

Onduleur intelligent



Performances supérieures

Rendement maximum 98.6%



Installation facile

17 kg



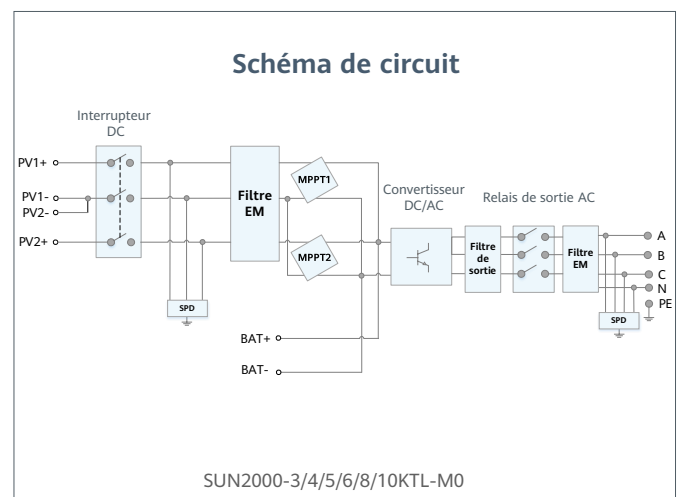
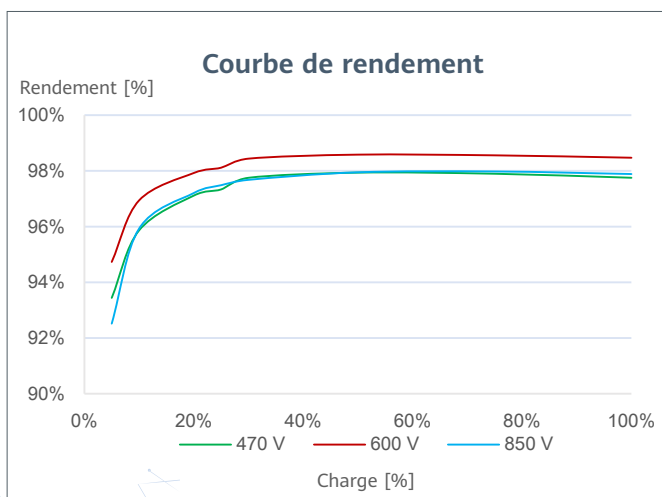
Batterie prête

Interface batterie Plug & Play



Sécurité et fiabilité

Protection contre les défaut d'arc (AFCI)



SUN2000-3/4/5/6/8/10KTL-M0

Spécifications Techniques

Spécifications techniques	SUN2000 -3KTL-M0	SUN2000 -4KTL-M0	SUN2000 -5KTL-M0	SUN2000 -6KTL-M0	SUN2000 -8KTL-M0	SUN2000 -10KTL-M0
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Rendement

Rendement max.	98.2%	98.3%	98.4%	98.6%	98.6%	98.6%
Rendement énergétique européen pondéré	96.7%	97.1%	97.5%	97.7%	98.0%	98.1%

Entrée

Puissance DC max. recommandée	6,000 Wp	8,000 Wp	10,000 Wp	12,000 Wp	14,880 Wp	14,880 Wp
Tension d'entrée max. ¹	1,100 V					
Plage de tension de fonctionnement ²	140 V ~ 980 V					
Tension de démarrage	200 V					
Plage de tension MPPT à pleine puissance	140 V ~ 850 V	190 V ~ 850 V	240 V ~ 850 V	285 V ~ 850 V	380 V ~ 850 V	470 V ~ 850 V
Tension nominale d'entrée	600 V					
Courant d'entrée max. par MPPT	11 A					
Courant de court-circuit max par MPPT	15 A					
Nombre de trackers MPP	2					
Nombre max. d'entrées par MPPT	1					

Sortie

Connexion au réseau	Triphasé					
Puissance nominale	3,000 W	4,000 W	5,000 W	6,000 W	8,000 W	10,000 W
Puissance apparente maximale	3,300 VA	4,400 VA	5,500 VA	6,600 VA	8,800 VA	11,000 VA ³
Tension nominale de sortie	220 Vac / 380 Vac, 230 Vac / 400 Vac, 3W / N+PE					
Fréquence nominale AC	50 Hz / 60 Hz					
Courant de sortie maximal	5.1 A	6.8 A	8.5 A	10.1 A	13.5 A	16.9 A
Facteur de puissance réglable	0.8 capacitif ... 0.8 inductif					
Distorsion harmonique max.	≤ 3 %					

