

WEEE Disassembly Manual

NUUO INC.

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TAIWAN (R. O. C.)

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

Sample Submitted By : NUUO INC.
 Type of Product : NVRsolo
 Style/Item No. : NS-2040 (NS-2XXX, NVS-2XXX, NS-2XX0,
 NVS-2XX0, X=EVEN NUMBER)
 Sample Receiving Date : 2014/06/27



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CONCLUSION:

The NVRsolo is classified as Category 3 under Annex I & II of Directive 2012/19/EU WEEE (recast). The following table shows the WEEE (recast) Directive compliance conclusion.

Assessment Item	Recycled Rate (%)	Recovered Rate (%)
Result of Assessment	91.60	92.19
Minimum Recovery targets under WEEE (recast) Directive Annex V (2012/8/13 ~ 2015/8/14)	65	75
WEEE (recast) requirement compliance	PASS	PASS
Disassembly time (sec)	186	

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Signed for and on behalf of
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1. Product Information

The product is a NVRsolo. The weight of this product excluding package is 2483.7706 g.The appearance of the product is as follows:



2. Product Composition

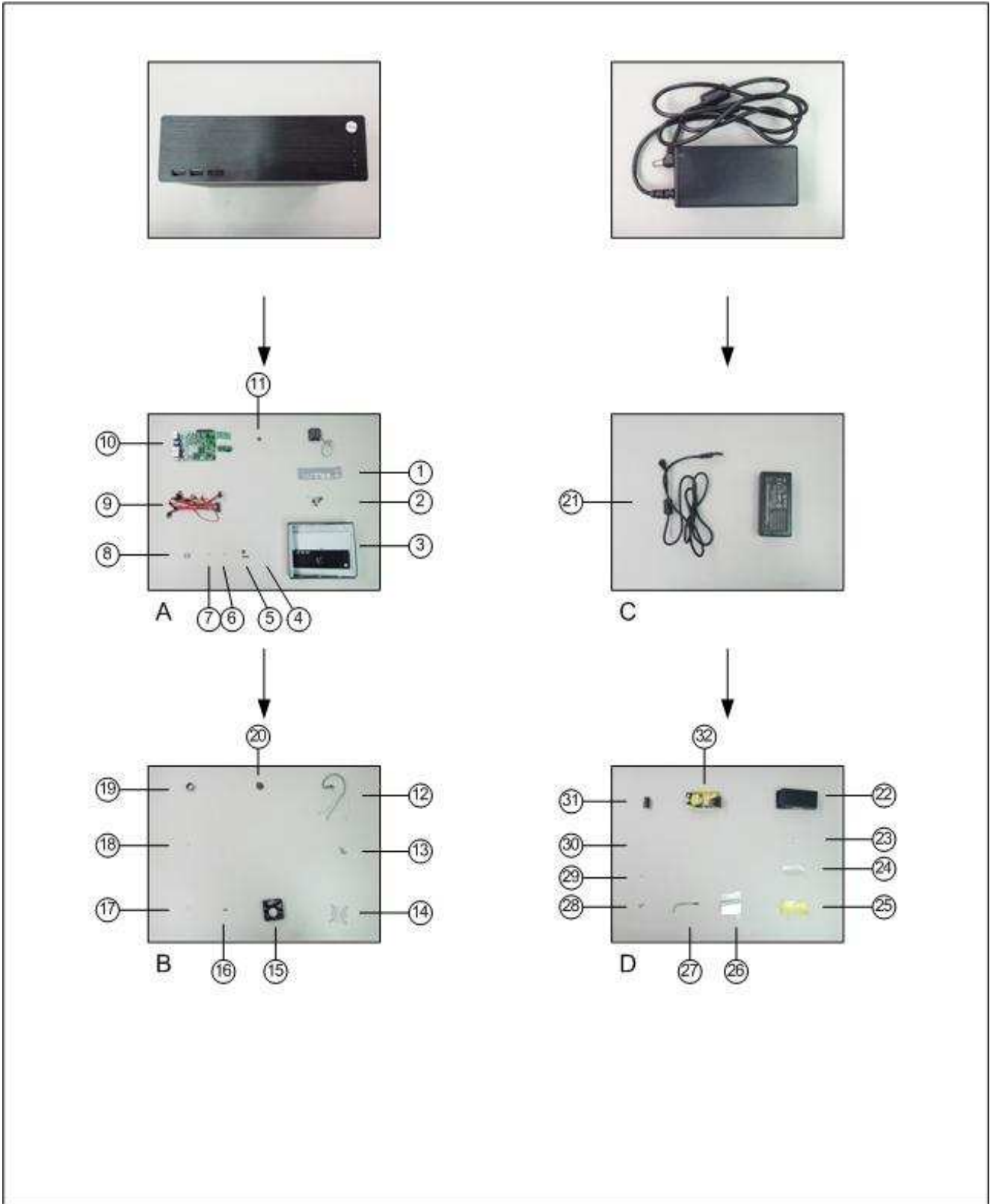
The composition and weight of each part is described as follows:

