

# EV Chargers

A 2019 Citizens Advisory Committee Project Report Prepared by Kevin Decker, Richard Wolf, & Chris Richardson - POCAC Subcommittee Members

## Background

When cars use gasoline or diesel power for propulsion, their exhaust produces toxic and carcinogenic particles that are dangerous to breathe, and carbon dioxide (CO<sub>2</sub>) emissions that warm the atmosphere, acidify the ocean, and raise sea levels. The Port can help clean the air, slow climate change impacts on oceans, and improve our local economy in the process.

Electric vehicles (EV) are a fast growing segment of the automobile market. Demand for EV chargers drives tourism (e.g. at farmer's markets and casinos) and sales (e.g. in downtown areas and department stores). As China requires higher quotas of electric car sales, US carmakers such as GM have committed to building more EVs. The Port of Olympia's Small Cities fund helped the City of Yelm install EV chargers designed to:

- Meet the growing needs of energy-conscious local citizens and to
- Attract tourists and shoppers to boost the local economy.

While the POCAC's 2018 Marina Marketing study suggests the possibility of EV golf carts for transporting visiting boaters to the Farmer's Market and Downtown Olympia, the Port has only one 110-V outlet post in a parking lot, with no EV-specific charging options. Adding EV chargers can serve visitors and locals, and can benefit our economy and environment.

## What programs and grants are available?

### [Volkswagen diesel settlement](#)

The Volkswagen diesel settlement is being used to fund projects that reduce emissions. Washington state will receive a total of \$140 million from Volkswagen to settle violations of the state and federal Clean Air Acts. The funds are the result of a \$112.7 million federal settlement negotiated by the U.S. Environmental Protection Agency and \$28.4 million from a separate state settlement.

Under the federal settlement, the state can invest mitigation funds in projects that replace or repower eligible vehicles, vessels, and equipment with new, less-polluting diesel engines, alternate-fueled (compressed natural gas, propane, or hybrid), or all-electric engines. They can also invest in projects that develop charging infrastructure for electric vehicles.

## [Clean Energy Fund](#)

The Washington State Department of Commerce also runs a Clean Energy Fund (CEF) grant program. The CEF program funds the development, demonstration and deployment of clean energy technology, including supporting [electrification of transportation](#) projects. The Notice of Funding Opportunity is currently being revised. This includes timelines, requirements, and scoring criteria.

### [RCW 82.08.816](#)

The purchase of electric vehicle charging infrastructure is exempt from state sales taxes through January 1, 2020. Additional RCW language is in the Appendix

## Types of EV chargers

There are three main types of EV charging – rapid, fast, and slow. These represent the power outputs, and therefore charging speeds, available to charge an EV.

**Rapid (level 3):** Also known as DCFC or DC Fast Chargers. These charging stations are the quickest way to charge a vehicle. Rapid chargers are one of two types – AC or DC [Alternating or Direct Current]. Current Rapid AC chargers are rated at 43 kW, while most Rapid DC units are at least 50 kW. Both will charge the majority of EVs to 80% in around 30-60 minutes (depending on battery capacity). Not every EV is equipped to charge at a level 3 charger.

**Fast (Level 2):** This is the typical EV plug found in homes, garages, and public charging stations. Fast chargers include those which provide power from 7 kW to 22 kW, which typically fully charge an EV in 3-4 hours. Common fast connectors are a tethered Type 1 or Type 2 socket (via a connector cable supplied with the vehicle).

**Slow (Level 1):** This is the standard wall outlet plug of 120 volts. Slow units (up to 3 kW) are best used for overnight charging and usually take between 6 to 12+ hours for a pure-EV, or 2-4 hours for a PHEV. EVs charge on slow devices using a cable which connects the vehicle to a 3-pin or Type 2 socket.

## Selected EV Charging Manufacturers

While there are numerous EV charging providers, the three most ubiquitous providers are [Chargepoint](#), [EVgo](#), and [Blink](#). Additional information on these manufacturers is provided below.

### Chargepoint

Connor J. Anderson  
Sales Development Representative  
[Connor.Anderson@Chargepoint.com](mailto:Connor.Anderson@Chargepoint.com)  
669.254.1488

Notes: In the [Appendix](#) is a general brochure for both owning and renting Chargepoint stations; renting is the best way to avoid upfront costs while owning is the best way to have lower recurring costs. A local representative is available for a free site walk to determine if there are any quarterly promotions or incentives, as well as give a full price estimate including the infrastructure costs.