Caractéristiques et protections

Dispositif de déconnexion DC	Oui
Protection anti-îlotage	Oui
Protection contre l'inversion de polarité DC	Oui
Contrôle d'isolement	Oui
Dispositif parafoudre DC ⁴	Oui
Dispositif parafoudre AC ⁴	Oui
Surveillance du courant résiduel	Oui
Protection contre la surintensité AC	Oui
Protection contre les courts-circuits AC	Oui
Protection contre la surtension AC	Oui
Protection contre les arcs de défaut	Oui
Récepteur de contrôle d'ondulation (Ripple control)	Oui
Communication DC MBUS avec optimiseur	Non

Données générales

Plage de température de fonctionnement	-25 ~ + 60 °C (Déclassement au-dessus de 45°C à la puissance de sortie nominale)
Humidité relative de fonctionnement	0 %RH ~ 100 %RH
Altitude de fonctionnement	0 - 4,000 m (déclassement au-dessus de 3,000 m)
Refroidissement	Convection naturelle
Interface	Voyants LED; WLAN intégré + FusionSolar App
Communication	RS485; WLAN / Ethernet via Smart Dongle-WLAN-FE; 4G / 3G / 2G via Smart Dongle-4G (en option)
Poids (support de montage compris)	17 kg
Dimension (support de montage compris)	525 x 470 x 166 mm
Degré de protection	IP65
Consommation nocturne	< 5.5 W

Conformité aux normes (plus disponible sur demande)

Sécurité	EN/IEC 62109-1, EN/IEC 62109-2
Normes de connexion au réseau	G98, G99, EN 50438, 50549-1, CEI 0-21, VDE-AR-N-4105, AS 4777, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, IEC61727, IEC62116, DEWA

^{*1} La tension d'entrée maximale est la limite supérieure de la tension continue. Toute tension CC d'entrée plus élevée endommagerait probablement l'onduleur.

^{*2} Toute tension d'entrée CC en dehors de la plage de tension de fonctionnement peut entraîner un dysfonctionnement de l'onduleur.

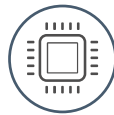
^{*3} C10 / 11: 10,000 VA

^{*4} Classe de protection compatible TYPE II selon EN / IEC 61643-11.

Optimiseur PV



Optimiseur universel (seul optimiseur de la gamme)



<1,5 min Appariement avec onduleur



<5s Disposition automatique



Positionnement précis des défaut d'arc

Spécifications techniques		SUN2000-450W-P
		Entrée
Puissance nominale d'entrée ¹		450 W
Tension d'entrée maximale absolue		80 V
Plage de tension MPPT en fonctionnement		8 - 80 V
Courant d'entrée max.		13 A
Rendement max.		99.5 %
Rendement pondéré		99.0 %
Catégorie de surtension		II
		Sortie
Tension de sortie max.		80 V
Courant de sortie max.		15 A
Bypass de sortie ²		Oui
Tension de sortie d'arrêt par optimiseur ³		0 V
Impédance de sortie d'arrêt par optimiseur		1k ohm ± 10 %
		Conformité aux Normes
Sécurité		IEC62109-1 (sécurité de classe II)
RoHS		Oui
		Données générales
Dimensions (l x L x H)		71 x 138 x 25 mm
Poids (câbles inclus)		0.55 kg
Pièce d'installation		Plaque de montage, Cosse, Plaque de montage sur cadre module
Connecteur d'entrée		Staubli MC4
Connecteur de sortie		Staubli MC4
Longueur du câble de sortie		1.2 m (3.9 ft.) ⁴
Plage de température/d'humidité de fonctionnement		-40 °C ~ 85 °C ⁵ / 0 %RH ~ 100 %RH
Indice de protection		IP68
Produits compatibles communication MBUS		SUN2000-2/3/3.68/4/4.6/5/6KTL-L1, SUN2000-3/4/5/6/8/10KTL-M1, SUN2000-12/15/17/20KTL-M2

Conception de longues chaînes (optimiseur complet)	SUN2000-2-6KTL-L1	SUN2000-3-10KTL-M1	SUN2000-12-20KTL-M2
Nombre d'optimiseur minimum par chaîne	4	6	6
Nombre d'optimiseur maximum par chaîne	25	50	50
Puissance DC maximale par chaîne	5,000 W	10,000 W	10,000 W

¹ La puissance nominale du module à STC ne doit pas dépasser la «puissance CC d'entrée nominale» de l'optimiseur de puissance. Les modules avec une puissance jusqu'à + 5% de tolérance de puissance sont acceptables.

