100W 4-Port USB GaN Fast Charger NGE100 series



(NGE100: Universal Version)



(NGE100U: US Version)

EDM

User's Manual Click Me

GaN PD 3.0 QC 3.0

UL62368-1 R33100 RoHS GB4943.1 AS/NZS 62368.1 TPTC004 IEC62368-1

DEKRA BS EN/EN62368-1 KC62368-1 IS13252 Energy Verified Rendement Énergétique Vérifié VI

ECO Household Security Network

Features

- One model for multi-devices
- MEAN WELL Patent Application Number:202330347779.4
- Universal version: Interchangeable AC plug(NGE100);
  US version: Non-interchangeable AC folding plug(NGE100U)
- Global certified
- 90~264Vac Universal AC input
- USB-2C2A, independent 4-port fast charging
- Each USB-C port offers max.100W
- Support QC2.0, QC3.0, PD3.0
- Auto-detection 5V/9V/12V/15V/20V
- Protections: Short circuit / Overload / Over temperature
- No load power consumption <0.3W
- Energy efficiency Level VI
- Compact size (62*30*85.5mm)
- Type-C cable with charging and data transmission included (100cm)
- 3 years warranty

Applications

- Mobile phone
- Tablet
- Laptop
- Earphone
- Game devices

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

The NGE100 series is a 100W universal fast charger with gallium nitride (GaN) technology. This product offers 2 models to choose from: the universal version **NGE100,** which can be paired with 7 types of AC plugs (EU, US, UK, AU, CN, KR, IN), making it ideal for business travel. Additionally, there is a US version, **NGE100U**, equipped with a 90-degree vertically folding US plug that is suitable for countries with 2 flat pins.

The NGE100 utilizes gallium nitride (GaN) technology and complies with Level VI of energy efficiency standards. It has a no-load power consumption of less than 0.3W and boasts an efficiency of up to 88%. With compact dimensions (62*30*85.5 mm), it features two USB-C and two USB-A charging ports, allowing simultaneous charging of multiple devices. The charger supports various fast charging protocols, including PD3.0 and QC3.0. Upon plugging in a device, it automatically recognizes and adjusts the charging voltage (5V/9V/12V/15V/20V) and allocates charging power. All ports support independent fast charging, and either USB-C1 or C2 supports a rapid 100W charge, making it suitable for charging various electronic devices such as smartphones, tablets, laptops, gaming consoles, cameras, AirPods, and more.

Furthermore, this product not only has built-in short circuit/overload/over temperature protections, but also has a 94V-0 high flame-retardant casing; obtained safety certifications from CB, DEKRA, UL, PSE, BSMI, CCC, RCM, KC, BIS, EAC, CE, UKCA, and FCC along with a 3 years warranty, it is a reliable, safe, and durable green charger.

Model Encoding

NGE 100 □

- AC Plug: Blank : AC Pin fixed; Universal version with interchangeable plugs
  U : Foldable AC Pin; US version with non-interchangeable plug
- Rated wattage
- Series name