- Chargepoint will provide technical and design support for developing a business plan for installing chargers.
- With no obligation they will send out a person to review the site and develop pricing, infrastructure requirements and explain services they will provide to the Port.
- Recommend level 2 charging units. \$7,200 to buy plus \$900/yr for software and service support. \$2,400/yr. to rent includes installation and insurance.
- Level 3 costs \$40,000 to purchase, no rental available.
- They will work with the Port on pricing discounts and grant funding as they stay on top of most grants that are available.
- Washington State is their second largest area served by number of units and they presently have 8 units in Olympia including 1 level three used by an auto dealer.
- They provide full coverage insurance and say they will usually repair within 24 hours .
- They provide a phone service line for station owners and for drivers so most issues will go directly to Chargepoint instead of the Port. They provide a web page that allows the Port to monitor the charge stations, get 15 minute updates, lets the Port set pricing for each station (some could be free), how long each driver is at the charging station, and electricity usage. It also allows for a penalty fee if the driver does not vacate the station after a full charge is completed.
- Chargepoint collects all revenue (accepts credit cards) and pays the Port 90% and retains 10% for the services they provide. If the Port does not charge a fee, there are no fees due to Chargepoint other than for the rental or purchase of the charging station.
- The Port can configure some charging stations to be open to the public and others to have restricted use and only accessible with special codes.
- Installation time would be a few weeks to a month.
- Preliminary site work is free with no obligation to buy.

## EVgo

Olympia is outside of EVgo's prospective footprint and they would not be interested in pursuing an opportunity at this time.

## Blink

Adrianne Noicely  
Business Development Executive  
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305.521.0200, EXT. 200

Two purchasing options:

1. The Port purchases and owns the Blink electric vehicle charging stations.
  - Port pays for annual Network Service, each charging station has an annual network fee of \$216.
  - Port sets pricing and receives 100% of the net revenue generated after an 8% transaction fee is removed.
  - Each Blink 100Amp wall charging station costs \$3,500 MSRP plus shipping.
  - Each 100Amp pedestal charging station costs \$4,100 MSRP plus shipping.
  - Blink EV charging stations come with a 1 year warranty. Extended warranty options are available beginning at \$499 per charging station per year.
  - The Port will be responsible for installation of equipment and payment of all electricity costs.
2. Blink Owned and 5 Year Service Agreement
  - 50% net revenue share with electricity reimbursed model.
  - Blink Network, LLC will provide Blink charging stations at no cost to the Port for a 5 year term, which includes setting fees, maintaining/ providing replacement equipment, customer support, and will remit 50% of the net revenue generated less an \$18 per-month per-charger network fee and 8% transaction fees.
  - Additional charging stations will be provided if demand warrants additional units.
  - Blink will reimburse the cost of electricity dispensed by the charging machine.
  - Service under this model is provided by Blink Network, LLC who supplies parts and coordinate scheduled repairs.
  - There are NO service or network fees invoiced to the Port.

## Partnership

If the Port is serious about moving forward with installing EV chargers there is a great, but limited, window of opportunity to coordinate with the City of Olympia and take advantage of limited grant funding. The partnership would reduce the cost to the Port through cost sharing with the City. Additionally, the application for grant funds would be significantly strengthened by demonstrating a partnership with other local entities. Partnering with the City will also allow the Port to benefit from the city's experience and their gained knowledge of the process. The City has indicated an interest in working with and further collaborating with the Port to install EV chargers at the Farmer's Market. City contacts are Danelle MacEwen 360-753-8211 [dmacewen@ci.olympia.wa.us](mailto:dmacewen@ci.olympia.wa.us) and Meliss Maxfield [mmaxfiel@ci.olympia.wa.us](mailto:mmaxfiel@ci.olympia.wa.us).

## Where to install chargers

The City of Olympia has indicated an interest in pursuing a partnership with the Port to install EV chargers near the Olympia Farmers Market. A survey conducted by the city of the parking lot near the Farmer's Market has identified two locations that would be best suited for locating EV chargers. This determination was based on existing electrical infrastructure at these locations.



