c)	Copper alloy containing up to 4 % lead by weight	Harwin R25-1001002

2. REACH Regulation (EC) No 1907/2006, Article 33: substances of very high concern

Status: Contains a substance of very high concern at or above 0.1 % w/w in an article

Assessed against the Candidate List of substances of very high concern for authorisation published by the European Chemicals Agency, version of 04 February 2026 (253 entries), confirmed current at echa.europa.eu/candidate-list-table on 17 September 2026.

Following the judgment of the Court of Justice of the European Union in case C-106/14, the 0.1 % weight-by-weight threshold is applied to each article as incorporated in the product and not to the product as a whole. A substance is therefore declared whenever it exceeds 0.1 % of any component, even where its share of the complete product is far below 0.1 %.

Substance	CAS	EC	Concentration	Article and location
Lead	7439-92-1	231-100-4	at or above 0.1% w/w (Harwin states only that it exceeds the threshold; no figure given)	Base material - brass; component Harwin R25-1001002

Information for safe use (Article 33(1))

Lead (CAS 7439-92-1): The lead is present as an alloying element in the metal of a machined mounting spacer. It is bound in the alloy and is not released in normal use; no special measures are needed during installation, operation or storage. At end of life the product is to be treated as waste electrical and electronic equipment and not disposed of in general waste.

3. REACH Regulation (EC) No 1907/2006, Annex XVII: restrictions

Status: No restricted substance in a use that meets a condition of restriction

Assessed against Annex XVII of Regulation (EC) No 1907/2006 in the consolidated text of 22 June 2026 (02006R1907-20260622), entries 1 to 83, as last amended by Regulation (EU) 2026/859 (entry 83) and Regulation (EU) 2026/1168 (entry 78).

No substance present in the product is in a use that meets a condition of restriction in Annex XVII.

4. Other EU regulations

Regulation	Status	Basis
Persistent Organic Pollutants, Regulation (EU) 2019/1021	Compliant	No substance listed in Annex I of Regulation (EU) 2019/1021 is specified or intentionally used. Manufacturer POPs non-use statements are held for the FMC connector, the Ethernet PHYs, the crystal, the MOSFET and the mounting spacer; whole-board laboratory tests of the bare printed circuit board report all PBB and PBDE congeners, HBCDD and short-chain chlorinated paraffins not detected; every remaining component is declared RoHS compliant and free of REACH Candidate List substances above 0.1 %, a list that includes HBCDD, SCCPs, PFOA, PFHxS, Dechlorane Plus and UV-328, or is inorganic. No analytical test for PFOA or PFHxS at the Annex I trace limits has been performed.
Ozone-Depleting Substances, Regulation (EU) 2024/590	Compliant	The product is a printed circuit board assembly. It contains no refrigerant, foam, aerosol, solvent, propellant or fire-suppression agent and no component that contains one, so no Annex I or Annex II substance of Regulation (EU) 2024/590 is present. Manufacturer ODS statements are held for the FMC connector and the MOSFET.
Fluorinated Greenhouse Gases, Regulation (EU) 2024/573	Compliant	The product contains no fluorinated greenhouse gas of Annexes I to III of Regulation (EU) 2024/573. It has no refrigeration, air-conditioning, heat pump, fire-protection, foam, aerosol, solvent or electrical switchgear function and no component that is filled with, insulated by or relies on a fluorinated gas.
Mercury, Regulation (EU) 2017/852	Compliant	No mercury-added product within Annex II of Regulation (EU) 2017/852 is used: no switch, relay, lamp, battery, sensor or measuring device. Mercury is RoHS-restricted and every component and the assembly process are declared below 0.1 % in each homogeneous material. Whole-board tests of the bare printed circuit board report mercury not detected at a 2 mg/kg detection limit.
Radioactive substances, Directive 2013/59/Euratom	Compliant	No radioactive source and no intentionally added radionuclide. The product contains no gas discharge tube, thoriated electrode, radioluminescent, ionising or other component type that carries one.

Biocidal Products, Regulation (EU) No 528/2012	Compliant	The product is neither a biocidal product nor a treated article within Article 3(1)(l) of Regulation (EU) No 528/2012. No biocidal active substance is incorporated in or applied to it, no antimicrobial treatment or claim is made, no conformal coating, adhesive or potting is used, and the assembly process uses SAC305 solder paste only.

5. Per- and polyfluoroalkyl substances (PFAS)

No PFAS is specified in the design and, to Opsero's knowledge, none is intentionally used: the product contains no fluoropolymer part, fluorinated coating or fluorinated lubricant. Manufacturer PFAS statements are held for the FMC connector and the crystal. The bare printed circuit board was screened by an accredited laboratory against the REACH Candidate List, which includes PFOA, PFHxS and the C9-C14 perfluorocarboxylic acids, with none detected. Opsero has identified no PFAS-containing material and is not aware of any non-compliance with the PFAS restrictions currently in force (REACH Annex XVII entries 68 and 82, and the POPs Regulation listings of PFOA, PFOS and PFHxS). The product has not been tested for total fluorine or for PFAS. Opsero will assess the product against the universal PFAS restriction under REACH when it is adopted and its scope and transition periods are known.

6. Basis of this declaration

This declaration was compiled component by component from the declarations of the component manufacturers for every part fitted on the production bill of materials of the builds listed above (20 unique fitted parts), including the bare printed circuit board (fabricator laboratory test reports) and the assembly materials. No product-level analytical testing has been carried out. The supporting documents are held on file by Opsero Electronic Design Inc. and can be provided on request, subject to any confidentiality terms of the issuing manufacturer.

The declaration reflects the information available on the issue date. It is reissued after a change to the Candidate List or to Annex XVII that affects the product, or a change to the bill of materials; the current version for every product is published at opsero.com. It is made in good faith on the basis of supplier information and does not extend any warranty beyond the statements it contains.

Declared on behalf of Opsero Electronic Design Inc. by

Jeffrey Johnson
Electronically signed by typed name

Jeffrey Johnson, President
Opsero Electronic Design Inc., 17 September 2026