² L'optimiseur de puissance est contourné dans la chaîne connectée à un onduleur en fonctionnement lorsqu'il ne fonctionne pas

³ La sortie de l'optimiseur de puissance 0Vdc lors de la déconnexion de l'onduleur ou de l'onduleur est à l'arrêt.

⁴ Convient au module PV dans une installation paysage et portrait. ⁵ La capacité à pleine puissance fait référence à l'outil de conception intelligente en ligne.

Smart Dongle-WLAN-FE



Intelligent

Communication WLAN et Fast Ethernet (FE)
Supporte le système de surveillance tiers ¹



Facile

Support Plug & Play
Soutien max. 10 appareils



Fiable

IP65
Reconnexion auto

Spécifications techniques	SDongleA-05
Données GENERALES	
Max. Appareils pris en charge	10
Max. Onduleurs pris en charge	10
Interface de connexion	USB
Interface Ethernet	10/100M Ethernet
Installation	Plug-and-play
Indicateur	LED
Dimensions (L x H x P)	146 x 48 x 33 mm
Poids	90 g
Degré de protection	IP65
Consommation électrique (typique)	2.5 W
Mode de fonctionnement	STA
Algorithme de cryptage	Mécanisme de chiffrement: WPA/WPA2 Cryptage: TKIP/CCMP/AES
Paramètres sans fil	
Soutien standard et fréquence	802.11b/g/n (2.412G—2.484G)
Environnement de travail	
Plage de température de fonctionnement	-30 °C to +65 °C
Humidité relative de fonctionnement	5 - 95% RH
Plage de température de stockage	-40°C to +70°C
Max. altitude de fonctionnement	4,000 m
Conformité aux normes (plus disponible sur demande)	
Certificat	SRRC, CE, RCM
Onduleurs compatibles	
Modèles d'onduleurs compatibles	SUN2000-2/3/3.68/4/4.6/5/6KTL-L1 SUN2000-3/4/5/6/8/10KTL-M0 SUN2000-12/15/17/20KTL-M0

*1: Le système de gestion tiers doit faire correspondre le protocole de communication avec Huawei Smart Dongle.

Smart Dongle-4G



Intelligent

2G, 3G, 4G communication ¹
Supporte le système de surveillance tiers ²



Facile

Support Plug & Play
Soutien max. 10 appareils



Fiable

IP65
Auto reconnexion

Spécifications techniques	SDongleA-03-EU
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Données GENERALES	
Max. Appareils pris en charge	10
Max. Onduleurs pris en charge	10
Interface de connexion	USB
Installation	Plug-and-play
Indicateur	Indicateur LED
Dimensions (L x H x P)	130 x 48 x 33 mm
Poids	90 g
Degré de protection	IP65
Consommation électrique (typique)	3.5 W

Paramètres sans fil	
Type de carte sim	mini-sim (15 mm x 25 mm)
Soutien standard et fréquence	4G: FDD-LTE / TDD-LTE 3G: WCDMA / HSDPA / HSUPA / HSPA+ 2G: GSM / GPRS / EDGE ³

Environnement de travail	
Plage de température de fonctionnement	-30 °C ~ +65 °C
Humidité relative de fonctionnement	5 - 95% RH
Plage de température de stockage	-40°C ~ +70°C
Max. altitude de fonctionnement	4,000 m

Conformité aux normes (plus disponible sur demande)	
Certificat	CE

Onduleurs compatibles	
Modèles d'onduleurs compatible	SUN2000-2/3/3.68/4/4.6/5/6KTL-L1 SUN2000-3/4/5/6/8/10KTL-M0 SUN2000-12/15/17/20KTL-M0 SUN2000-60KTL-M0 SUN2000-100KTL-M1

¹ Pour assurer une transmission de données stable, Huawei suggère d'installer le dongle 4G dans les zones à signal mobile stable (signal 2G ≥ 4 barres, signal 3G / 4G ≥ 3 barres)

