

# RAPID ST



## The ultra-fast charging station

**Ultra-fast charging stations are a key element** for electric mobility to take off fully.

Ingteam's solution for ultra-fast charging stations is based on a new DC distribution architecture, which allows maximum simplification of the installation and easy integration of storage and photovoltaic energy.

It brings together all the advantages of latest generation SiC electronics with a very compact size, as well as excellent efficiency and reliability.

RAPID ST200 and ST400 are the ideal ultra-fast charging points for service stations with a high turnover. Compatible with the CHAdeMO and CCS standards, they are the perfect solution for charging all types of electric vehicle.



	RAPID ST 200		RAPID ST 400	
	ONE	DUO	ONE	DUO
Connectors	1	2	1	2
Simultaneous charging		✓		✓
Connector type	CCS	CCS + CCS CCS + CHAdeMO	CCS	CCS + CCS CCS + CHAdeMO

## RAPID ST FEATURES

### Functions

- Ultra-fast charging in CCS, up to 400 kW.
- Ultra-fast charging in CHAdeMO up to 100 kW.
- Cable management system (CMS).
- Ambient light.
- Integrated DC wattmeter.
- Simplicity and efficiency in the integration of storage systems.

### HMI

- RFID reader.
- 7" color touchscreen, multi-language.

### Communications and software

- Ethernet, RS485.
- OCPP, Autocharge, Plug & Charge.
- DLM, static and dynamic power management with other Ingeteam DC and AC units.
- Web Manager.
- Modbus TCP, MQTT.
- Automatic software updates.
- Update via USB.

### Safety

- Built-in electrical protections.
- Emergency button.
- Security lock with key.
- Door-opening sensor.

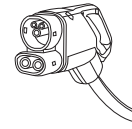
### Maintenance

- Ventilation filter accessible from the outside without internal manipulation.
- IP2x accessible control area.

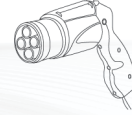
### Options

- GPRS - 2G/3G/4G communication.
- Ethernet switch kit for 8 ports.
- Contactless bank card reader.
- 21" Full HD advertising screen.
- Complete supply of the transformation center.
- Smart DLM.
- Cloud Manager.
- Refrigerated cable.

## CONNECTORS



**CCS2 300/500**  
CCS Type 2  
300 or 500 A



**CHA200**  
CHAdeMO 200 A



1,130 mm

791 mm

2,365 mm

**CHARGING SATELLITES**
**RAPID ST200**
**RAPID ST400**
**DC INPUT**

Rated current	301 A	602 A
Rated voltage	700 V	700 V

**DC OUTPUT**

Voltage range	50 - 1,000 Vdc	
Maximum current	312 A to 500 Vdc 200 A to 1.000 Vdc	500 A to 500 Vdc, 400 A to 1,000 Vdc
Maximum power	200 kW	400 kW
Charging connectors	CCS I CCS + CCS I CCS + CHAdeMO	

**REGULATIONS AND SAFETY**

Standards	IEC 61851-1, IEC 61851-21-2, IEC 61851-23, IEC 61851-24 IEC 62196-2, IEC 62196-3, IEC 61000, DIN70121, ISO15118
Indirect contacts	DC: continuous insulation monitoring AC: differential protection
Overvoltages	Overvoltage category: III (according to IEC 60664-1)

