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Huawei Fully Liquid-cooled Ultra-fast and Fast Charging

High-Quality Charging Anywhere

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Huawei Fully Liquid-cooled Ultra-fast/Fast Charging Solution

Optimal Experience

Low Noise

Charging noise < 55 dB

Charge-and-Go

200 km range by 5-minute charging

Plug-and-Charge

99% success rate
in first-attempt charging

Superior Quality

Long Service Life

15-year lifespan

Smart O&M

All-online O&M

No Leakage

Prefabrication with coolant-electricity isolation design

High Utilization

Large Capacity & Fast Turnover

Charging capacity ↑ 30%;
doubled turnover rate

High Efficiency & Low Power Loss

E2E efficiency of 95.5%

Easy PV & ESS Integration

Continuous evolution,
negating the need of grid revamping

Huawei Fully Liquid-cooled Charging Power Unit

Huawei fully Liquid-cooled power unit is a product oriented to electric vehicles for efficient energy conversion and power allocation. Compared with traditional solutions, Huawei innovatively adopts the liquid cooling technology and DC bus architecture. The product can output a maximum of 720 kW power at full configuration, and contains 120 kW AC/DC modules, 60 kW DC/DC Liquid-cooled modules, and power sharing units. A maximum of 12 charging connectors are supported at full configuration.

Liquid-cooled Power Unit Specifications

	720 Series	600 Series	480 Series
Product Model	DS720-720LCNA1		DS480-480LCNA1
AC/DC and DC/DC Modules	AC/DC x 5 + DC/DC x 12	AC/DC x 4 + DC/DC x 10	AC/DC x 4 + DC/DC x 8
Max. Output Power	720 kW	600 kW	480 kW
Dimensions (W x D x H)	800 mm x 1700 mm x 2150 mm		
Installation Mode	Floor mounting (prefabrication before transportation supported)		
System Efficiency	Max. efficiency: 95.5%		
Cooling Mode	Liquid cooling		
IP Rating	IP55		
Communications Port	4G and FE (northbound)		
Input Voltage	380 V AC±15%, three-phase, four-wire		
Input Frequency	45–66 Hz		
Power Factor	≥ 0.99 (load ≥ 50%)		
Harmonics	≤ 5% (load ≥ 50%)		
Input Power Distribution	800 A, 3-pole AC circuit breaker		630 A, 3-pole AC circuit breaker
Output Voltage	200–1000 V DC		
Max. Quantity of Charging Connectors	12	8	8
Regulated Current Precision	≤ ±1%		
Regulated Voltage Precision	≤ ±0.5%		
Operating Temperature	–35°C to +50°C		
Storage Temperature	–35°C to +70°C		
Altitude	≤ 4000 m		
Relative Humidity	5%–95% RH		
Noise Level	≤ 55 dB@25°C (silent mode); ≤ 60 dB@25°C (standard mode)		
Safety Functions	Input overvoltage/undervoltage protection, output overvoltage protection, constant power overload protection, short circuit protection, grounding failure protection, overtemperature protection, surge protection, emergency stop protection, current leakage protection, insulation detection, door opening protection, battery reverse connection protection, relay adhesion protection, water intrusion protection, and smoke alarm, etc.		
Standards	GB/T 18487.1-2015, GB/T 27930, GB/T 18487.2, NB/T 33001-2018, NB/T 33008.1-2018		
Communication Terminal for Power Unit and Dispenser	FE, ring network recommended, Cat 5E FTP cable		
Communication Protocol for Power Unit and Dispenser	GOOSE + Modbus TCP		
Auxiliary Power Supply Standards	220 V AC auxiliary power output for the power unit		
Flexible Power Expansion for Power Unit	●	●	○
Intelligent Power Scheduling	●		
Multi-channel Networking	●		
Charging Safety Protection	●		
DC ESS Connection	●		
Upgrade Options			
Single-Connector Output Capability Enhancement	●		
OTA Supported for EV and Dispenser	●		
Upgrade from Fast Charging to Ultra-fast Charging	●		

Huawei Charging Dispenser

Huawei charging dispenser is designed for EV users with two cooling modes: liquid cooling and natural cooling. After connecting to Huawei fully Liquid-cooled power unit, the Liquid-cooled ultra-fast charging dispenser can output a maximum of 600 A for one charging connector; while the naturally cooled fast charging dispenser can output a maximum of 250 A for one charging connector.