100W 4-Port USB GaN Fast Charger NGE100 series

SPECIFICATION		NGE100 ○ ○ =Blank, U				
OUTPUT						
USB C1 (100W max.)		PD3.0, 5V , 9V , 12V , 15V/3A , 20V/5A				
USB C2 (100W max.)		PD3.0, 5V , 9V , 12V , 15V/3A , 20V/5A				
USB A1 (18W max.)		QC3.0, 5V/3A , 9V/2A , 12V/1.5A , 20V/0.9A				
USB A2 (18W max.)		QC3.0, 5V/3A , 9V/2A , 12V/1.5A , 20V/0.9A				
TOTAL POWER		100W max.				
FOR 5V ONLY(45W max.)	Note.2	USB C1: 5V/3A , USB C2: 5V/3A , USB A1: 5V/1.5A , USB A2: 5V/1.5A				
DC VOLTAGE	Note.3	5V	9V	12V	15V	20V
RIPPLE & NOISE (max.)	Note.4	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p
VOLTAGE TOLERANCE	Note.5	±5.0%	±5.0%	±4.0%	±4.0%	±4.0%
LINE REGULATION	Note.6	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
LOAD REGULATION	Note.7	±5.0%	±5.0%	±4.0%	±4.0%	±4.0%
SETUP, HOLD UP TIME		1000ms,30ms/230Vac 2000ms,10ms/115Vac at USB C1 20V/5A				
INPUT						
VOLTAGE RANGE	Note.8	90 ~ 264Vac				
FREQUENCY RANGE		47 ~ 63Hz				
POWER FACTOR		PF>0.92/230Vac; PF>0.98/115Vac				
EFFICIENCY (Typ.)		88% / 20V 5A				
AC CURRENT		1.6A/115Vac 0.8A/230Vac				
INRUSH CURRENT (max.)		65A/115Vac 95A/230Vac				
LEAKAGE CURRENT (max.)		0.5mA/240Vac				
PROTECTION						
OVERLOAD		101 ~ 150% rated output power				
		Protection type : Hiccup mode,recovers automatically after fault condition is removed				
OVER TEMPERATURE		Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT						
WORKING TEMP.		-30 ~ +70℃ (Refer to "Derating Curve")				
WORKING HUMIDITY		20% ~ 90% RH non-condensing				
STORAGE TEMP., HUMIDITY		-20 ~ +85℃, 10 ~ 95% RH non-condensing				
TEMP. COEFFICIENT		±0.03% / ℃ (0 ~ 40℃)				
VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
SAFETY & EMC	Note.9					
SAFETY STANDARDS		UL62368-1, DEKRA BS EN/EN62368-1, BSMI CNS15598-1, PSE J62368-1, CCC GB4943.1-2022, RCM AS/NZS 62368.1, KC KC62368-1, BIS IS13252(part1):2010/IEC60950-1:2005, EAC TPTC004 approved (Please refer to next page for more details)				
WITHSTAND VOLTAGE		I/P-O/P:3KVac				
ISOLATION RESISTANCE		I/P-O/P :100M Ohms / 500VDC / 25℃/ 70% RH				
EMC EMISSION		Parameter	Standard	Test Level / Note		
		Conducted emission	BS EN/EN55032(CISPR32)FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B) GB/T 9254.1-2021, KS C 9832	Class B		
		Radiated emission	BS EN/EN55032(CISPR32)FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B) GB/T 9254.1-2021, KS C 9832	Class B		
		Harmonic current	BS EN/EN61000-3-2,GB 17625.1-2022	Class A		
		Voltage flicker	BS EN/EN61000-3-3	-------		
EMC IMMUNITY		BS EN/EN55035(CISPR35), KS C 9835				
		Parameter	Standard	Test Level /Note		
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact		
		RF field susceptibility	BS EN/EN61000-4-3	Level 2, 3V/m		
		EFT bursts	BS EN/EN61000-4-4	Level 2, 1KV		
		Surge susceptibility	BS EN/EN61000-4-5	Level 3, 1KV/L-N		
		Conducted susceptibility	BS EN/EN61000-4-6	Level 2, 3V		
		Magnetic field immunity	BS EN/EN61000-4-8	Level 1, 1A/m		
		Voltage dips , interruption	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods		
OTHERS						
MTBF		336.4Khrsmin. MIL-HDBK-217F(25℃) 3008.3Khrsmin. Telcordia TR/SR-332 (Bellcore) (25℃)				
DIMENSION		62*30*85.5mm (L*W*H)				
PACKING (Refer to page 7)	MAIN BODY POWER UNIT	NGE100 : 484g ; 28pcs/ 14.55Kg / 1.65CUFT NGE100U: 249g ; 28pcs/ 10.6Kg / 1.65CUFT				
	AC PLUGS	Included 7 types of AC Plugs for NGE100				
	Type-C Cable	Included for NGE100 / NGE100U				

NOTE

1.All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.
2.DC voltage: The output voltage set at point measure by plug terminal & 50% load.
3.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1 μF & 47 μF capacitor.
4.Tolerance: includes set up tolerance, line regulation, load regulation.
5.Line regulation is measured from low line to high line at rated load.
6.Load regulation is measured from 0% to 100% rated load
7.Derating may be needed under low input voltage. Please check the derating curve for more details.
8.The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
9.Design meet US DoE Level VII (from Docket number EERE-2020-BT-STD-0006).
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Interchangeable AC Plug Specifically for NGE100

Model NO.	NGE100 (Universal Version) 	NGE100U (US Version) 
AC plug	Interchangeable Type (Unfoldable; AC Pin fixed) EU  US  UK AU  CN  KR  IN 	Non-Interchangeable Type (Foldable AC Pin)
Certificate	CB DEKRA  c UL us   R33100 RoHS 	CB c UL us  R33100 RoHS

■ Interchangeable AC Plug Installation Steps (Convertible with NGE100 only)

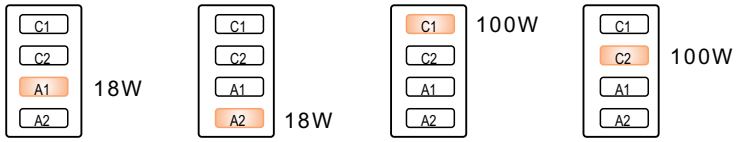
Step1	Step2
	
Slide in AC converter along the guided rail between the metal prongs until it is locked in (with a "click" sound).	Check if the new plug type is stable and correct before use.