² Le système de gestion tiers doit faire correspondre le protocole de communication avec Huawei SmartDongle

³ Pour la liste des transporteurs recommandés et des détails sur les fréquences prises en charge, veuillez contacter les distributeurs locaux

Smart Power Sensor



Précis

Précision de mesure: classe 1



Simple et Facile

Écran LCD, facile à régler et à vérifier



Écologique

Consommation d'énergie totale ≤ 1 W

Spécifications techniques	DDSU666-H	DTSU666-H 250A/50mA
Données générales		
Dimensions (L x P x H)	100 x 36 x 65.5 mm	100 x 72 x 65.5 mm
Type d'installation	DIN35 Rail	
Poids (câbles inclus)	1.2 kg	1.5 kg
Alimentation		
Type de réseau électrique	1P2W	3P4W
Puissance d'entrée	176 Vac ~ 288 Vac	
Consommation d'énergie	≤ 0.8 W	≤ 1 W
Plage de mesure		
Tension de ligne	/	304 Vac ~ 499 Vac
Tension de phase	176 Vac ~ 288 Vac	
Courant	0 ~ 100 A	0 ~ 250 A
Précision de mesure		
Tension	± 0.5 %	
Actuel / Électricité / Énergie	± 1 %	
Fréquence	± 0.01 Hz	
Communication		
Interface	RS485	
Débit de transmission	9,600 bps	
Protocole de communication	Modbus-RTU	
Environnement		
Température de fonctionnement	-25 °C ~ 60 °C	
Température de stockage	-40 °C ~ 70 °C	
Humidité en fonctionnement	5 %RH ~ 95 %RH (sans condensation)	
Autres		
Accessoires	Câble RS485 (10 m)	
	1 CT 100 A / 40 mA (5 m)	3 CT 250 A / 50 mA (5 m)

Accessoires





EU Declaration of Conformity

(No. CE-04744035)

We **Huawei Technologies Co., Ltd.**

**Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C**

declare under our sole responsibility that the product

Name/Trademark SOLAR INVERTER/HUAWEI

Model/Software SUN2000-10KTL-M0
SUN2000-8KTL-M0
SUN2000-6KTL-M0
SUN2000-3KTL-M0
SUN2000-5KTL-M0
SUN2000-4KTL-M0/V100

Accessories NA

comply with the following directives and regulations:

- 2014/53/EU (Radio Equipment Directive)
- 2011/65/EU (RoHS Directive)

For the evaluation of the compliance with these Directives and Regulations, the following standards/requirements were applied:

Artificial 3.1 (a) Safety & Health	EN 62109-1:2010 EN 62109-2:2011 EN 50385:2017 EN 62232:2017
Artificial 3.1 (b) EMC	EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007+A1:2011* EN 61000-6-4:2007+A1:2011 Draft EN 301 489-1 V2.2.0 Draft EN 301 489-17 V3.2.0
Artificial 3.2 Radio	ETSI EN 300 328 V2.1.1:2016
RoHS	EN 50581:2012

CE Marking Date: 2019-01-14

Responsible for making this declaration is the:

Manufacturer Authorised representative established within the EU

Person responsible for making this declaration

Print name/Title : LingHongDong Regulation Compliance Manager

China, Shenzhen Jan.14,2019
(Place) (Date)

Ling Hong Dong
(Signature)

Huawei Technologies Co.,Ltd.(“Huawei”) Limited Product Warranty

This Limited Product Warranty covers the “Covered Products” defined in the table below, is valid only for the duration of the applicable “Warranty Period” defined in the table below and is subject to the following terms and conditions:

Covered Products	Warranty Period
SUN2000 Series Inverters: 8,12,17, 20, 23, 28, 33, 36,42, 55, 60, 100KTLs (“Inverter”)	Sixty (60) months starting ninety (90) days after shipment.*
Solar Smart Monitor & Data Logger (“Smart Logger1000 and 2000”)	Twenty four (24) months starting ninety (90) days after shipment.*
SmartACU2000, SACU2000, ACBox2000	Twenty four (24) months starting ninety (90) days after shipment.*
SUN2000L Series Inverters: 2,3,3.68, 4, 4.6, 5KTLs (“Inverter”)	One hundred twenty (120) months starting ninety (90) days after shipment.*
SmartPSB2000L	One hundred twenty (120) months starting ninety (90) days after shipment.*
Smart PV Optimizer SUN2000P-375W	Twenty five (25) years starting ninety (90) days after shipment.*
NetEco1000S Inverter management system; Smart I-V curve diagnosis	1 years warranty after shipment

*The Limited Warranty only applies to the buyer who has purchased the Products from an authorized seller of Huawei for use in accordance with their intended purpose. The Limited Warranty may be transferred from buyer to any assignee, and will remain in effect for the time period remaining under the foregoing warranties, provided that the Products are not moved outside its original country of installation and any reinstallation is done in accordance with the user manual or quick guide provided by Huawei.