## Estimated Costs

Costs have been provided for 2 EV charger manufacturers. These costs do not include some items such as creating the electricity infrastructure, pavement, etc. It only includes basic charger costs. An insurance review would also be required to determine any potential liability concerns that could increase premiums.

## POCAC Recommendations

- Reach out to the City of Olympia and begin discussion on a partnership to move forward with installing EV Chargers.
- The Port should work with its preferred provider to do an initial assessment of Port properties to identify best locations and number of chargers needed.
- New leases with tenants should encourage energy efficient practices such as EV chargers and solar power. It is recommended that the Port formalize its policies with respect to encouraging these practices through monetary or other support mechanisms.

# Appendix

RCW 82.08.816

Exemptions—Electric vehicle batteries and infrastructure. (Expires January 1, 2020.)

\*\*\* CHANGE IN 2019 \*\*\* (SEE 2042-S2.SL) \*\*\*

(1) The tax imposed by RCW 82.08.020 does not apply to:

- (a) The sale of batteries for electric vehicles;
- (b) The sale of or charge made for labor and services rendered in respect to installing, repairing, altering, or improving electric vehicle batteries;
- (c) The sale of or charge made for labor and services rendered in respect to installing, constructing, repairing, or improving electric vehicle infrastructure; and
- (d) The sale of tangible personal property that will become a component of electric vehicle infrastructure during the course of installing, constructing, repairing, or improving electric vehicle infrastructure.

(2) Sellers may make tax exempt sales under this section only if the buyer provides the seller with an exemption certification in a form and manner prescribed by the department. The seller must retain a copy of the certificate for the seller's files.

(3) The definitions in this subsection apply throughout this section unless the context clearly requires otherwise.

(a) "Battery charging station" means an electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles, which meet or exceed any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

(b) "Battery exchange station" means a fully automated facility that will enable an electric vehicle with a swappable battery to enter a drive lane and exchange the depleted battery with a fully charged battery through a fully automated process, which meets or exceeds any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

(c) "Electric vehicle infrastructure" means structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

(d) "Rapid charging station" means an industrial grade electrical outlet that allows for faster recharging of electric vehicle batteries through higher power levels, which meets or exceeds any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

(4) This section expires January 1, 2020.





# CT4000 Family

ChargePoint® Level 2 Commercial Charging Stations

The CT4000 family is the latest generation of ChargePoint commercial charging stations. Refined yet rugged, these stations set the industry standard for functionality and aesthetics.

The CT4000 full motion color LCD display instructs drivers and supports dynamic updates of custom branded videos and advertisements.

Intelligent power management options double the number of parking spaces served by allowing two charging ports to share a single circuit. Sites with single port EV stations can upgrade to dual port stations without requiring additional electrical services.

The CT4000 is the first ENERGY STAR® certified EV charger because it charges efficiently and conserves power when not charging. As an ENERGY STAR certified EV charger, the CT4000 uses significantly less energy than a standard EV charger when in standby mode to help you save money on your utility bill.

All CT4000 models offer one or two standard SAE J1772™ Level 2 charging ports with locking holsters, each port supplying up to 7.2kW. With this standard connector, ChargePoint level 2 stations can charge any EV.

Stations are available in bollard and wall mount configurations for easy installation anywhere. All stations are fully software upgradeable remotely over the air.

Stations come in both 6' and 8' tall models with 18' and 23' cords, respectively. With multiple options for size and cord reach, your station can service up to four parking spaces, reach all car models regardless of parking style or car sizes and increase the usability of your EV spots.

## Driver Friendly User Interface

- \* Instructional video shows how to use the station
- \* Multi-language: English, French, Spanish
- \* Touch button interface; works in rain, ice and with gloves
- \* Backed by ChargePoint's world class 24/7 driver phone support

## Easily Communicate with Your Drivers

Whether you're a retail establishment wanting to advertise your latest product, a workplace looking to communicate with employees or a municipality wanting to welcome visitors, ChargePoint's prominent LCD screen makes it easy to reach EV drivers:

- \* Daylight readable, with auto brightness control
- \* 640 X 480 resolution active matrix
- \* Full motion 30fps video support
- \* Upload up to 60 seconds of high quality video on a color LCD screen to individual stations as often as desired
- \* Brand your charging stations to communicate with drivers
- \* Instructional video in English, Spanish or French



The First  
**ENERGY STAR®**  
Certified EV Charger



### Service Products and Support

ChargePoint offers world-class service products and support that help ensure quality of work, save time and money, protect your investment and enhance the productivity of your charging stations. From site planning to installation and setup, to ongoing care and management, when you choose ChargePoint, you're covered.