Note:

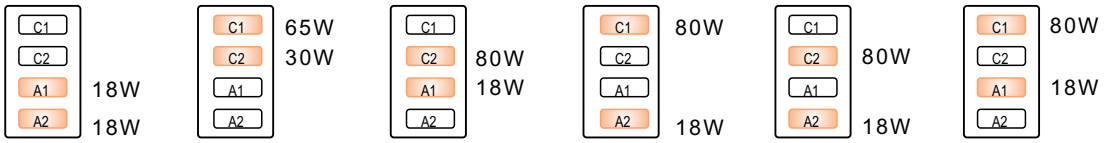
NGE100 is interchangeable type, it needs to be used along with one of the AC inlet plug (EU,US,UK,AU,CN,KR,IN).

■ Recommended Configuration

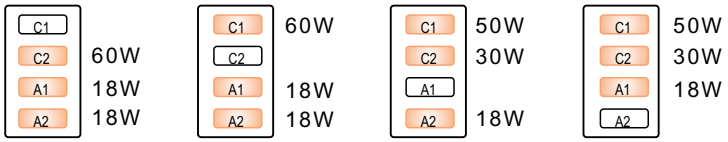
For 1 Port Charging



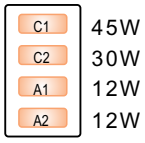
For 2 Ports Charging



For 3 Ports Charging

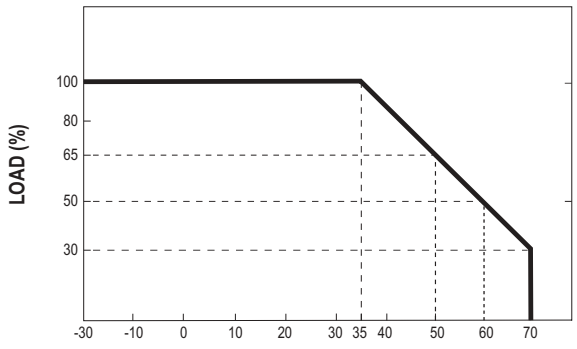


For 4 Ports Charging

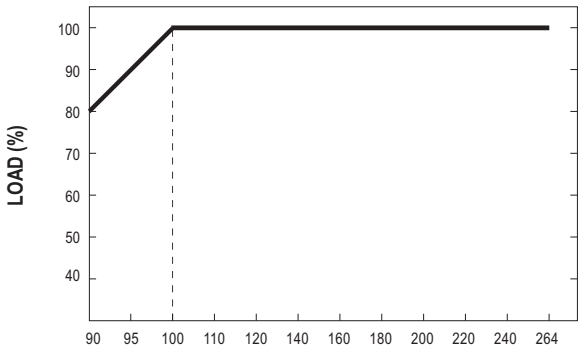


1. USB C1/C2 Type-C support PD (Power Delivery) 2.0 and 3.0; USB A1/A2 Type-A support QC (Quick Charge) 3.0
2. Due to the fast charge protocol identification and power allocation, when multiple ports are used at the same time, normal charging will be resumed after 1 to 3 interruptions, which is a protocol allocation security protection.