During the Warranty Period, in the event that a Covered Product is found to have a non conformity or defect in the workmanship or materials occurring during normal use of the Covered Product, Huawei will, subject to the terms set out below, replace the Covered Product with a product that is functionally equivalent (in relation to feature, function, fit compatible, default software version) to, or better than, the defective Covered Product detailed in the warranty claim (“Replacement Product”) and the terms of this Limited Product Warranty shall apply to any Replacement Products supplied by Huawei under this Limited Product Warranty. A Replacement Product shall be the Customer’s sole and entire remedy in respect of any non conformity of or defects in the Covered Products.

Where the Replacement Product is an Inverter or safety box, it shall be covered by this Limited Product Warranty for the remaining Warranty Period or three hundred sixty (360) days from the date of replacement, whichever is longer. Where the Replacement Product is an optimizer or SmartLogger product or SmartACU or SACU2000 or ACBox, it shall be covered by this Limited Product Warranty for the remaining Warranty Period or ninety (90) days from the date of replacement, whichever is longer. Following a replacement, the Replacement Product will become the property of the Customer and the defective Covered Product shall become the property of Huawei.

Standard Warranty Extension Procedure

The Warranty Period for Inverters can be extended up to a period of ten (10), fifteen (15) or twenty (20) years, at an additional cost to the Customer (“Extended Warranty”). An Extended Warranty can only be purchased during the warranty valid period.

Any Extended Warranty shall be in accordance with and subject to the same terms and conditions as the standard Warranty Period.

Claiming Under the Warranty

To claim under this Limited Product Warranty Customer shall promptly after discovery of a non conformity or defect in workmanship or materials in the Covered Products, report the non conformity or defect to Huawei by contacting the Huawei Customer Services Help Desk (contact details as below) and providing the following information:

- i) a short description of the non conformity or defect; including but not limited to input & output parameters, alarm ID, reason ID and data exported from the Inverter;
- ii) product serial number;
- iii) a copy of the purchase receipt.

Claiming under this Limited Product Warranty is conditional upon such information being provided.

- **The Customer Services Help Desk** can be contacted via:
Free phone: 00 80 03 38 88 888
Email: eu_inverter_support@huawei.com
- **Online Technical Support:** <http://solar.huawei.com/eu/>
Customer can find user manual and other information on the website.

Product Replacement

Huawei will, upon receipt of a warranty claim, determine whether the claim is covered by this Limited Product Warranty. If Huawei determines that the claim is not covered by this Limited Product Warranty, it will notify Customer setting out the reasons why the claim has been rejected. If Huawei determines the claim is covered by this Limited Product Warranty, then Huawei will provide the Customer with a Replacement Product.

Where Huawei opts to provide a Replacement Product, Huawei will deliver the Replacement Product to the Customer's nominated site within the European countries, normally within two (2) to five (5) "Working Days" (being Monday to Friday but excluding public and bank holidays) after the warranty claim has been logged, investigated and confirmed. Within fifteen (15) Working Days of the Customer receiving the Replacement Product, the Customer shall return the defective Covered Product to Huawei in its original packaging or the packaging removed from the Replacement Product (or failing that, in safe and secure packaging to prevent any damage in transit).

Huawei reserves the right to charge the Customer for the cost of the defective Covered Product, and Customer agrees by making a warranty claim to pay such charges, if:

- (i) a Replacement Product has been dispatched to the Customer but the defective Covered Product is not returned to Huawei on time;
- (ii) on inspection, a Covered Product returned does not match the one described in the warranty claim;
- (iii) on inspection, a Covered Product is found not to be covered by this Limited Product Warranty or the Limited Product Warranty has been invalidated as set out below.

