

# Kempower Station Charger C500



## The all-in-one EV charging station with adaptive voltage and dynamic power management

The Kempower Station Charger is the perfect all-in-one solution for charging sites that require high-power output for a small number of charging points. The charger features up to two DC charging outputs with the user-friendly Kempower cable support system, and an optional 22 kW AC socket.

The Kempower Station Charger utilizes standard Kempower 50 kW DC power modules. The single cabinet version can house up to 4 power modules, providing up to 200 kW nominal DC power. The double cabinet version doubles the available capacity with a maximum nominal power of 400 kW.

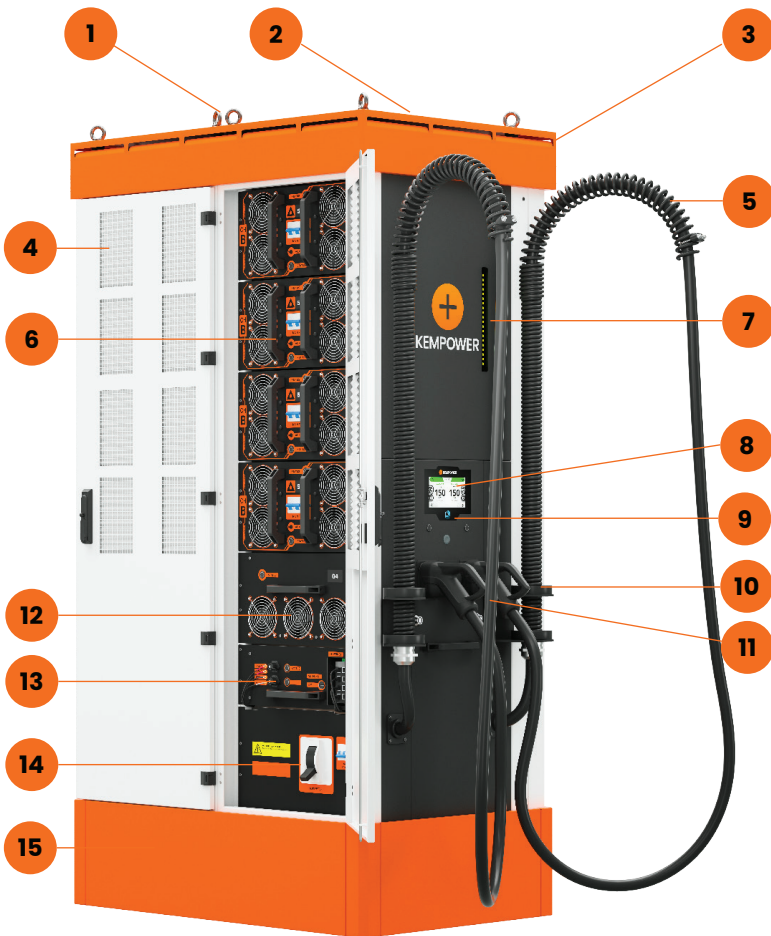
With the dynamic power management option, all available charging power of every power module is automatically distributed to all connected charging outputs, depending on the size of the charging cable and the requirements of the electric vehicles being charged. With the static power management option, the power modules typically provide equal charging power to each DC charging output.

Power range

**50-400 kW**

Adaptive voltage range

**150-1000 v**



1. Lifting lugs
2. WiFi / cellular / GPS antenna
3. Air outlet
4. Air inlets
5. Charging cable support spring system
6. Power module (1 to 4 pcs per CPU)
7. Charging status indication LEDs
8. 7" touch screen display
9. RFID reader (ISO14443A)
10. Charging plug holders
11. AC charging socket
12. Power distribution module
13. Control module
14. Main switch
15. AC cable entry



Advanced cable support system (pat. pend.) to provide premium user experience



Easy scalability with add-on power modules



Improving cost efficiency of the charging system



On-screen QR code to follow the charging status on the user's mobile phone



Safe and easily accessible enclosure guaranteed by the lockable door



Advanced charging control and customization options with Kempower ChargeEye solution

