







Product name:		U1252B Digital Multimeter	
			
Description: Handheld digital multimeter to scope voltages, currents, resistance, and ect. Display ✓ Main display is 5-digit liquid crystal display(LCD) with maximum reading of 50,000 counts Power Consumption ✓ 165 mVA/480 mVA(with backlight usage) maximum Manufacturer : Agilent Technologies			
Characteristics:			
Mass:		0.95 kg	
Outline dimensions: (w x h x l)		210 x 53 x 95 mm	
Connector type:		M2511, 16A, 250V~	
➤ Non military purpose ➤ No Pyrotechnics			
Contents:			
➤ U 1252B Multimeter ➤ Test leads and probes for multimeter ➤ U 1170 Power code (RHC-240025-6, 10A, 250V~)			
Serial numbers:		U1252B, MY51240096	
Approval:		Signature / stamp:	
Date:			
Name:			


Product name:		Exso EX-611B antistatic wrist strap
		
Description: Antistatic wrist strap used to safely ground in use of sensitive electronic equipment.		
Characteristics:		
Mass:	0.033 kg	
Outline dimensions: (w x h x l)	80 x 5 x 20 mm	
Connector type:	crocodile clip	
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 		
Contents:		
<ul style="list-style-type: none"> ➤ Wrist strap - 2pcs 		
Serial numbers:	EX-611 B(1), EX-611 B(2)	
Approval:	Signature / stamp:	
Date:		
Name:		

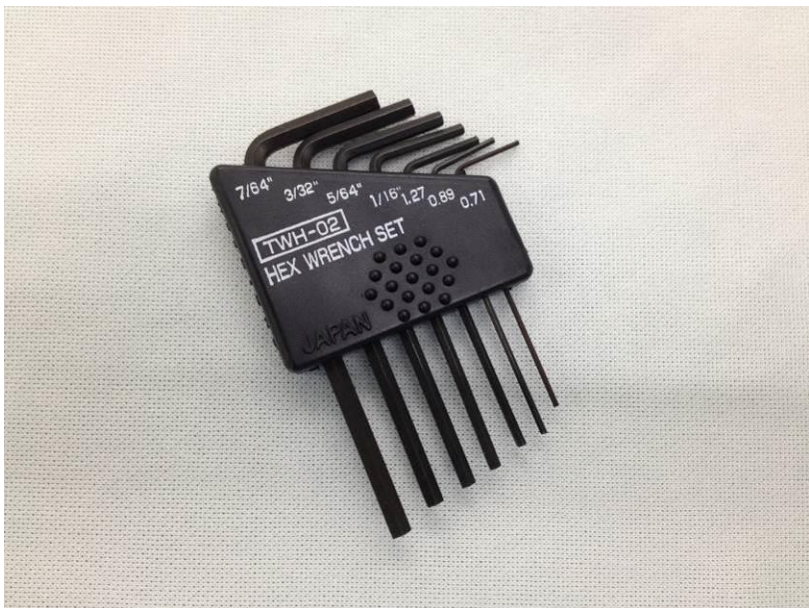
Product name:	Small Nipper		
			
Description: It is a nipper to cut wires. It is quite small to work in narrow area like cubesat. It is made by SESHIN, KOREA. Material of the small nipper is stainless steel + rubber.			
Characteristics:			
Mass:	0.069 kg		
Outline dimensions: (w x h x l)	112 x 92 x 11 mm		
Connector type:			
➤ Non military purpose ➤ No Pyrotechnics			
Contents:			
➤ Nipper – 1pc			
Serial numbers:	S6		
Approval:	Signature / stamp:		
Date:			
Name:			


Product name:	Long Nose Plier		
			
Description: It is a long nose plier to cut and grab wires. It has a long feature so it can reach to things in narrow area. It is usually used with the nipper. It is made by LOBSTER, JAPAN. Material of the long nose plier is stainless steel + rubber.			
Characteristics:			
Mass:	0.123 kg		
Outline dimensions: (w x h x l)	162 x 49 x 10 mm		
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents:			
<ul style="list-style-type: none"> ➤ Long nose plier – 1pc 			
Serial numbers:	TMP150		
Approval:	Signature / stamp: 		
Date:			
Name:			