- + **ChargePoint Configuration and Activation:** customized setup and activation of your stations
- + **ChargePoint Assure:** the most comprehensive EV Station maintenance and management in the industry

### Energy Measurement and Management

- + Real-time energy measurement
- + 15 minute interval recording
- + Time of Day (TOD) pricing
- + Load shed by percentage of running average or to fixed power output

### Minimize Costs with Flexible Power Management Options

In the vast majority of applications, a full power configuration is the best choice for both station owners and drivers. However, when drivers are parked for a longer time, an intelligent, lower power output can save station owners considerable installation cost while still providing drivers a great charging experience. With flexible power options, station owners can meet the needs of drivers while lowering costs:

#### Power Select (Patent Pending)

- + Allows for a lower capacity (less than 40A) circuit to power each port
- + Cuts installation costs by reducing the cost or even avoiding the need to upgrade panels or transformers

#### Power Sharing

- + Dynamically share one 40A, 30A or 20A circuit between two parking spaces
- + Doubles the number of parking spots served while reducing installation and operating costs
- + Allows station owners to upgrade a single port station to dual port to serve more drivers with no electrical upgrade

### Clean Cord Technology

- + Keep charging cords off the ground
- + Standard on all models
- + Ultra-reliable second-generation gravity operated mechanism
- + Flexible over entire -40°F to +122°F product temperature range

### Safe, Reliable, Energy Efficient Hardware

- + UL listed, meeting the stringent requirements of the nation's leading safety standards organization
- + Stations are rugged, built to withstand the elements
- + Safe, Reliable and Energy Efficient
- + ENERGY STAR certified, charges efficiently and conserves power when not charging

### When Charging is Mission Critical, Protect Your Investment with ChargePoint Assure

- + **Minimize downtime:** ChargePoint Assure provides the most comprehensive EV Station maintenance and management in the industry
- + **Get up and running quickly and flawlessly:** Professional guidance for station configuration saves you time, and unlimited changes to station policies flexibly supports your business
- + **Eliminate unexpected future expenses:** Cost for parts and on-site labor to install is covered for all Assure eligible repairs
- + **One less thing to worry about:** Proactive station monitoring provides you with regular reporting
- + **Reduced risk of downtime:** We guarantee 98% annual uptime and one business day response to requests
- + **Support when you need it:** We're there for you *and* your drivers. Phone support available for station owners Monday to Friday from 5 AM to 6 PM Pacific. Phone support for drivers is 24/7/365, so you never need to field a driver call

Ultra-reliable second-generation gravity operated mechanism.

18' and 23' cords to reach all car models and serve more parking spaces.

World-class 24/7 driver phone support.

Instructional video shows how to use the station. Multi-language charging instructions, giving drivers the choice of English, French or Spanish.

Driver interaction is supported in any weather by five rugged, back-lit buttons with audio feedback.

Strong and rugged design materials built to withstand the elements.

CT4000 stations come with 18' or 23' cords to increase the usability of your charging spots, on 6' and 8' tall models respectively.

#### CT4021

Dual-port bollard charging station with 18' charging cables. Standard *EV Charging Only* sign without optional custom branding.



## Promote Your Brand and Business

Having your stations installed in a visible location makes a bold statement about your business' commitment to sustainability and shows that you care about your customers. ChargePoint CT4000 stations are built for customization so you can conveniently promote your brand as well. With custom signage and video you can:

- + Increase brand recognition
- + Attract EV drivers by making sure your stations are highly visible
- + Ensure EV charging installations are consistent with the look and feel of your brand
- + Differentiate your stations from standard ChargePoint stations to make them easily identifiable by your driver base



ChargePoint CT4000 Family

### Bollard Charging Stations



### Wall Mount Charging Stations



### Contact Us

- Visit [chargepoint.com](https://www.chargepoint.com)
- Call +1.408.705.1992
- Email [sales@chargepoint.com](mailto:sales@chargepoint.com)



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Listed by Underwriters  
Laboratories Inc.