## Product code interpretation examples:

**C501P160CCA5CSD2**

**C501P160CC7CPD2C0**

C501	Station Charger C500 single cabinet
P160	Charging power P160 = 200 kW
CCA CC	Charging method CCA = 2 x CCS2 & Type 2 AC CC = 2 x CCS2
5C 7C	Charging cable length & current 5 = 5 m 7 = 7 m C = 200 A nominal charging cable current
S P	S = standard user interface P = EMV contactless payment terminal without PIN entry possibility
D2	Power distribution module
C0	Unbranded, no stickers, black roof & base

## Number of cabinets

C501	Single cabinet (Max weight when fully furnished is 525 kg)
C502	Double cabinet (Max weight when fully furnished is 925 kg)

## Charging method

C	CCS2
CC	2 x CCS2
CCA	2 x CCS2 & Type 2 AC
CD	CCS2 & CHAdeMO
CDA	CCS2 & CHAdeMO & Type 2 AC

## Nominal charging cable current

B	125 A (CHAdeMO)
C	200 A (CCS2)
D	250 A (CCS2)
E	300 A* (CCS2)

\*Note: with 300 A charging cables:

500 A (max. 10 min) in +25°C. Requires a specific hardware configuration.

375 A continuous in +25°C. Requires a specific hardware configuration.

## Power distribution modules

D2	Up to 2 adaptive dynamic outputs 150-1000 VDC
S2	Up to 2 static outputs

## General electric specifications

Input voltage (AC)	380...480 VAC +6%/-10%
Input frequency	50...60 Hz
Output voltage	150...1000 VDC
Power factor (at full load)	0.92
Efficiency (at full load)	94%
Idle power	20 VA
Standby power	C501: 50 W, C502: 180 W
Over voltage class	III
Icc	35 kA
Network type	TN-S, TN-C, TN-C-S, TT

## Environmental specifications

Operating temperature	-30...+50°C
Current derating	-1.5% of max. charging current per 1°C (above +40°C)
Maximum altitude	2000 m (without altitude derating)
Altitude derating	-1.4% of max. charging current per 100 m (above 2000 m )
Storage temperature	-40...+60°C
Enclosure	IP54, IK10
Operational noise level	< 60 dB (at 1 m distance)
Ambient air humidity	< 95% relative humidity

## Connections & Protocols

WiFi	802.11 b/g/n (2.4/5 GHz)
Cellular / GPS	LTE-FDD, LTE-TDD, WCDMA, GSM
Ethernet	RJ45, IEEE 802.3 / 802.3u
OCPP	1.6j / 2.0.1
Connectivity	Kempower ChargeEye solution
CCS2	DIN70121:2012, ISO15118:2013, ISO15118:2010
CHAdeMO	0.9 / 1.0 / 2.0
Type 2 AC	IEC 61851-1

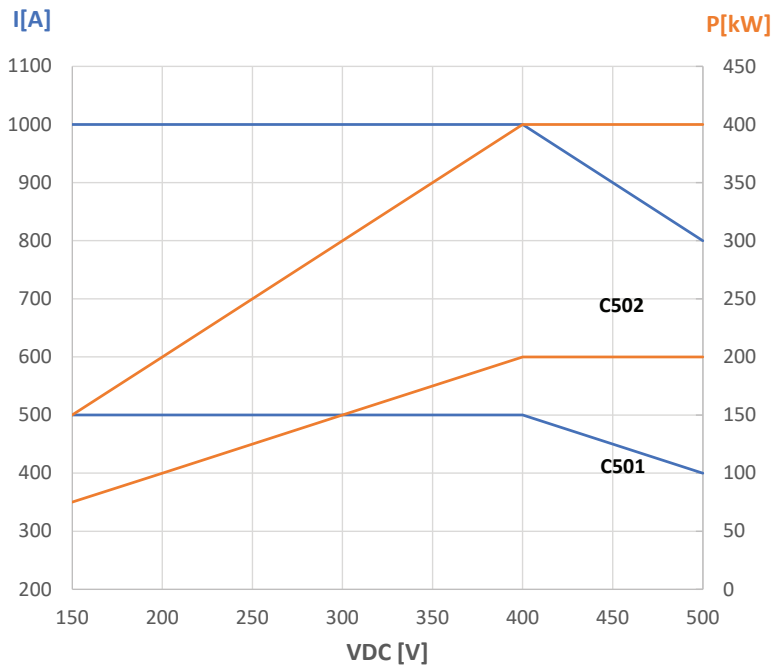
## Electrical protections

Over/under voltage
Surge
Short circuit
Overload
Earth leakage current
Device over temperature