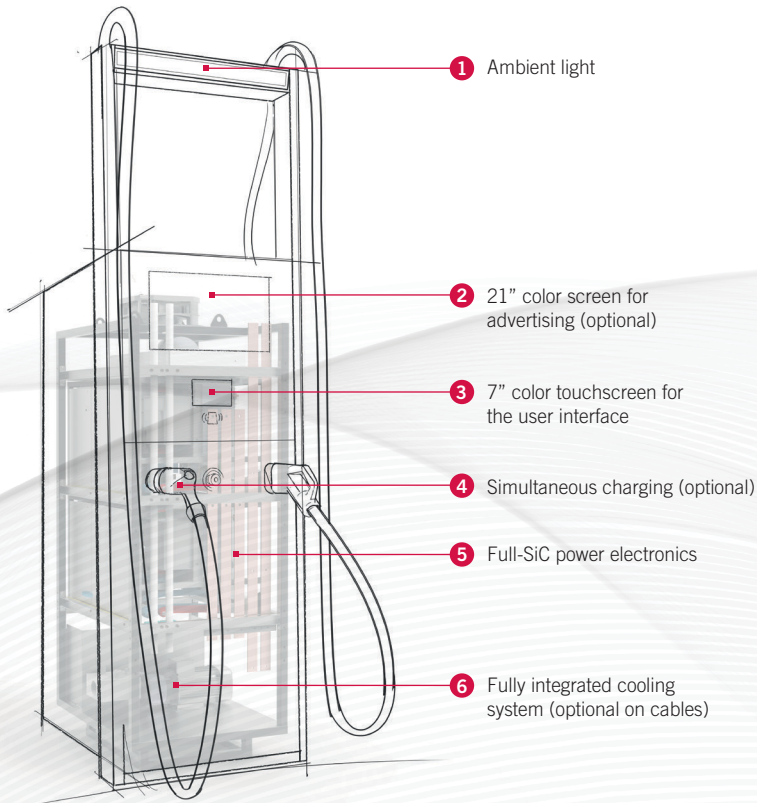
**FUNCTIONALITIES AND ACCESSORIES**

Communication interfaces	Ethernet, RS485 GPRS - 2G/3G/4G (optional), dual SIM (optional)
Communication protocols	OCPP 1.6, 2.0.1, Modbus RTU, Modbus TCP, MQTT
HMI	7" color touchscreen, multi-language RFID reader (Mifare Classic 1K&4K, Mifare DesFire EV1, NFC) Contactless bank card reader (optional)
Advertising screen	21" Full HD (optional)
Plug & Charge	Yes

**GENERAL INFORMATION**

Auxiliary supply	3 phases + N; 400 Vac $\pm$ 10%	
Stand-by consumption	300 W	
Efficiency and power factor	> 95% at rated power; > 0.98	
Energy measurement	DC meter	
Hose length	4.8 m with cable management system (CMS) included	
Operating temperature	-20 °C to 55 °C (derating from 40 °C)   Low temperature kit at -35 °C (optional)	
Humidity	< 95%	
Maximum altitude	2,000 m (for higher altitudes, consult Ingeteam)	
Weight	530 kg	630 kg
Dimensions (h x w x d)	2365 x 791 x 1,130 mm	
Enclosure	Galvanized steel	
Protection class	IP55 / IK10 (IK08 display) / C5H	
Cooling system	Integrated liquid cooling (optional in cables)	
Markings	CE	
Directives	Low Voltage Directive: 2014/35/EU   EMC Directive: 2014/30/EU   RED Directive 2014/53/EU	