## ChargePoint as a Service

### Description and Ordering Information

ChargePoint® as a Service (CPaaS) is the easiest way to provide electric vehicle (EV) charging solutions without having to purchase and maintain everything yourself. ChargePoint takes care of it all for a simple annual subscription fee.

✦ **Effortless installation and management**

Once the site is prepared, ChargePoint takes care of the rest. We manage installation, setup, software and hardware upgrades and any necessary repairs for you.

✦ **Increased uptime and future-proof charging solution**

Round-the-clock monitoring and proactive service repairs keep stations working. Flexible contract options grow with you as your needs evolve.

✦ **Lower total cost of ownership and predictable expense**

Annual subscription fee significantly lowers initial investment. No unexpected surprises with multi-year plans that lock in consistent pricing, resulting in lower total cost of ownership.



CT4021  
Dual-port bollard  
charging station with  
18' charging cables.

### Highlights

Feature	Description
Dual-Port CT4000 Charging Station	Delivers 25 miles of Range per Hour and can charge most electric vehicles in under four hours.
Two 18-foot Charging Cables	Allows one station to service up to four parking spaces, regardless of parking style or car size.
24/7 Driver Support	Assists EV drivers with questions about charging.
Station Manager Support	Supports station managers over the phone (5 AM – 6 PM PT) or via email.
Charging Data and Analytics	Reports on key station metrics, including status, power and energy use, charging session details and more.
Flex Billing	Gives station managers the option to set prices that drivers pay to use their stations. Funds collected from drivers are automatically transferred to a designated bank account once a month.
Access Control	Empowers station managers to specify who can plug into their stations and when.
Waitlist	Lets drivers get in line to use ChargePoint stations.
Power Management	Manages available power at a circuit, panel or site level so more charging stations can be installed without upgrading existing electrical facilities; also reduces electricity costs by managing the load.
Valet Services	Maximizes the number of vehicles you can charge in a day without increasing your number of ports. Optimized map proactively alerts valets to swap out fully charged vehicles for cars that need charging.
Automatic Station Software Updates	Downloads software upgrades over the air so the latest features and performance enhancements are always available.
98% Annual Uptime Guarantee	Ensures your stations stay up and running so drivers can charge at your site.
One-Business-Day Response Time	Proactively responds to fix the stations, should there be any issues.
Labor Cost Coverage for Repairs	Covers the cost of labor and repairs so you don't have to worry about them.

## Highlights continued

Feature	Description
Site Qualification Survey	Ensures a properly designed installation.
Station Installation and Validation Services	Ensures that your charging solutions are properly installed and validated.
Activation and Configuration	Ensures you can meet your charging goals with help setting up smart features, including pricing, access controls, administration rights, advertisements and much more.

## Ordering Information

Description	Order Code
ChargePoint as a Service, Dual-Port Station, 5 years	CPAAS-DUAL-5
ChargePoint as a Service, Dual-Port Station, 3 years	CPAAS-DUAL-3
ChargePoint as a Service, Dual-Port Station, 1 year	CPAAS-DUAL-1



ChargePoint, Inc.  
254 East Hacienda Avenue, Campbell, CA  
95008-6617 USA  
+1.408.841.4500 or toll free +1.877.370.3802  
chargepoint.com

## Contact Us

To order ChargePoint as a Service:

-  Visit [chargepoint.com/sales](https://chargepoint.com/sales)
-  Call +1.408.705.1992
-  Email [sales@chargepoint.com](mailto:sales@chargepoint.com)

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### SALES QUOTE

Legal Entity Name:	PORT OF OLYMPIA	Date Quoted:	July 24, 2019
Street Address:	700 CAPITOL WAY NORTH	Quote Valid Until:	September 30, 2019
City, State, Zip:	OLYMPIA, WA 98501	Account Manager:	Adrianne Noicely
Contact Name:	KEVIN DECKER	AM Phone #:	305-521-0200 EXT. 200
Contact Phone #:	206-685-0864	AM Email:	ANoicely@BlinkCharging.com
Contact Email:	KEVINDPOCA@GMAIL.COM	OPP #:	OPP # 17243
			10% DISCOUNT MSRP \$USD

