Barco ecoscore questionnaire

This questionnaire is used to calculate the Barco ecoscore of a device. Please try to complete as many questions as possible.
Give a description of what has been implemented in the device in the column 'Explanation/remarks'.
If a question is not applicable to the device, fill in 'Not applicable', and add the arguments.

BARCO

Topic	Question	Answer	Explanation/remarks
General			
Identification			
	Model		
	Description of the device or component		
	Intended use		
	CDP_Specs Provided		
	Reference product		
Energy			
Power supply efficiency			
	What is the efficiency level of the external power supply according to the Energystar standard? (e.g. Level VI)		
	What is the efficiency of the internal power supply at 100% loading conditions? (in %)		
	What is the power factor of the internal power supply at 100% loading condition?		
Energy efficiency			
	What is the power consumption in normal/active mode per delivered capability or standardized testing methodology (e.g. W/lm & color spectrum)?		
Standby mode/off mode			
	Is there a standby mode?		
	If yes, what is the power consumption in standby mode? (W)		
	Is there a networked standby mode? (= a mode in which the product can be activated remotely)		
	If yes, what is the power consumption in networked standby mode? (W)		
	Is there an off mode?		
	If yes, what is the power consumption in off mode? (W)		
Power management function			
	Is there a power management function? Describe (that brings the device automatically into standby mode when no content is shown)		
	Is the power management function activated by default? Not applicable for RPC (Rear Projection Cube)		
Materials			
Full material declaration			
	Are Full Material Declarations available from suppliers? Critiria: % of components coverd by BOM. Or, is info on critical raw materials (CRM) provided & Barco Substance list declared		
Halogens in PCBs and Cables			
	Does the device contain halogen-free PCB's? If yes, how many of the PCB's are halogen-free? (w/w or %)		
	Does the device contain halogen-free cables? (internal and/or external cables, if country specific power cable is shipped this can be excluded from calculation) If yes, how many of the cables are halogen-free? (w/w or %)		
Halogen-free plastics			
	Are the plastic parts weighing >25g halogen-free (= free of halogenated flame retardants?)		
Product weight			
	What is the weight of the product (kg)		
	Has specific effort been done to reduce the weight of the product compared to the reference product? Describe		
Recycled material			
	Does the product contain recycled plastics?		
	If yes, what is the amount of postconsumer or postindustrial recycled plastic? (weight recycled plastic/weight total plastic or %)		
	Does the device contain recycled metals in the housing and or base frame exceeding UNEP rates: Aluminum, steel, etc.		
Packaging & Logistics			
Optimized product packaging design			
	What is the total weight of the packaging material?		
	Fill in the packed weight (kg) and the outer dimensions in the sheet 'Packaging' (include device, packaging, accessories, etc.)		
Optimized packaging incoming goods for assembly			
	Are relevant parts for assembly delivered in bulk (to Barco) (no individual packaging) or reusable packaging.		
Logistics/stacking			
	Is the packaging design optimized for a standard pallet (e.g.: 1200x800)?		
	How many % of the pallet surface is used?		
	Have specific actions been taken to optimize transport? Is the packaging optimized for sea freight? (stacking height, etc.) see QAM_PAC01: Describe		
Recyclability			
	List all packaging materials with their respective weights in sheet 'Packaging'		
	Can all packaging materials easily be separated? (without the use of tools)		
	The employed materials results in mass weight average material ecopoint score <58		
Recycled content			
	How many % of the cardboard is recycled cardboard?		
	Are manuals printed on recycled paper?		
Number of accessories in the box			
	Which accessories will be included in the box? (cables, manuals, etc.)		
End of life optimization - Circular economy			
Lifetime extension			
	How many years warranty/service contract are guaranteed?		
	How many years will spare parts be available after end-of-life?		
	MTBF assessment at equipment level available		
Repairability: service model			
	Will the product be repaired? If yes, can the repair of critical components be done on-site?		
	Will the device be connected for service and/or predictive maintenance? (NA if in conflict with safety or data protection regulations)		
	No restrictions against second hand / remanufactured service components (data protect, compliancy or regulatory exemption are NA)		
Repairability: Spare parts			
	Which spare parts are available?		
	Is the list of spare parts and the process to order spare parts visible on the website? Can repair and maintenance information be accessed by a professional repairer?		
Design for disassembly/repair			
	Can the housing, chassis and critical parts be removed with commonly available tools? How many tools are needed? (Critical parts: PCB's, Batteries, LCD, Lamps, Power supplies, Fans, Cables)		
	Are PCB(A) assemblies potted?		
	WEEE recycling passport available on free accessible website (External PSU, charger and AC Adapters are exempted from the disassembly instructions)		
Modularity/Upgradeability			
	Is modularity in electronic components maximized? This by using discrete building blocks that are part of a common platform or family, or this by using building blocks that are genericly interchangeable. >50% number based of product building blocks shall fit this definition		
	Are building blocks or software features that are subjected to rapid technological changes or changes in use profiles, updatable? This should result in enhancement of the functionality, performance, capacity or esthetics of an end-product. At least 2 impact criteria (see tab impact criteria) shall be checked to apply this definition		
	How many years will latest firmware be available after end-of-life?		
Material type			
	Which plastic types are used in the enclosure and chassis?		
	Are plastic parts weighing >25g marked according to ISO 11469 & ISO 1043 1-4? (e.g. <ABS-FR(52)>)		
	Are housing/enclosure parts painted/coated? (paint is allowed for recycled content plastics and metals or coating for EMI purposes)		

Company name	
Name of responsible	
Function title	
Signature	
Date	

Packaging dimensions		
Width (mm)		
Length (mm)		
Height (mm)		
Volumetric weight (kg) (calculation)	0	
Product weight (kg)		
Packed weight (kg) (product + accessories + packaging)		
%	calculation: vol weight vs packed weight	