Liquid-cooled Charging Dispensers

Naturally Cooled Charging Dispensers

Dispenser Specifications

Product Series	Ultra-fast Charging Dispenser		Fast Charging Dispenser		
Product Model	DT600L1-CNA1	DT600L1-CNA1-6315-002	DT250N1-CNA1-6316-003	DT250N2-CNA1	DT250N2-CNA2
Dimensions (W x D x H)	340 mm x 295 mm x 1700 mm		390 mm x 295 mm x 1700 mm		
Quantity of Charging Connectors	1	1	1	2	2
Charging Cable Length	3.5 m	3.5 m	5 m		7.4 m
Installation Mode	Floor mounting				
IP Rating	IP55				
Cooling Mode	Liquid cooling		Natural cooling		
Operating Temperature	–35°C to +50°C				
Noise Level	≤ 55 dB@25°C		≤ 50 dB@25°C		
Storage Temperature	–35°C to +70°C				
Relative Humidity	5%–95% RH				
Altitude	≤ 4000 m				
Output Voltage	200–1000 V DC				
Charging Current	600 A (maximum)		250 A		
Standards	GB/T 27930-2015, JJG 1149-2022		GB/T 18487.1-2015, NB/T 33001-2018, NB/T 33008.1-2018, GB/T 27930-2015, JJG 1149-2022		
Safety Functions	Output overvoltage protection, short circuit protection, grounding continuity detection, overtemperature protection, emergency stop protection, leakage protection, insulation detection, door opening protection, power failure protection, battery reverse connection protection, contactor adhesion protection, and low liquid level alarm				

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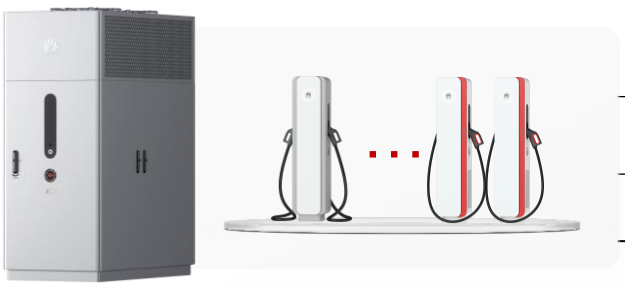
Huawei Ultra-fast and Fast Charging Solutions

Configuration Parameters

Ultra-fast Charging Solution

Power Unit Model	AC/DC and DC/DC Modules	Max. Ultra-fast Charging Dispensers
DS720-720LCNA1	AC/DC x 5 + DC/DC x 12	6
	AC/DC x 4 + DC/DC x 10	4



Ultra-fast + Fast Charging Solution

Power Unit Model	AC/DC and DC/DC Modules	Ultra-fast Charging Dispensers	Fast Charging Dispensers
DS720-720LCNA1	AC/DC x 5 + DC/DC x 12	2	10
	AC/DC x 4 + DC/DC x 10	2	6

* The preceding table lists parameters in typical configuration, which can be adjusted based on site requirements.

Fast Charging Solution

Power Unit Model	AC/DC and DC/DC Modules	Max. Fast Charging Dispensers
DS720-720LCNA1	AC/DC x 5 + DC/DC x 12	12
	AC/DC x 4 + DC/DC x 10	8
DS480-480LCNA1	AC/DC x 4 + DC/DC x 8	8

Huawei Digital Power Technologies Co., Ltd.

Address: Huawei Digital Power Antuoshan Headquarters, Futian District, Shenzhen
Postal code: 518084
Website: https://digitalpower.huawei.com
Email: support@huawei.com
Hotline: 4008302118