

Huawei FusionCharge Fully Liquid-Cooled Ultra-Fast Charging



Advocating For Sustainable Development of Future-Proof Charging Facility

Enhanced **Charging**

Fast and Quiet
High Utilization Rate

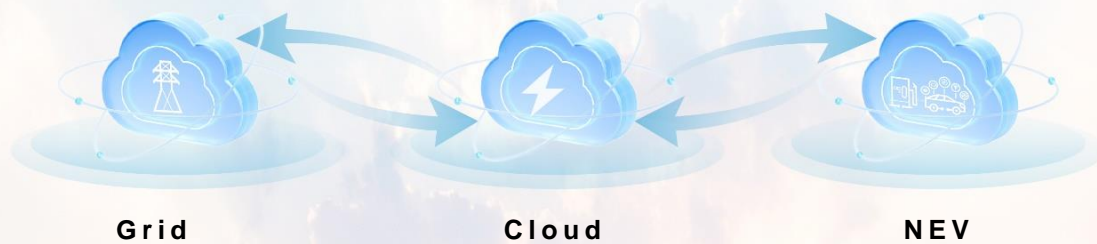
Superior **Quality**

Long Lifespan
Low Failure Rate

Flexible **Architecture**

PV & ESS Convergence
Upgradeable

FusionCharge



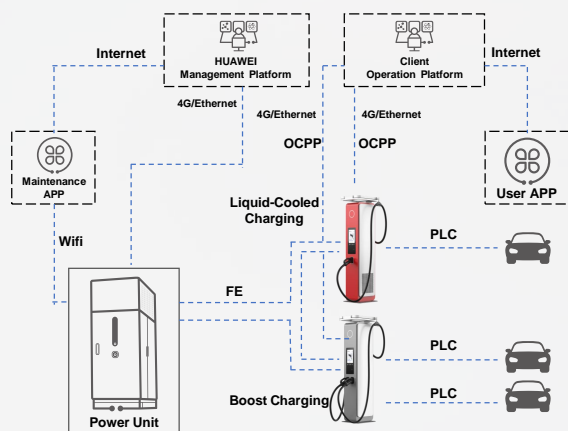
Introduction

Liquid-cooled power unit is the core part of ultra-fast DC charging system for public charging station and other sites demanding multiple fast chargers. With AC/DC and DC/DC modules decoupled, power units can better utilize power capacity and be accessible to DC ESS coupling.

An innovative liquid-cooled architecture with DC bus enables enhanced charging, superior quality and flexible architecture.



Architecture



Power Unit



Liquid-Cooled Power Unit

Dispenser



Liquid-Cooled Charging Dispenser Boost Charging Dispenser

Product Features

Enhanced Charging



Power Sharing Matrix
Improving power utilization



Low Noise
≤60dB@25°C

Superior Quality



Long Life
10 years lifespan



Low Failure Rate
Module failure rate < 0.5%*
* Theoretical values

Flexible Architecture



DC Bus
AC or DC ESS coupling supported



Modular Design
Multiple dispenser configurations



Power Unit Specification

Basic Specifications	Dimensions (W x D x H)	800 mm × 1700 mm × 2150 mm
	Power Configuration (AC/DC)	600kW
	Power Configuration (DC/DC)	720kW
	Installation Mode	Floor-mounted
	Efficiency (Full load)	94.7%
	Efficiency (Maximum)	95.5%
	Cooling	Liquid cooling
	IP Rating	IP55
	Communication Interface	4G, Ethernet (Northbound communication)
	Standby Power	35W
Input Specifications	Rated Input Voltage	2 X 400Vac, three-phase five-wire system
	Rated Frequency	50/60 Hz
	Rated Input Current	≤931 A (Output: 600kW, Input: 400Vac)
	Input Module	120kW AC/DC liquid-cooled module
	Power Factor	≥0.99 (Load≥50%)
	THDi	≤5% (Load≥50%)
Output Specifications	Output Voltage	200~1000 Vdc
	Output Module	60kW DC/DC liquid-cooled module
	Current Ripple	≤ 1.5A @frequency<10Hz; ≤ 6A@frequency<5000Hz; ≤ 9A@frequency<150kHz
	Voltage Ripple	≤ ±5V
	Charging Connector Number	Max. 12 (Max. 8 x ultra-fast)
Environmental Specifications	Operating Temperature	-35°C to +50°C
	Storage Temperature	-35°C to +70°C
	Altitude	≤4000m
	Relative Humidity	5%~95% (Non-condensing)
	Noise	≤ 55 dB@25°C (Mute Mode), ≤ 60 dB@25°C (Standard mode)
Compliance		IEC 61851-1, IEC 61851-23, IEC 61851-21-2