List all packaging materials		
(List all packaging materials, select a material and fill in the weight)		
Description	**Material**	**Kg**
example 1	PET	1
example 2	Other (define in description)	0,5
Total		**1,5**

Definitions	Requirements
ECO mode	A condition when the device consumes less energy than in one mode on user initiative (to reduce energy consumption, to increase lifetime of the lamp/LCD)
Energy efficiency external power supplies	Energy efficiency according to the International Efficiency Marking Protocol for External Power Supplies (Version 3.0, September 2013)
Full Material Declaration	A full material disclosure/declaration is a list of all substances present in the product with their respective mass or concentration.
Halogen-free	For printed circuit boards (as defined in IEC 61249-2-21) • < 900 ppm Chlorine • < 900 ppm bromine • < 1500 ppm total halogens For components other than printed circuit boards: Each plastic within the component must must contain • < 1000 ppm (0.1%) of Bromine (Br), and • < 1000 ppm (0.1%) of Chlorine (Cl)
Networked standby	A condition in which the equipment is able to resume a function by way of a remotely initiated trigger from a network connection
Off mode	A condition in which the equipment is connected to the mains power source and is not providing any function;the following shall also be considered as off mode: - conditions providing only an indication of off-mode condition - conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC
Plastic marking according to ISO 14469 & ISO 1043 1-4?	ISO 11469:2016: Generic identification and marking of plastic products ISO 1403:2011: Plastics - Symbols and abbreviated terms - 1403-1: Part 1: Basic polymers and their special characteristics - 1403-2: Part 2: Fillers and reinforcing materials - 1403-3: Part 3: Plasticizers - 1403-4: Part 4: Flame retardants
Upgrade	Process of enhancing the functionality, performance, capacity or aesthetics of a product
Power factor	The ratio of the real power consumed in Watts to the apparent, or reactive, power drawn in volt amperes
Power management function	When equipment is not providing a main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition having networked standby/standby.
Standard tools for dismantling	Tools most commonly used for repair purposes in general that are readily available for purchase by any individual or business without restrictions
Standby mode	A condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time - reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or - information or status display

PSU certification									
80 PLUS Certification		115V Internal Non-Redundant				115V Industrial			
% of Rated Load	10%	20%	50%	100%	10%	25%	50%	100%
80 PLUS	---	80%	80%	80% / PFC .90			---		
80 PLUS Bronze	---	82%	85% / PFC .90	82%			---		
80 PLUS Silver	---	85%	88% / PFC .90	85%	80%	85% / PFC .90	88%	85%
80 PLUS Gold	---	87%	90% / PFC .90	87%	82%	87% / PFC .90	90%	87%
80 PLUS Platinum	---	90%	92% / PFC .95	89%	85%	90% / PFC .95	92%	90%
80 PLUS Titanium	90%	92% / PFC .95	94%	90%			---		

80 PLUS Certification		230V EU Internal Non-Redundant				230V Internal Redundant			
% of Rated Load	10%	20%	50%	100%	10%	20%	50%	100%
80 PLUS	---	82%	85% / PFC .90	82%			---		
80 PLUS Bronze	---	85%	88% / PFC .90	85%	---	81%	85% / PFC .90	81%
80 PLUS Silver	---	87%	90% / PFC .90	87%	---	85%	89% / PFC .90	85%
80 PLUS Gold	---	90%	92% / PFC .90	89%	---	88%	92% / PFC .90	88%
80 PLUS Platinum	---	92%	94% / PFC .90	90%	---	90%	94% / PFC .95	91%
80 PLUS Titanium	90%	94% / PFC .95	96%	94%	90%	94% / PFC .95	96%	91%

CA T20, Title 20 Appliance efficiency Regulations section	https://govt.westlaw.com/calregs/Document/IEEDE2D64EF7B4F168C0E85379828A8C2
TCO On mode projectors	Initiate the projector to present a default test image, full screen bright white picture, RGB settings 255, 255, 255 (100% image loading) on the reported maximum projected screen size Amax/office or Amax/video. Allow the projector to remain in this mode until stable energy readings are measured. Measurements are considered stable if the wattage reading does not vary by more than 1% for the duration of a three-minute period.

$A_{Max/video}$	On Mode (normal operation)
≤ 6.6 m²	≤ 260 W
≤ 13.3 m²	≤ 310 W
> 13.3 m²	≤ 310+150*(A_{max}- 13.3) W

UNEP rates	

Expert	If a repair, re-use, upgrade process can be carried out by a person with specific training and/or experience related to the product category concerned, the process is categorized as feasible for an expert.
Authorized expert	Person who is directly trained and audited by the manufacturer.
Bulk	Products or parts packed (min 2) togheter into one overall bulk packaging. Singel use bulk packaging shall contain less packaging material vs single unit packaging.
Access to critical parts	Physical access to prioirty parts (EN45554) and its fasteners or Barco defined spare parts, allowing the operator to remove the part for repair, upgrade or re-use.
firmware updates available	Availability of latest firmware update during the product lifetime. This does not to require mandatory firmware updates of the product is running stable or end of life.
Loosely Glued	Materials glued together shall be eastly removable by applying reasonable amount of force in order to separate the two materials for collective recycling. Separation shall be possible without the use of tools or the need of protective equipment.
Optimized Stacking	The product packing has been designed taking into account stacking of identical and or different articles for air, truck and see fright. The box has been labeled accordingly to facilitate stacking by the fright forwarder according the QAM Packaging 2.3.2 published on https://www.barco.com/en/about-barco/legal/terms-and-conditions
Reusable packing	Packaging that is re-used to transport the same type of goods at least twice without impairment of its protective function.