Part Name	Composition	Weight (g)	Percent (%)
Tape, Plastic case, Plastic piece, Plastic pad	Plastic	72.63	2.92
Screw, Metal case, Spring, Metal piece	Metal	1937.4706	78.01
PCBA	PCBA	356.50	14.35
Wire, Power cord	Cable/wire	104.35	4.20
Capacitor	Capacitor	12.82	0.52
Total		2483.7706	100.00

3. Disassembly Procedure






3.1 Flow Chart for Disassembly Procedure

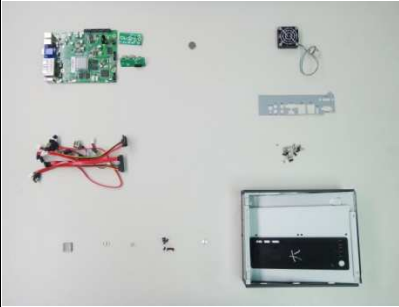



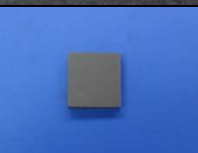

The disassembly procedure taken here is in accordance with the treatment requirements under the Annex VII of the WEEE (recast) Directive. In addition to considering economic and efficiency factors, manual operation and disassembly tools have been applied to separate the components and materials from 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 reused, recycled and recovered.

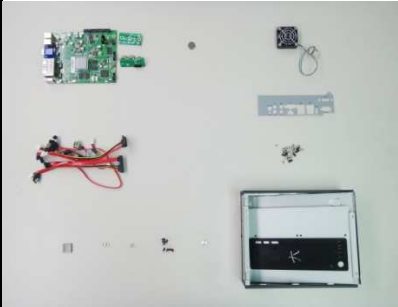



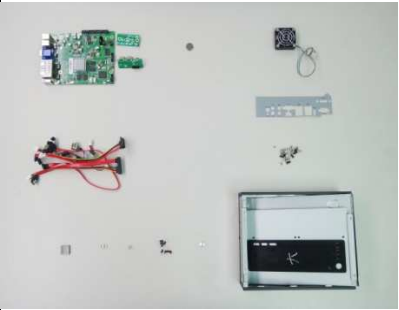

3.2 Component and Material Composition

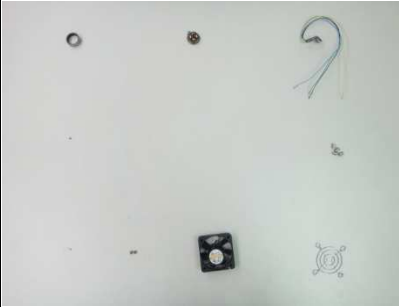





The material declaration for this product, the disassembly tools and the disassembly time are described in the following table.

Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
A		1	Tape		Plastic	2.70	Snap, Adhesive, Screw	Screwdriver, Slanted pliers	131	-
		2	Screw		Metal	15.97				
		3	Metal case		Metal	1900.00				
		4	Plastic case		Plastic	0.20				



Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
A		5	Plastic piece		Plastic	1.48	-	-	-	-
		6	Spring		Metal	0.14				
		7	Metal piece		Metal	0.82				
		8	Plastic pad		Plastic	3.27				
		9	Wire		Cable/wire	76.20				







Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
A		10	PCBA		PCBA	227.20	-	-	-	Part 10 is a PCBA. The surface of part 10 is greater than 10 square centimeters. According to WEEE (recast) directive, part 10 requires selective treatment.







No.	Picture	Part					Disassembly			Remark
		No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
A		11	Cell battery		Battery	2.82	-	-	-	Part 11 is a battery. According to WEEE (recast) directive, part 11 requires selective treatment.



No.	Picture	Part					Disassembly			Remark
		No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
B		12	Wire		Cable/wire	2.41	Solder, Screw	Screwdriver, Slanted pliers, Knife	22	-
		13	Screw		Metal	2.47				
		14	Metal piece		Metal	6.44				
		15	Plastic piece		Plastic	15.31				
		16	Metal piece		Metal	0.42				

No.	Picture	Part				Disassembly			Remark	
		No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool		Time (s.)
B		17	Metal piece		Metal	0.2706	-	-	-	-
		18	Screw		Metal	0.01				
		19	Metal piece		Metal	4.43				
		20	PCBA		PCBA	3.70				

Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
C		21	Power cord		Cable/wire	24.20	Solder	Slanted pliers	6	Part 21 is an external cable. According to WEEE (recast) directive, part 21 requires selective treatment.






Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
D		22	Plastic case		Plastic	46.90	Solder, Adhesive, Screw	Screwdriver, Lever, Slanted pliers, Hammer	27	-
		23	Plastic pad		Plastic	1.16				
		24	Tape		Plastic	0.84				
		25	Tape		Plastic	0.69				
		26	Metal piece		Metal	4.29				

Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
D		27	Wire		Cable/wire	1.54	-	-	-	Part 31 is an electrolyte capacitor. According to WEEE (recast) directive, part 31 requires selective treatment.
		28	Screw		Metal	1.23				
		29	Metal piece		Metal	0.98				
		30	Plastic piece		Plastic	0.08				
		31	Capacitor		Capacitor	12.82				

Procedure		Part					Disassembly			Remark
No.	Picture	No.	Name	Picture	Material	Weight (g)	Connection Technique	Tool	Time (s.)	
D		32	PCBA		PCBA	125.60	-	-	-	Part 32 is a PCBA. The surface of part 32 is greater than 10 square centimeters. According to WEEE (recast) directive, part 32 requires selective treatment.

3.3 Disassembly Tool

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

Disassembly Tool	Picture
Screwdriver	
Lever	
Slanted pliers	
Hammer	
Knife	

3.4 Connection Technology

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

Connector Tech.	Number
Solder	8
Snap	12
Adhesive	9
Screw	36

4. Reuse / Recycling / Recovery Assessment

The reuse, recycling and recovery 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	Recycled Rate (%)*	Energy Recovery Rate (%)*	Recovered Rate (%)*
Tape, Plastic case, Plastic piece, Plastic pad	Plastic	2.19	0.59	2.78
Screw, Metal case, Spring, Metal piece	Metal	74.10	-	74.10
PCBA	PCBA	11.48	-	11.48
Wire, Power cord	Cable/wire	3.57	-	3.57
Capacitor	Capacitor	0.26	-	0.26
Total		91.60	0.59	92.19

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

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.
Battery	11
External electric cable	21
Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	31
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	10, 32

5.2 Reuse/Recycling/Recovery Assessment

Assessment Item	Recycled Rate (%)	Recovered Rate (%)
Result of Assessment	91.60	92.19
Minimum Recovery targets under WEEE (recast) Directive Annex V (2012/8/13 ~ 2015/8/14)	65	75
WEEE (recast) requirement compliance	PASS	PASS
Disassembly time (sec.)	186	

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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