Power Unit Specification

Basic Specifications	Dimensions (W x D x H)	800 mm × 1700 mm × 2150 mm
	Power Configuration (AC/DC)	240kW
	Power Configuration (DC/DC)	360kW
	Installation Mode	Floor-mounted
	Efficiency (Full load)	94.7%
	Efficiency (Maximum)	95.5%
	Cooling	Liquid cooling
	IP Rating	IP55
	Communication Interface	4G, Ethernet (Northbound communication)
	Standby Power	30W
Input Specifications	Rated Input Voltage	2 X 400Vac, three-phase five-wire system
	Rated Frequency	50/60 Hz
	Rated Input Current	≤354 A (Output: 240kW, Input: 400Vac)
	Input Module	120kW AC/DC liquid-cooled module
	Power Factor	≥0.99 (Load≥50%)
	THDi	≤5% (Load≥50%)
Output Specifications	Output Voltage	200~1000 Vdc
	Output Module	60kW DC/DC liquid-cooled module
	Current Ripple	≤ 1.5A @frequency<10Hz; ≤ 6A@frequency<5000Hz; ≤ 9A@frequency<150kHz
	Voltage Ripple	≤ ±5V
	Charging Connector Number	Max. 6 (Max. 4 x ultra-fast)
Environmental Specifications	Operating Temperature	-35°C to +50°C
	Storage Temperature	-35°C to +70°C
	Altitude	≤4000m
	Relative Humidity	5%~95% (Non-condensing)
	Noise	≤ 55 dB@25°C (Mute Mode), ≤ 60 dB@25°C (Standard mode)
Compliance		IEC 61851-1, IEC 61851-23, IEC 61851-21-2



Power Unit Specification

Basic Specifications	Dimensions (W x D x H)	800 mm x 1700 mm x 2150 mm
	Power Configuration (AC/DC)	720kW
	Power Configuration (DC/DC)	720kW
	Installation Mode	Floor-mounted
	Efficiency (Full load)	94.7%
	Efficiency (Maximum)	95.5%
	Cooling	Liquid cooling
	IP Rating	IP55
	Communication Interface	4G, Ethernet (Northbound communication)
Input Specifications	Rated Input Voltage	400Vac±10%, three-phase five-wire system
	Rated Frequency	50/60 Hz
	Rated Input Current	≤1117A (Output: 720kW, Input: 400Vac)
	Input Module	120kW AC/DC liquid-cooled module
	Power Factor	≥0.99 (Load≥50%)
	THDi	≤5% (Load≥50%)
Output Specifications	Output Voltage	200~1000 Vdc
	Output Module	60kW DC/DC liquid-cooled module
	Current Ripple	≤ 1.5A @frequency<10Hz; ≤ 6A@frequency<5000Hz; ≤ 9A@frequency<150kHz
	Voltage Ripple	≤ ±5V
	Charging Connector Number	Max. 12 (4 x ultra-fast, 8 x fast)
Environmental Specifications	Operating Temperature	-35°C to +50°C
	Storage Temperature	-35°C to +70°C
	Altitude	≤4000m
	Relative Humidity	5%~95% (Non-condensing)
	Noise	≤ 55 dB@25°C (Mute Mode), ≤ 65 dB@25°C (Standard mode)
Compliance		IEC 61851-1, IEC 61851-23, IEC 61851-21-2



Huawei Dispenser Specification

Basic Specifications	Model	DT500L1-EUA1	DT500N2-EUA1
	Type	Liquid-cooled	Boost
	Dimensions (W x D x H)	≤395 mm × 495 mm × 2150 mm	≤395 mm × 495 mm × 2150mm
	Charging Connector Number	1 (CCS2)	2 (CCS2)
	Charging Cable Length	≥5m	≥5m
	Installation Mode	Floor-mounted	Floor-mounted
	IP Rating	IP55	IP55
	Cooling	Liquid cooling	Natural cooling
	Authentication	RFID reader(ISO/IEC 14443 A / B, ISO/IEC 15693, NFC) / Credit card reader (Optional) / QR code	RFID reader(ISO/IEC 14443 A / B, ISO/IEC 15693, NFC) / Credit card reader (Optional) / QR code
	Standby Power	45W	50W
	Meter Certification	MID / LNE	MID / LNE
	OCPP	1.6J	1.6J
Environmental Specifications	Operating Temperature	-30°C to +55°C (derating from 40°C)	-30°C to +55°C (derating from 40°C)
	Noise	≤55dB@25°C	≤50dB@25°C
	Storage Temperature	-40°C to +70°C	-40°C to +70°C
	Relative Humidity	5%RH~95%RH	5%RH~95%RH
	Altitude	≤2000m	≤2000m
Output Specifications	Power	400 kW*	2 x 400 kW*
	Output Voltage	200~1000Vdc	200~1000Vdc
	Output Current Max.	500A	2 × 500A
	Output Current Continuous	425A	2 x 375A
Compliance		IEC 61851-1, IEC 61851-23, IEC 61851-21-2, IEC 62196-1, IEC 62196-3, DIN 70121, ISO 15118	
Protections	Overvoltage protection, short circuit protection, grounding protection, overtemperature protection, leakage protection, insulation detection, door opening protection		

*Power rating is based on max. current rating and vehicle battery system voltage of 800V. For type "Boost" 2x 400kW can be achieved simultaneously.
The power of dispenser is limited by the max. power of the power unit. Time duration for max. current is 20 min for Liquid-cooled type and 10 min for Boost type.

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