■ Derating Curve



■ Static Characteristics

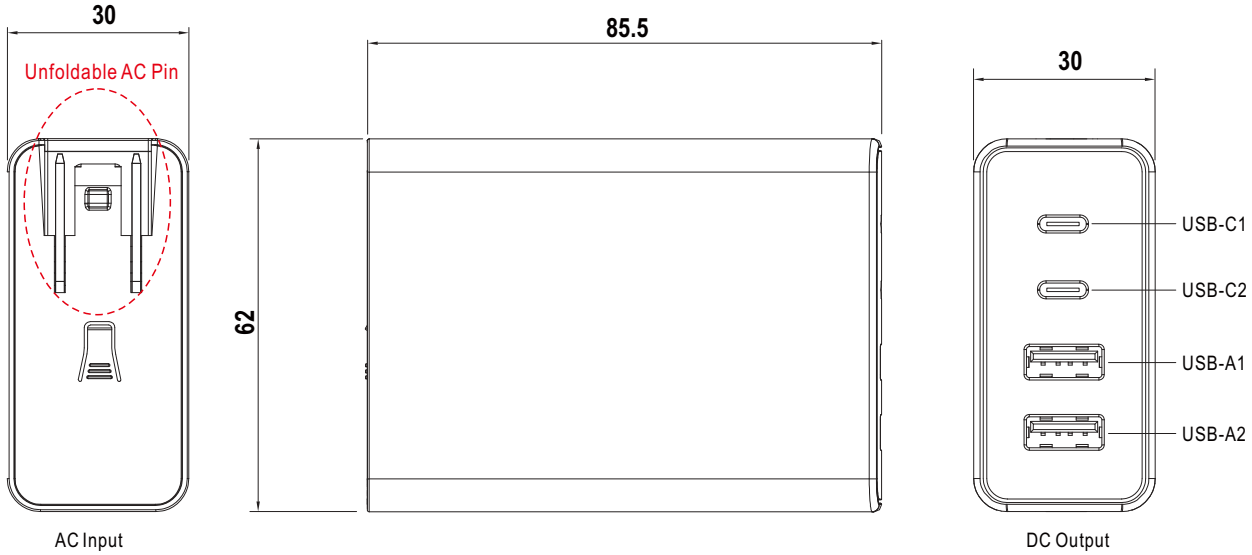


■ Mechanical Specification

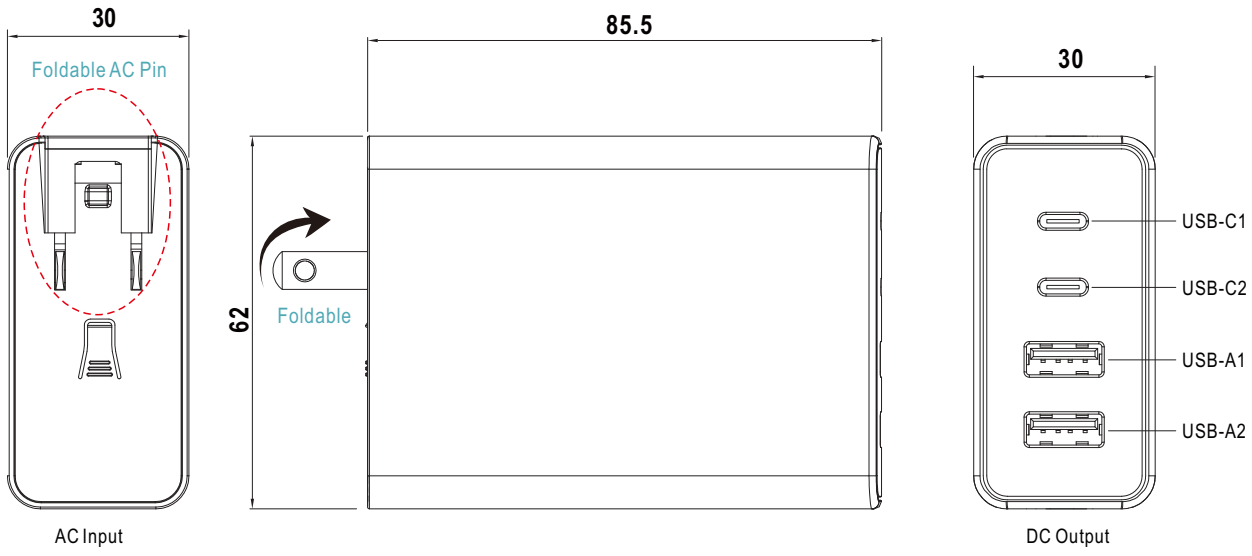
(Unit: mm , tolerance ± 1mm)

Case No.NGE100

※ NGE100 (Universal Version - AC Pin fixed; With interchangeable plugs)