Payment of the Installer Call-out Fee and Fault Inverter Transportation Costs

Following the replacement and receipt by Huawei of a defective Covered Product (only apply to inverters and SmartLogger, SmartACU, Optimizer devices and Safety Box), Huawei will pay the certified Installer a fee of €110 (including VAT) per Covered Product within the Warranty Period ("Installer Call-out Fee") along with reasonable transportation fees, provided that such transportation fees have been mutually agreed prior to the return by the Customer

of the defective Covered Product. Huawei will pay €25(including VAT) each for the second or more optimizer failure replacement. The payment of the Installer Call-out Fee and any agreed transportation fee will be processed by Huawei, or by a service company on behalf of Huawei, within sixty (60) days after receipt by Huawei of the defective Covered Product.

Limits to Cover

This Limited Product Warranty only applies to the hardware of the Covered Products and does not apply to any components, which are separate from the Covered Products such as ancillary equipment, consumable and mechanical parts for mounting, or protective coatings that are designed to diminish over time (except where the defect has occurred due to a defect in materials or workmanship).

This Limited Product Warranty only applies to Customers who have purchased the Covered Products directly from Huawei, or from an authorized seller of Huawei Inverters in the European Union Countries (Not include islands). Huawei only process the transportation in European Union Countries (not include islands).

This Limited Product Warranty only applies where the installation and any removal and reinstallation has been carried out in accordance with the installation directions and user guidelines which are provided with the Covered Products ("Documentation").

This Limited Product Warranty will be invalidated if the serial number of the Covered Product has been removed or defaced.

Exclusions

This Limited Product Warranty does not cover defects or damage resulting from:

- (i) Warranty does not cover damages incurred as a result of the incorrect installation or used of the equipment with regards to the user manual provided by Huawei;
- (ii) failure by the Customer to install and operate the Covered Product in accordance with the Huawei product specifications;
- (iii) the Covered Product being used other than its normal and customary manner;
- (iv) unauthorized disassembly, repair, alteration or modifications;
- (v) misuse, abuse, intentional damage, negligence or accidental damage;
- (vi) improper testing, operation, maintenance, or installation including without limitation:
 - (a) failure to meet the system requirements provided in writing for a safe operating environment or external electric parameters;
 - (b) failure to operate the Covered Products in compliance with the operation manual and/or user guides of the Covered Products;
 - (c) relocation and installation of the system other than in compliance with Huawei's requirements.
- (vii) damage due to use of incorrect voltage;
- (viii) directly caused by problems in system infrastructure;
- (ix) improper storage, shipping, handling or usage of the Covered Products;
- (x) force majeure events (including but not limited to act of public enemy, acts of governmental bodies or agencies foreign or domestic, sabotage, riot, fire, floods, typhoons, explosions or other catastrophes, epidemics or quarantine restrictions, labour unrest, or labour shortages, accident, freight embargoes, or any other event beyond the control of Huawei) for the period of time occasioned by any such occurrence.

The Limited Product Warranty does not cover cosmetic damage or superficial defects, dents, marks or scratches which do not influence the proper functioning of the Covered Product.

Limitation of Liability

This Limited Product Warranty shall be in lieu of all other warranties, conditions or guarantees as to description, quality, fitness for any particular purpose, satisfactory or merchantable quality of the Covered Products or any other warranty, condition or guarantee whether express or implied.

Huawei shall not be under any liability whether in contract, tort or otherwise in respect of any non conformity of or defect in the Covered Products or for any injury, damage or loss resulting from such non conformity or defect or for any loss of contracts, loss of revenue, loss of use or profits or business, business interruption or for any extra operating expense or any indirect, consequential or economic damages or losses whatsoever and howsoever caused. The remedies specified in this Limited Product Warranty shall be the Customer's sole and entire remedy in respect of any non conformity of or defects in the Covered Products.

Notwithstanding the foregoing, nothing in this Limited Product Warranty shall limit Huawei's liability for:

- (i) death or personal injury;
- (ii) fraud or fraudulent misrepresentation;
- (iii) any other liability that cannot be limited or excluded as a matter of law.

General

- (i) No one other than an authorized representative of Huawei may make any modification, extension, or addition to this Limited Product Warranty.
- (ii) If any provision of this Limited Product Warranty is held by any court or award in arbitration to be invalid or unenforceable, the validity or enforceability of such provision shall not affect the other provisions of this Limited Product Warranty which shall remain in full force and effect.