

Product Environmental Profile

Harmony Industrial PC





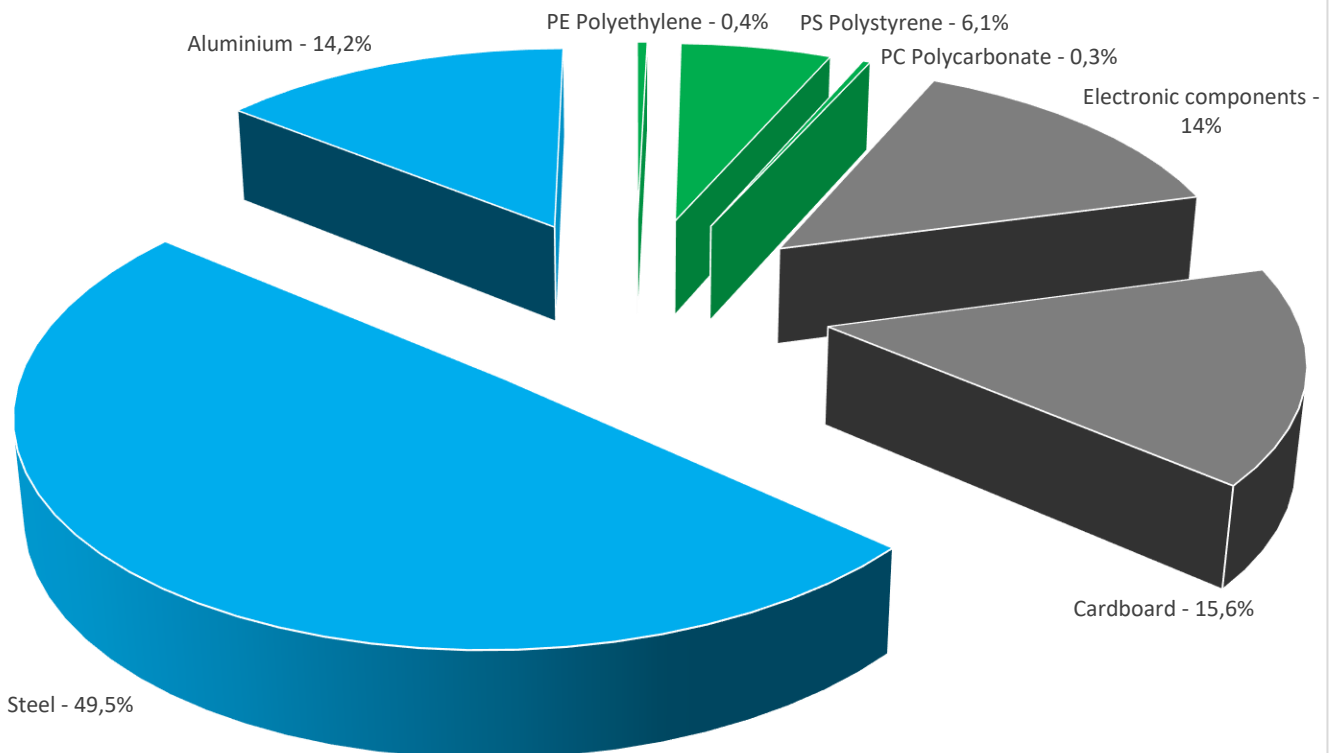
General information

Representative product	Harmony Industrial PC - HMIBSCEA53D1L0T
Description of the product	IIoT Edge Box Core eMMC DC Linux TPM
Description of the range	<p>Harmony iPCs (formerly known as Magelis iPC) and Edge Box run at the Edge Control level of Ecostruxure, the Schneider Electric IIoT architecture. They enable secured communication from shop floor to IT, improving profitability and offering new business opportunities through enhanced asset performance for more efficient operation and maintenance of capital assets. They offer smart application design and engineering to leverage asset performance, with end-to-end cybersecurity.</p> <p>The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.</p>
Functional unit	Harmony iPC and Edge Box offer an Industrial design, operating within a 0-55°C temperature range for 10 years and consuming 15,8W/5,2W in active/standby mode.



Constituent materials

Reference product mass 1197 g including the product, its packaging and additional elements and accessories



Plastics	6.4%
Metals	63.7%
Others	29.6%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>