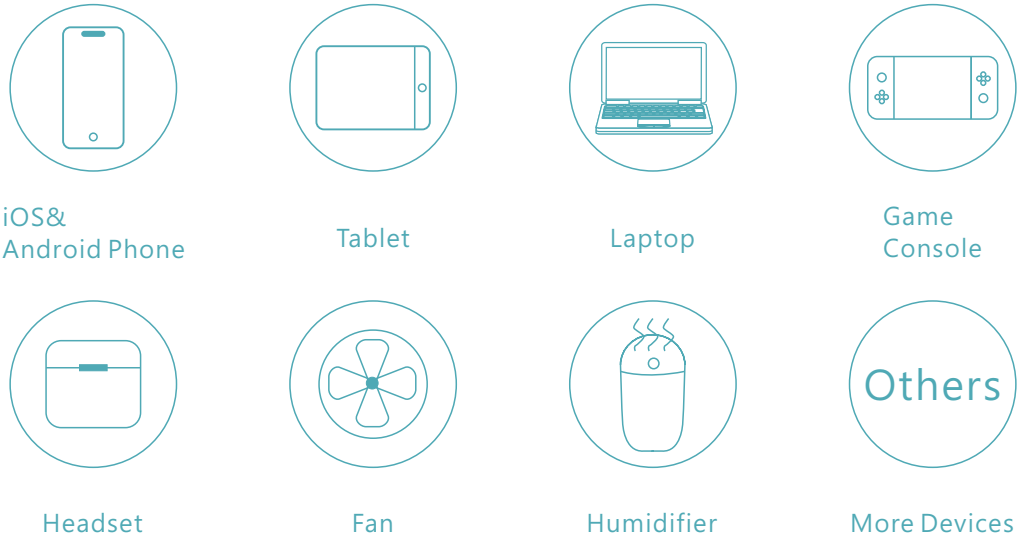


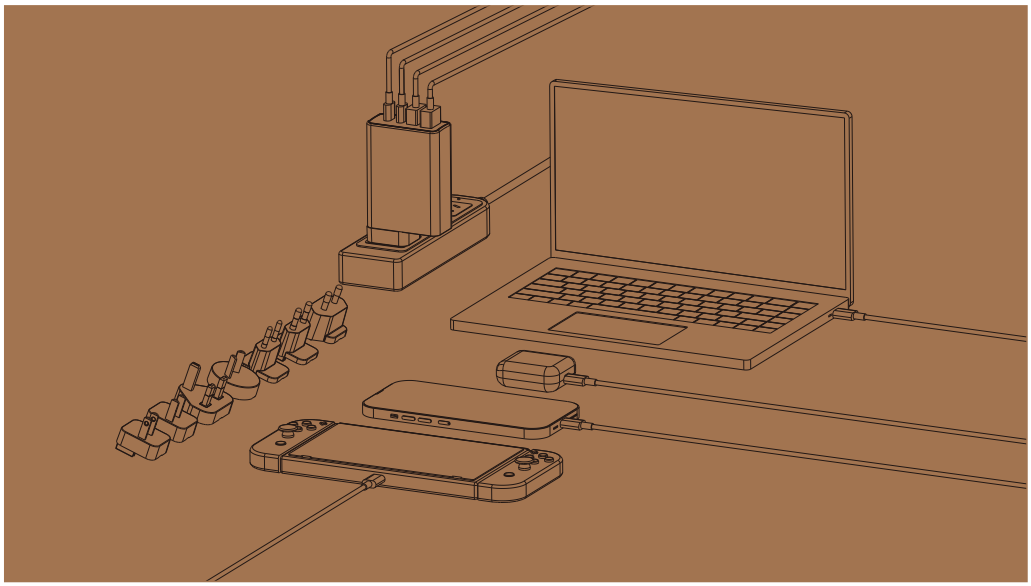
※ NGE100U (US Version - Foldable AC Pin; With non-interchangeable plug)



■ Application

※ One For Multi-Devices





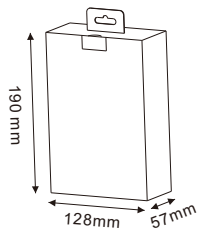
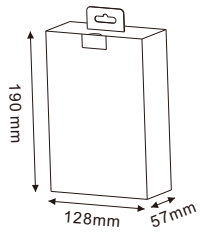
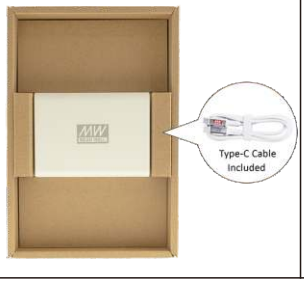
■ Accessory List

※ NGE100 : Includes 7 types of AC Plugs(EU, US, UK, AU, CN, KR, IN) 、 a 100cm USB Type-C cable、 a drawstring accessory pouch

NGE100U: Includes a 100cm USB Type-C cable

Model NO.	Item	Photo
NGE100	AC Plugs (EU, US, UK, AU, CN, KR, IN)	
	100cm USB Type-C cable	
	Drawstring Accessory Pouch	
NGE100U	100cm USB Type-C cable	

■ Packing

Model NO.	Dimension (L*W*H)	Photo		Per Package weight	Max.Q'TY /Carton (pcs)	One Carton G.W
		Outer	Inside			
NGE100				466g	28pcs	13.8Kg
NGE100U				353g	28pcs	10.6Kg

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html