Product name:	Set of tweezers		
			
Description: It is tweezers to pick small things up. There are a variety tweezers to be used in proper area. It can help user easily pick and put things and we have 4 tweezers. It is made by AVEN, USA. Material of the tweezers is stainless steel.			
Characteristics:			
Mass:	0.06 kg (total)		
Outline dimensions: (w x h x l)	Written below		
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents: <ul style="list-style-type: none"> ➤ 112 x 9 x 9 mm, 0.013 kg, serial No : 5SA, 14 euro – 1pc ➤ 123 x 11 x 10 mm, 0.021 kg, serial No : OODSA, 14 euro – 1pc ➤ 109 x 9 x 9 mm, 0.01 kg, serial No : 3CSA, 14 euro – 1pc ➤ 120 x 9 x 16 mm, 0.016 kg, serial No : 7SA, 14 euro – 1pc ➤ Total quantity : 4 			
Serial numbers:	5SA, OODSA, 3CSA, 7SA		
Approval:	Signature / stamp: 		
Date:			
Name:			


Product name:		Hex Key Set	
			
Description: It is hex driver to tighten screws. It is inch standard. There are so many screws on our cubesat so it is so important tool. It is made by Pro`sKit Material of the hex driver is stainless steel + plastic.			
Characteristics:			
Mass:		0.854 kg	
Outline dimensions: (w x h x l)		Written below	
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents: <ul style="list-style-type: none"> ➤ Inches 15 Piece ➤ Metric 15 Piece 			
Serial numbers :		8PK-027	
Approval:		Signature / stamp:	
Date:			
Name:			


Product name:	Long Screw-Driver		
			
Description: It is long hex driver to tighten screws. It is enough long to be into small hall to reach screws It is made by VESSEL, JAPAN. Material of the long hex driver is stainless steel + plastic.			
Characteristics:			
Mass:	0.019 kg		
Outline dimensions: (w x h x l)	240 x 13 x 13 mm		
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents:			
<ul style="list-style-type: none"> ➤ Long hex driver – 1pc 			
Serial numbers:	P.O-150		
Approval:	Signature / stamp: 		
Date:			
Name:			


Product name:	Small Set of Hexes		
			
Description: It is small set of hex wrench set to tighten socket screws. There are many socket screws in our cubesat and the inside of the cubesat is so narrow. It can use there. It is made by ENGINEER, JAPAN. Material of the small set of hexes is stainless steel. The mount is plastic			
Characteristics:			
Mass:	0.014 kg		
Outline dimensions: (w x h x l)	56 x 43 x 8 mm		
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents: <ul style="list-style-type: none"> ➤ Wrench 7/64 inch size – 1pc ➤ Wrench 3/32 inch size – 1pc ➤ Wrench 5/64 inch size – 1pc ➤ Wrench 1/16 inch size – 1pc ➤ Wrench 1.27 inch size – 1pc ➤ Wrench 0.89 inch size – 1pc ➤ Wrench 0.71 inch size – 1pc ➤ Total quantity : 7 			
Serial numbers:	TWH - 02		
Approval:	Signature / stamp: 		
Date:			
Name:			


Product name:		Vernier Calipers	
			
Description: It is a vernier calipers to measure things for mechanic. It can be used for measure of depth, thickness and so on. It is made by MITUTOYO, JAPAN. Material of the vernier calipers is stainless steel and plastic			
Characteristics:			
Mass:		0.475 kg	
Outline dimensions: (w x h x l)		340 x 140 x 35 mm	
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents:			
<ul style="list-style-type: none"> ➤ Vernier calipers – 1pc 			
Serial numbers:		10362750	
Approval:		Signature / stamp: 	
Date:			
Name:			

Product name:		Set of Torque Wrenches	
			
Description: It is set of torque wrenches to tighten screws in proper torque. It is made by UTICA, USA Material of the set of torque wrench is stainless steel, and the case is plastic.			
Characteristics:			
Mass:		0.619 kg	
Outline dimensions: (w x h x l)		210 x 180 x 63 mm	
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents: <ul style="list-style-type: none"> ➤ Torque wrench – 1pcs ➤ Long neck (+)driver, size 0 – 2pc ➤ Short neck (+)driver, size 0 – 1pc ➤ Short neck (+)driver, size 1 – 1pc ➤ Long neck socket wrench, size 7/64 – 1pc ➤ Long neck socket wrench, size 1/16 – 1pc ➤ Short neck socket wrench, size 0.035 – 1pc ➤ Short neck socket wrench, size 0.028 – 1pc ➤ Short neck socket wrench, size 5/64 – 1pc ➤ Short neck socket wrench, size 1/16 – 1pc ➤ Short neck socket wrench, size 0.05 – 1pc ➤ Total quantity : 12 			
Serial numbers:		KT-100	
Approval:		Signature / stamp:	
Date:			
Name:			