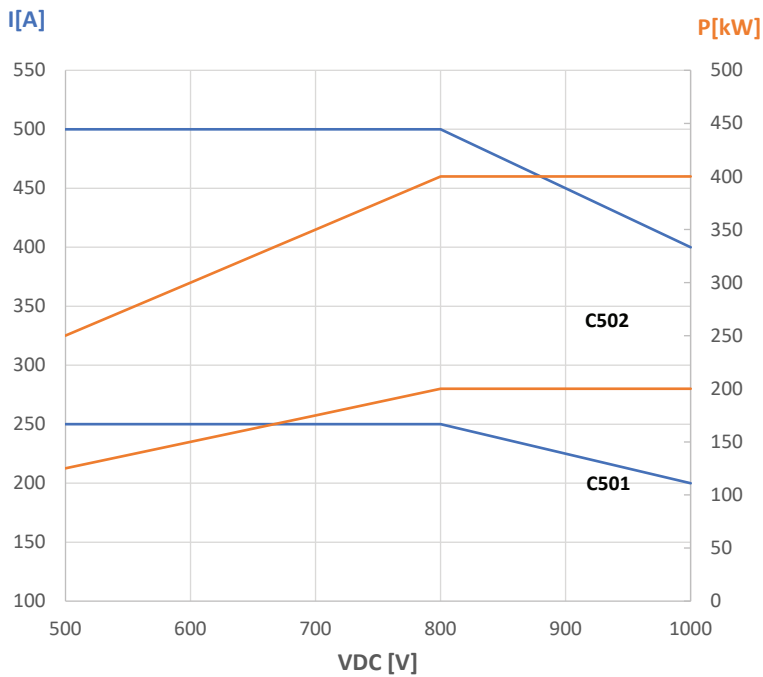
## Power performance

Product code	VDC	Charging (I)	Charging (P)	Input current (at 400 V)	Input current (at 480 V)
C501	150 V	500 A	75 kW	125 A	104 A
	200 V	500 A	100 kW	167 A	139 A
	300 V	500 A	150 kW	250 A	209 A
	400 V	500 A	200 kW	334 A	278 A
	500 V	400 A	200 kW	334 A	278 A
	500 V	250 A	125 kW	209 A	174 A
	600 V	250 A	150 kW	250 A	209 A
	667 V	250 A	167 kW	278 A	232 A
	700 V	250 A	175 kW	292 A	243 A
	800 V	250 A	200 kW	334 A	278 A
	1000 V	200 A	200 kW	334 A	278 A
C502	150 V	1000 A	150 kW	250 A	209 A
	200 V	1000 A	200 kW	334 A	278 A
	300 V	1000 A	300 kW	501 A	417 A
	400 V	1000 A	400 kW	668 A	556 A
	500 V	800 A	400 kW	668 A	556 A
	500 V	500 A	250 kW	417 A	348 A
	600 V	500 A	300 kW	501 A	417 A
	667 V	500 A	334 kW	557 A	464 A
	700 V	500 A	350 kW	584 A	487 A
	800 V	500 A	400 kW	668 A	556 A
	1000 V	400 A	400 kW	668 A	556 A