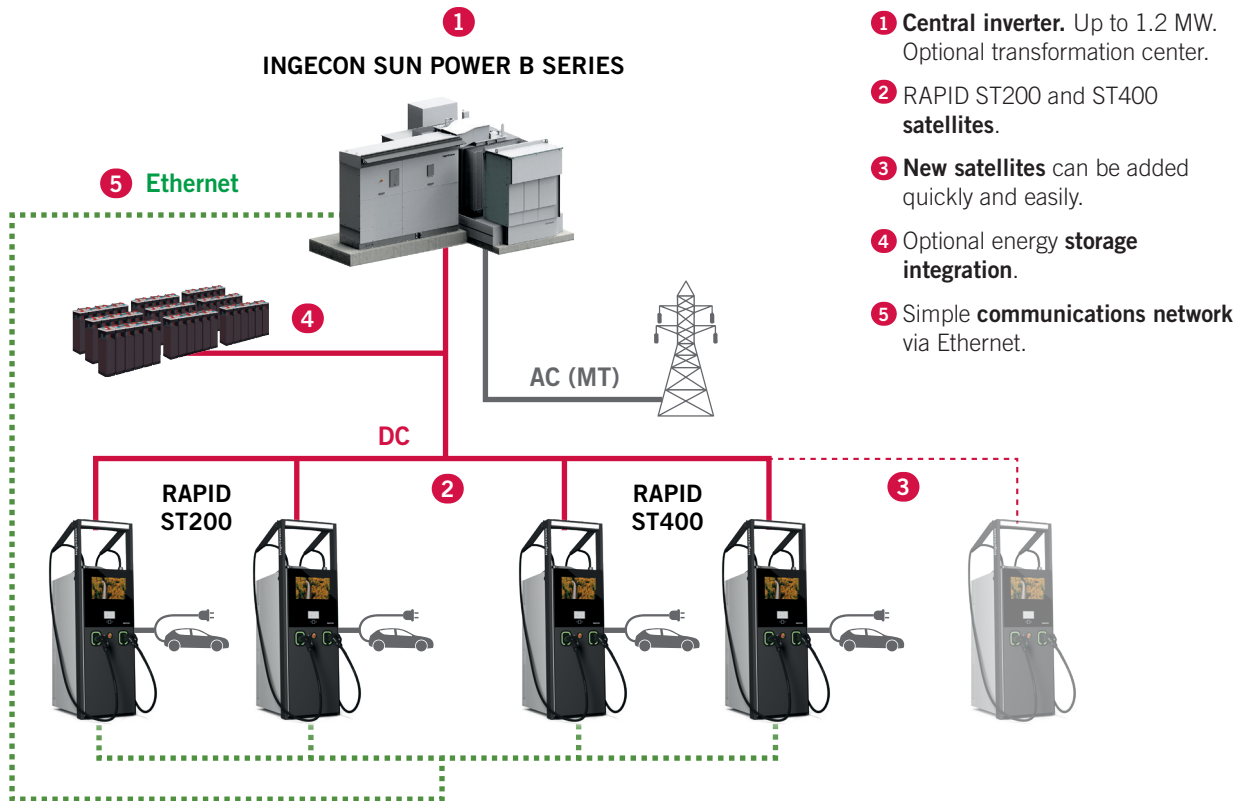




**Advantages of the DC bus architecture**

- Up to 120 meters of distance between the central inverter and the satellites, free and clear charging area.
- Half of the installation footprint of other architectures.
- Cooling integrated in all elements, allowing maximum simplification of the installation.
- Scalability, allowing easy implementation of expansions by connecting new satellites to the DC bus.
- Flexible power balancing (DLM) between all satellites.
- All satellites can always be charged simultaneously without having to sacrifice power modules in order to divert that energy to another satellite with greater demand.
- ST200 satellites can be updated to ST400 just by adding a new power module.

**INSTALLATION DIAGRAM**



- 1 **Central inverter.** Up to 1.2 MW. Optional transformation center.
- 2 **RAPID ST200 and ST400 satellites.**
- 3 **New satellites** can be added quickly and easily.
- 4 **Optional energy storage integration.**
- 5 **Simple communications network** via Ethernet.

**CENTRAL INVERTER**
**AC INPUT**
**1110TL B400**

Power @35 °C / @50 °C	1,020 kVA
Current @35 °C / @50 °C	1600 A / 1472 A
Rated voltage	3P 400 V IT System
Frequency	50 / 60 Hz
Adjustable power factor	Yes, 0-1 (leading /lagging)
THD (Total Harmonic Distortion)	< 3%
Overvoltage protection	Type II surge arresters
AC switch	AC thermomagnetic switch with door control, remote or motorized trip

**STORAGE**

Battery voltage range	580 V - 780 V
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**DIMENSIONS AND WEIGHT**

Dimensions (W x D x H)	2820 x 825 x 2,270 mm
Weight	1560 kg

**GENERAL DATA**
**INSTALLATION**

Operating temperature	-20 °C to +60 °C
Relative humidity (without condensation)	0 - 100%
Protection class	IP54 / IK10 (IK08 display and ventilation grilles)
Protection against corrosion	C5H
Maximum altitude	4,500 m (for installations above 1,000 m, please contact the sales department)
Product marking	CE

