No.: ETN24B00009 Date: 19-Dec-2024

WEEE Disassembly Manual

Zyxel Communication Corporation
No.2, Industry East Rd. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan

The following sample(s) was/were submitted and identified by the applicant as :

Sample Submitted By : Zyxel Communication Corporation
Type of Product : GPON Bridge ONT with 2.5GbE LAN
Style/Item No. : PM5313-00

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Sample Receiving Date : 12-Nov-2024

CONCLUSION:

The GPON Bridge ONT with 2.5GbE LAN is classified as Category 6 under Annex Ⅲ & IV of Directive 2012/19/EU WEEE (recast). The following table shows the WEEE (recast) Directive compliance conclusion.

Assessment / Item	Re-use/Recycled Rate (%)	Recovered Rate (%)
Result of Assessment	75.55	86.90
Minimum Recovery targets under WEEE (recast) Directive Annex V	55	75
WEEE (recast) requirement compliance	PASS	PASS
Disassembly time (sec.)	43	

Yvonne Wu, Ph.D. / Asst. Manager
Signed for and on behalf of
SGS TAIWAN LTD.

CHECK REPORT

PIN CODE: 0C4EF088

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1. Product Information

The product is a GPON Bridge ONT with 2.5GbE LAN. The weight of this product excluding package is 133.0848g. The appearance of the product is as follows:

Top

Left

Front

Right

Back

Bottom

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2. Product Composition

The composition and weight of each part is described as follows:

Part Name	Composition	Weight (g)	Percent (%)
Plastic case, Plastic piece, Label	Plastic	75.5293	56.75
Screw	Metal	1.1932	0.90
Electronic component	Mix	7.7530	5.82
PCBA	PCBA	48.6093	36.53
Total		133.0848	100.00

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3. Disassembly Procedure

3.1 Flow Chart for Disassembly Procedure

The disassembly procedure taken here is in accordance with the treatment requirements under the Annex VII of the WEEE (recast) Directive. In addition to considering economic and efficiency factors, manual operation and disassembly tools have been applied to separate the components and materials from this product in order to simulate the scenario at the treatment facility, and to achieve the objective that the separated components and materials can be re-use, recycled and recovered.

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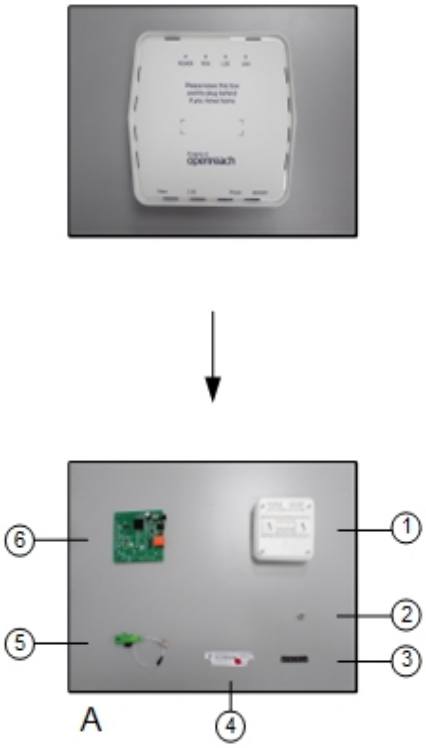

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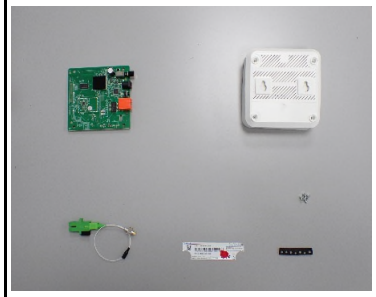
3.2 Component and Material Composition

The material declaration for this product, the disassembly tools and the disassembly time are described in the following table.

Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
A		1	Plastic case		Plastic	75.1761	Solder, Snap, Adhesive, Screw	Star Screwdriver, Slanted pliers, Knife	43	-
		2	Screw		Metal	1.1932				
		3	Plastic piece		Plastic	0.1490				
		4	Label		Plastic	0.2042				

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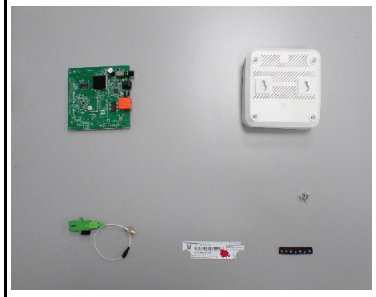
Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
A		5	Electronic component		Mix	7.7530	-	-	-	No.6 is a PCBA. The surface of No.6 is greater than 10 square centimeters. According to WEEE (recast) directive, No.6 requires selective treatment.
		6	PCBA		PCBA	48.6093				

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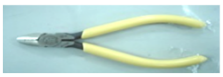
3.3 Disassembly Tool

The disassembly tool used for this product shows in the following table.

Disassembly Tool	Picture
Star Screwdriver	
Slanted pliers	
Knife	

3.4 Connection Technology

For this product, the connection technology including is as follows:

Connector Tech.	Number
Solder	8
Snap	3
Adhesive	3
Screw	4

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4. Re-use / Recycled Rate and Recovered Rate Assessment

The re-use / recycled rate and recovered rate assessment for this product is based upon the waste treatment technologies and equipment that are most frequently available to the market. The following table is the result of the assessment.

Part Name	Composition	Re-use/ Recycled Rate (%)*	Energy Recovery Rate (%)*	Recovered Rate (%)*
Plastic case, Plastic piece, Label	Plastic	42.57	11.35	53.92
Screw	Metal	0.85	-	0.85
Electronic component	Mix	2.91	-	2.91
PCBA	PCBA	29.22	-	29.22
Total		75.55	11.35	86.90

*: the percentages are based on the total device weight.

Note:

The results of Re-use / Recycled Rate and Recovered Rate

$$\textbf{Re-use / Recycled Rate (\%)} = \frac{\text{Re-use / Recycled Weight}}{\text{Product Total Weight}} * 100\%$$

$$\textbf{Recovered Rate (\%)} = \frac{\text{(Re-use / Recycled Weight + Energy Recovery Weight)}}{\text{Product Total Weight}} * 100\%$$

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5. WEEE (recast) Directive Compliance

5.1 Selective Treatment for Materials and Components

This product contains component and material items, listed in Annex VII of the WEEE (recast) Directive, that require selective treatment for materials and components of waste electrical and electronic equipment in accordance with Article 8. They are described in the following table.

Component/Material	Photo No.
Printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimeters	6

5.2 Re-use / Recycled Rate and Recovered Rate Assessment

Assessment / Item	Re-use/Recycled Rate (%)	Recovered Rate (%)
Result of Assessment	75.55	86.90
Minimum Recovery targets under WEEE (recast) Directive Annex V	55	75
WEEE (recast) requirement compliance	PASS	PASS
Disassembly time (sec.)	43	

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5.3 Selective Treatment for Material and Components of Waste Electrical and Electronic Equipment (Annex VII of WEEE (recast) Directive)

- Printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimeters
- Batteries
- External electric cables
- Liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimeters and all those back-lighted with gas discharge lamps
- Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)
- Mercury containing components, such as switches or backlighting lamps
- Plastic containing brominated flame retardants
- Polychlorinated biphenyls (PCB) containing capacitors
- Toner cartridges, liquid and pasty, as well as colour toner
- Asbestos waste and components which contain asbestos
- Cathode ray tubes
- Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC)
- Gas discharge lamps
- Components containing refractory ceramic fibers
- Components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation

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