### Figure 1: Power curve 150-500 VDC



### Figure 2: Power curve 500-1000 VDC (adaptive voltage)



## C50x with dynamic power distribution

Product code	Charging outputs	Max. continuous charging current	Max. DC charging power at 400 VDC*	Max. DC charging power at 800 VDC*
C501...CC...C...	2 x CCS2	2 x 200 A	2 x 80 kW	2 x 160 kW
C501...CC...D...	2 x CCS2	2 x 250 A	2 x 100 kW	2 x 200 kW
C501...CC...E...	2 x CCS2	2 x 300 A	2 x 120 kW	2 x 200 kW
C501...CD...CB...	CCS2 & Chademo	200 A & 125 A	80 kW & 50 kW	160 kW & 100 kW
C501...CD...DB...	CCS2 & Chademo	250 A & 125 A	100 kW & 50 kW	200 kW & 100 kW
C501...CD...EB...	CCS2 & Chademo	300 A & 125 A	120 kW & 50 kW	200 kW & 100 kW
C501...CCA...C...	2 x CCS2 & Type 2 AC	2 x 200 A & AC 3~32 A	2 x 80 kW & AC 22 kW	2 x 160 kW & AC 22 kW
C501...CCA...D...	2 x CCS2 & Type 2 AC	2 x 250 A & AC 3~32 A	2 x 100 kW & AC 22 kW	2 x 200 kW & AC 22 kW
C501...CCA...E...	2 x CCS2 & Type 2 AC	2 x 300 A & AC 3~32 A	2 x 100 kW & AC 22 kW	2 x 200 kW & AC 22 kW
C501...CDA...CB...	CCS2 & Chademo & Type 2 AC	200 A & 125 A & AC 3~32 A	80 kW & 50 kW & AC 22 kW	160 kW & 100 kW & AC 22 kW
C501...CDA...DB...	CCS2 & Chademo & Type 2 AC	250 A & 125 A & AC 3~32 A	100 kW & 50 kW & AC 22 kW	200 kW & 100 kW & AC 22 kW
C501...CDA...EB...	CCS2 & Chademo & Type 2 AC	300 A & 125 A & AC 3~32 A	120 kW & 50 kW & AC 22 kW	200 kW & 100 kW & AC 22 kW

Product code	Charging outputs	Max. continuous charging current	Max. DC charging power at 400 VDC*	Max. DC charging power at 800 VDC*
C502...CC...C...	2 x CCS2	2 x 200 A	2 x 80 kW	2 x 160 kW
C502...CC...D...	2 x CCS2	2 x 250 A	2 x 100 kW	2 x 200 kW
C502...CC...E...	2 x CCS2	2 x 300 A	2 x 120 kW	2 x 240 kW
C502...CD...CB...	CCS2 & Chademo	200 A & 125 A	80 kW & 50 kW	160 kW & 100 kW
C502...CD...DB...	CCS2 & Chademo	250 A & 125 A	100 kW & 50 kW	200 kW & 100 kW
C502...CD...EB...	CCS2 & Chademo	300 A & 125 A	120 kW & 50 kW	240 kW & 100 kW
C502...CCA...C...	2 x CCS2 & Type 2 AC	2 x 200 A & AC 3~32 A	2 x 80 kW & AC 22 kW	2 x 160 kW & AC 22 kW
C502...CCA...D...	2 x CCS2 & Type 2 AC	2 x 250 A & AC 3~32 A	2 x 100 kW & AC 22 kW	2 x 200 kW & AC 22 kW
C502...CCA...E...	2 x CCS2 & Type 2 AC	2 x 300 A & AC 3~32 A	2 x 120 kW & AC 22 kW	2 x 240 kW & AC 22 kW
C502...CDA...CB...	CCS2 & Chademo & Type 2 AC	200 A & 125 A & AC 3~32 A	80 kW & 50 kW & AC 22 kW	160 kW & 100 kW & AC 22 kW
C502...CDA...DB...	CCS2 & Chademo & Type 2 AC	250 A & 125 A & AC 3~32 A	100 kW & 50 kW & AC 22 kW	200 kW & 100 kW & AC 22 kW
C502...CDA...EB...	CCS2 & Chademo & Type 2 AC	300 A & 125 A & AC 3~32 A	120 kW & 50 kW & AC 22 kW	240 kW & 100 kW & AC 22 kW

Note: All 3 outputs can be active simultaneously (2xDC + 1xAC); requires minimum 2 Power Modules for simultaneous adaptive voltage DC charging