Additional environmental information

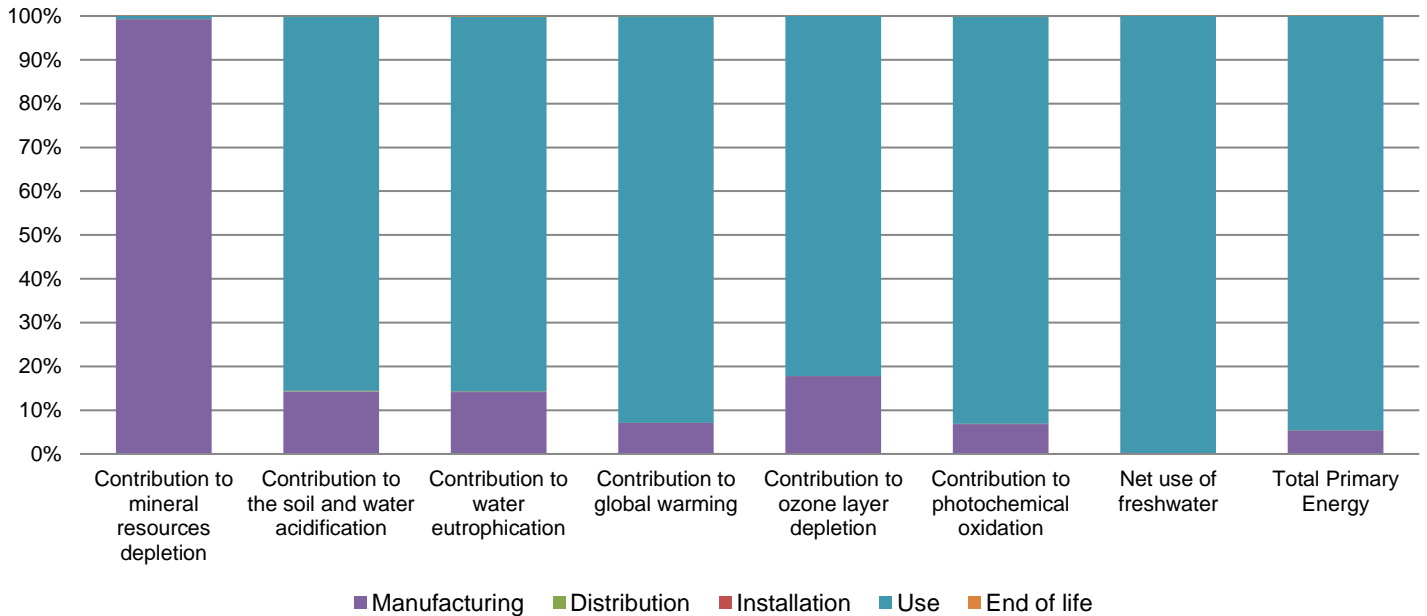
The Harmony Industrial PC presents the following relevant environmental aspects

Manufacturing	Manufactured at a production site complying with the regulations
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 263,2 g, consisting of Cardboard (72%), polystyrene (28%) Product distribution optimised by setting up local distribution centres
Use	1 Battery BR2032 to be changed every 5 years
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains Battery (1,2g), electronic card (170g) that should be separated from the stream of waste so as to optimize end-of-life treatment. The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: 77% Based on "ECO'DEEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental impacts

Reference life time	10 years			
Product category	Other equipments - Active product			
Installation elements	cable, connectors, screws			
Use scenario	The product is in active mode 55% of the time with a power use of 15,8W and in idle phase 45% of the time with a power use of 5,19W for 10 years.			
Geographical representativeness	Europe, US, Asia			
Technological representativeness	IIoT Edge Box Core eMMC DC Linux TPM			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Taiwan	Electricity mix; AC; consumption mix, at consumer; 100V; JP	Electricity mix; AC; consumption mix, at consumer; 100V; JP	Electricity mix; AC; consumption mix, at consumer; 100V; JP

Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.48E-03	2.46E-03	0*	0*	1.82E-05	0*
Contribution to the soil and water acidification	kg SO ₂ eq	4.98E-01	7.09E-02	7.05E-04	7.20E-05	4.26E-01	3.63E-04
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1.10E-01	1.55E-02	1.62E-04	4.00E-05	9.41E-02	1.35E-04
Contribution to global warming	kg CO ₂ eq	4.41E+02	3.13E+01	1.54E-01	0*	4.09E+02	3.51E-01
Contribution to ozone layer depletion	kg CFC11 eq	8.87E-05	1.58E-05	0*	0*	7.28E-05	1.41E-08
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	7.27E-02	4.98E-03	5.03E-05	0*	6.77E-02	3.45E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	6.80E+02	1.08E-01	0*	0*	6.80E+02	0*
Total Primary Energy	MJ	7.49E+03	4.00E+02	2.18E+00	0*	7.08E+03	1.69E+00



Optional indicators	Harmony Industrial PC - HMIBSCEA53D1L0T						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	4.65E+03	3.51E+02	2.17E+00	0*	4.29E+03	1.37E+00
Contribution to air pollution	m ³	2.92E+04	1.99E+03	6.57E+00	0*	2.72E+04	1.20E+01
Contribution to water pollution	m ³	2.78E+04	4.08E+03	2.54E+01	0*	2.37E+04	1.93E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	5.70E-01	5.70E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	5.11E+02	5.72E+00	0*	0*	5.05E+02	0*
Total use of non-renewable primary energy resources	MJ	6.98E+03	3.94E+02	2.18E+00	0*	6.58E+03	1.69E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	5.07E+02	1.88E+00	0*	0*	5.05E+02	0*
Use of renewable primary energy resources used as raw material	MJ	3.84E+00	3.84E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6.97E+03	3.88E+02	2.18E+00	0*	6.58E+03	1.69E+00
Use of non renewable primary energy resources used as raw material	MJ	5.95E+00	5.95E+00	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life

Hazardous waste disposed	kg	1.42E+01	4.65E+00	0*	0*	8.18E+00	1.39E+00
Non hazardous waste disposed	kg	1.20E+02	1.33E+01	0*	6.28E-02	1.06E+02	0*
Radioactive waste disposed	kg	8.91E-01	9.99E-03	0*	0*	8.81E-01	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.07E+00	1.07E-01	0*	2.07E-01	0*	7.51E-01
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	7.98E-02	0*	0*	0*	0*	7.98E-02
Exported Energy	MJ	8.53E-03	8.00E-03	0*	5.33E-04	0*	0*

* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.8.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

Depending on the impact analysis and with exception of the mineral resource depletion indicator, other environmental indicators of other products in this family may be proportionnal extrapolated by energy consumption values.

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

Registration number	ENVPEP2003021_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	03/2020		
Validity period	5 years	Information and reference documents	www.pep-ecopassport.org
Independent verification of the declaration and data			
Internal	X	External	
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »			

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