Product name:	Vertical Integration Support Jig		
			
Description: Vertical support jig for CubeSat structure. 2 fixed clamps and 2 adjustable POM clamps (to prevent damage to structure). Used for mounting external payload on CubeSats, functional test of satellite systems and environmental testing of satellites. ESD protection of structure through additional ESD cable			
Characteristics:			
Mass:	0.677 kg		
Outline dimensions: (w x h x l)	200 x 120 x 200 mm (assembled)		
Connector type:			
➤ Non military purpose ➤ No Pyrotechnics			
Contents:			
➤ Vertical Integration Support Jig			
Serial numbers:		VISJ	
Approval:		Signature / stamp:	
Date:			
Name:			

Product name:		Dyneema Thread	
			
Description: It is a roll of dyneema thread. It is made by XIYUECHUPIN, China. It is used for spare burn-wire of CubeSat antenna.			
Characteristics:			
Mass:		0.054 kg	
Outline dimensions:		R60	
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents:			
<ul style="list-style-type: none"> ➤ Dyneema Thread (1 roll) 			
Serial numbers:			
Approval:		Signature / stamp:	
Date:			
Name:			

Product name:	TNT USB 3.0 AM to BM Cable		
			
Description: It is a USB 3.0 cable made by NetMate It is used for communication between CubeSat and a laptop during functional test of satellite systems and environmental testing of satellites.			
Characteristics:			
Mass:	0.055 kg		
Outline dimensions: (w x h x l)			
Connector type:	USB 3.0 Standard-A, Standard-B		
➤ Non military purpose ➤ No Pyrotechnics			
Contents:			
➤ TNT USB 3.0 AM to BM Cable			
Serial numbers:			
Approval:		Signature / stamp:	
Date:			
Name:			

Product name:	Personal Laptop		
			
Description: These are laptops and made by GIGABYTE. Used for functional test of satellite systems of satellites.			
Characteristics:			
Mass:	3.2 kg		
Outline dimensions: (w x d x h)	413 x 275.5 x 45 mm		
Connector type:			
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents:			
<ul style="list-style-type: none"> ➤ Laptop (GIGABYTE P272K) ➤ Power Adaptor 			
Serial numbers:			
Approval:		Signature / stamp:	
Date:			
Name:			

Product name:	AC/DC Switching Adaptor
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Description:
AC/DC Switching adaptor for switching the AC voltage to the DC voltage. Power Consumption : 20 W max It is made by MeanWell


Characteristics:	
Mass:	0.393 kg
Outline dimensions: (w x h x l)	
Connector type:	CEE 7/16, 60Hz, 220V~, 0.7 A
<div>➤ Non military purpose</div> <div>➤ No Pyrotechnics</div>	

Contents:
<ul style="list-style-type: none"> ➤ 220Vac to 5 Vdc switching power adapter ➤ CEE 7/16 power cable

Serial numbers:	
Approval:	Signature / stamp:
Date:	
Name:	

Product name:	TNT USB 3.0 to mini 5 pin Cable	
		
Description: This cable is made by Netmate. It is used to communicate between PC and CubeSat.		
Characteristics:		
Mass:	0.018 kg	
Outline dimensions: (w x h x l)	360 mm (length)	
Connector type:	USB 3.0 Standard-A, Micro 5 pin	
➤ Non military purpose ➤ No Pyrotechnics		
Contents: ➤ TNT USB 3.0 to mini 5 pin cable		
Serial numbers:		
Approval:	Signature / stamp: 	
Date:		
Name:		

Product name:		ST-LINK/V2 programmer for STM32	
			
Description: It is made by STMicroelectronics. In-circuit debugger and programmer			
Characteristics:			
Mass:		0.018 kg	
Outline dimensions: (w x h x l)		255 mm (length)	
Connector type:		USB standard A to JTAG 4-pin pitch 2.54 mm	
<ul style="list-style-type: none"> ➤ Non military purpose ➤ No Pyrotechnics 			
Contents:			
<ul style="list-style-type: none"> ➤ ST-LINK V2 USB programmer ➤ pitch 2.54 mm 4 pin female cable. 			
Serial numbers:			
Approval:		Signature / stamp:	
Date:			
Name:			

Product name:	Power removal junction PCB	
		
Description: It is used to remove power supply line PCB from PC to CubeSat and to upload FSW from PC to CubeSat. It is made by Kyung Hee University.		
Characteristics:		
Mass:	0.007 kg	
Outline dimensions: (w x h x l)	30 x 25 mm	
Connector type:	USB and Micro 5 pin	
➤ Non military purpose ➤ No Pyrotechnics		
Contents:		
➤ Junction PCB		
Serial numbers:		
Approval:	Signature / stamp:	
Date:		
Name:		