\* Depends on number of installed power modules



## C50x with static power distribution

Product code	Charging outputs	Max. continuous charging current	Max. DC charging power at 400 VDC*	Max. DC charging power at 800 VDC*
C501...C...C...	CCS2	1 x 200 A	80 kW	N/A
C501...C...D...	CCS2	1 x 250 A	100 kW	N/A
C501...C...E...	CCS2	1 x 300 A	120 kW	N/A
C501...CC...C...	2 x CCS2	2 x 200 A	2 x 80 kW	N/A
C501...CC...D...	2 x CCS2	2 x 250 A	2 x 100 kW	N/A
C501...CC...E...	2 x CCS2	2 x 300 A	2 x 100 kW	N/A
C501...CD...CB...	CCS2 & Chademo	200 A & 125 A	80 kW & 50 kW	N/A
C501...CD...DB...	CCS2 & Chademo	250 A & 125 A	100 kW & 50 kW	N/A
C501...CD...EB...	CCS2 & Chademo	300 A & 125 A	120 kW & 50 kW	N/A
C501...CCA...C...	2 x CCS2 & Type 2 AC	2 x 200 A & 3~32 A	2 x 80 kW & 22 kW	N/A
C501...CCA...D...	2 x CCS2 & Type 2 AC	2 x 250 A & 3~32 A	2 x 100 kW & 22 kW	N/A
C501...CCA...E...	2 x CCS2 & Type 2 AC	2 x 300 A & 3~32 A	2 x 100 kW & 22 kW	N/A
C501...CDA...CB...	CCS2 & Chademo & Type 2 AC	200 A & 125 A & 3~32 A	80 kW & 50 kW & 22 kW	N/A
C501...CDA...DB...	CCS2 & Chademo & Type 2 AC	250 A & 125 A & 3~32 A	100 kW & 50 kW & 22 kW	N/A
C501...CDA...EB...	CCS2 & Chademo & Type 2 AC	300 A & 125 A & 3~32 A	120 kW & 50 kW & 22 kW	N/A

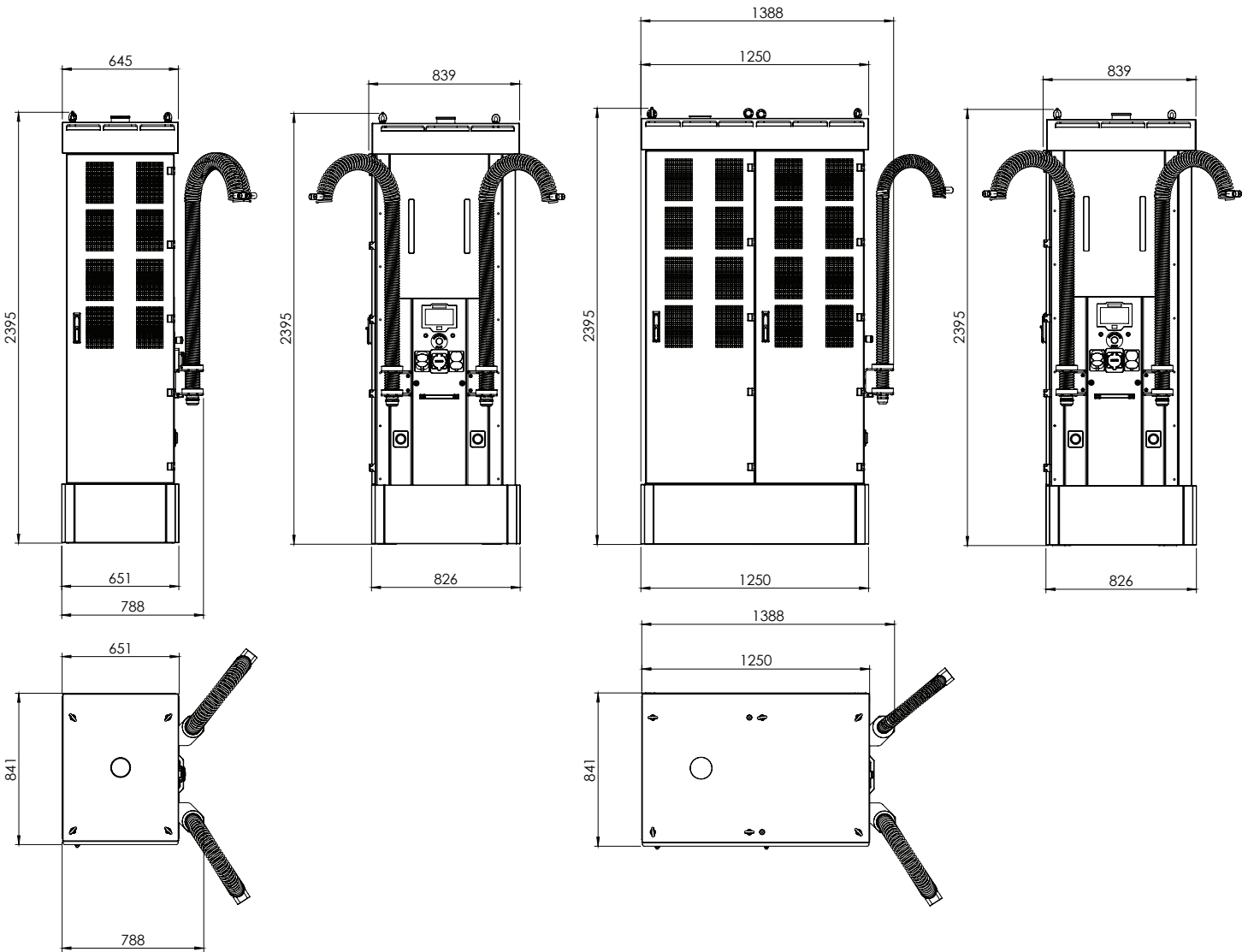
Product code	Charging outputs	Max. continuous charging current	Max. DC charging power at 400 VDC*	Max. DC charging power at 800 VDC*
C502...CC...C...	2 x CCS2	2 x 200 A	2 x 80 kW	N/A
C502...CC...D...	2 x CCS2	2 x 250 A	2 x 100 kW	N/A
C502...CC...E...	2 x CCS2	2 x 300 A	2 x 120 kW	N/A
C502...CD...CB...	CCS2 & Chademo	200 A & 125 A	80 kW & 50 kW	N/A
C502...CD...DB...	CCS2 & Chademo	250 A & 125 A	100 kW & 50 kW	N/A
C502...CD...EB...	CCS2 & Chademo	300 A & 125 A	120 kW & 50 kW	N/A
C502...CCA...C...	2 x CCS2 & Type 2 AC	2 x 200 A & AC 3~32 A	2 x 80 kW & AC 22 kW	N/A
C502...CCA...D...	2 x CCS2 & Type 2 AC	2 x 250 A & AC 3~32 A	2 x 100 kW & AC 22 kW	N/A
C502...CCA...E...	2 x CCS2 & Type 2 AC	2 x 300 A & AC 3~32 A	2 x 120 kW & AC 22 kW	N/A
C502...CDA...CB...	CCS2 & Chademo & Type 2 AC	200 A & 125 A & AC 3~32 A	80 kW & 50 kW & AC 22 kW	N/A
C502...CDA...DB...	CCS2 & Chademo & Type 2 AC	250 A & 125 A & AC 3~32 A	100 kW & 50 kW & AC 22 kW	N/A
C502...CDA...EB...	CCS2 & Chademo & Type 2 AC	300 A & 125 A & AC 3~32 A	120 kW & 50 kW & AC 22 kW	N/A

Note: All 3 outputs can be active simultaneously (2xDC + 1xAC)

\* Depends on number of installed power modules

## Mechanical dimensions (WxHxD), footprint

651 x 2395 x 841 mm



## Compliance to standards

Electrical safety IEC 61851-1, IEC 61851-23

EMC, Harmonics IEC 61851-21-2

## Options

Customized branding Customer branding options (colors, stickers)\*

\*Please consult Kempower for availability, pricing and MOQ