Product	Quantity	Price	Subtotal
Blink IQ 200 Charging Station - Advanced, w/LCD, 80A, Single Port	4	\$3,150.00	\$12,600.00
Blink IQ 200 Pedestal - Triangle, Dual (Pedestal Only)	2	\$600.00	\$1,200.00
Choose an item.	0	\$0.00	\$ 0.00
Choose an item.	0	\$0.00	\$ 0.00
Blink Network Annual Fee – (Kiosk or Advanced Charging Station)	4	\$216.00	\$ 864.00
Blink Network Annual Fee – (Smart Charging Station)	0	\$0.00	\$ 0.00
Extended Warranty	0	\$0.00	\$ 0.00
Shipping Estimate		Freight	\$360.00
		<b>*Subtotal</b>	<b>\$15,024.00</b>

\*Tax to be calculated on invoice

Payment in full shall be required prior to shipment of any equipment or provision of services. Unless noted, the estimated ship date will be determined once the order is placed and payment is received. The term of the Subscriptions purchased by Client shall commence on the date of installation. A 4% processing fee will be added to all credit card payments.

#### Financial Information (if applicable)

Remittance:	PORT OF OLYMPIA	Bill To:	PORT OF OLYMPIA
	700 CAPITOL WAY NORTH		700 CAPITOL WAY NORTH
	OLYMPIA, WA 98501		OLYMPIA, WA 98501
Contact:	KEVIN DECKER	Contact:	KEVIN DECKER
Email:	KEVINDPOCA@GMAIL.COM	Email:	KEVINDPOCA@GMAIL.COM

Client Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name & Title: \_\_\_\_\_

The purchase of equipment hereunder is governed by the standard terms and conditions available at <https://www.blinknetwork.com/equipment-tc.html>  
The purchase of Blink Network services hereunder is governed by the standard terms and conditions available at <http://www.blinknetwork.com/network-tc.html>  
Please provide the organization's W-9 and Tax-Exempt Certificate when returning this document to Blink.



# blink

**15,000 Charging Stations**  
**150,000 Blink Members**



## Blink is the largest owner/operator of EV charging stations in the U.S.

Founded in 2009 Blink is dedicated to slowing climate change by reducing greenhouse gas emissions caused by transportation. The company is a driving force in the EV industry paving the way for the growth and adoption of electric vehicles.

**Blink Partners with smart businesses & property owners** to be on the forefront of this green energy revolution by installing EV charging stations that attract EV drivers and support sustainability, making your location EV-friendly.

Blink offers several different business models for EV charging stations powered by our robust, cloud-based EV charging network. We work with our property partners to design a program that fits each specific locations' needs.

### Partnership Models

- 1. Host Owned**  
Perfect for service locations, host owned is for those who want to be the owner and operator of the EV charging stations.
- 2. Hybrid Partnership**  
Shared costs and revenue with Blink, the hybrid partnership allows your location to provide the charging station to customers while Blink provides operations and administration.
- 3. Blink Owned**  
For qualifying locations, Blink is willing to provide the installation, equipment and operations while sharing the revenue with the host location.



	Host Owned	Hybrid Partnership	Blink Owned* <small>(Qualifying locations only)</small>
Equipment Cost	Host	Blink	Blink
Installation	Host	Host	Blink
Electricity	Host	Host	Blink
Maintenance	Host	Blink	Blink
Revenue Share	Revenue share based on location, installation costs, term and contract agreement		

[blinkcharging.com](http://blinkcharging.com)



The Blink IQ200 is the fastest Level 2 Charging Station available.

### The Future for EV is Now

- There are currently more than 1 million electric vehicles (EV) in the U.S.
- In 2018, U.S. electric vehicle sales were up 80% from 2017
- By 2025 EV sales are projected to account for 30% of all global sales
- By 2030 the US is estimated to need a cumulative 13 million chargers

**Go Green!**  
**Host an EV**  
**Charging**  
**Station Today!**

**888.998.2546**

[sales@blinkcharging.com](mailto:sales@blinkcharging.com)

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# blink

## Meet The Blink IQ200 Family

Level 2 AC EV Charging Stations



### Variable Charging Currents Multiple Unit Network Wall or Pedestal Mounted

#### Experience

- Time-based, KWh-based, or session-based fee billing
- Easy payment\* via RFID, Apple Pay, Google Wallet, all major credit cards
- 7" Daylight color LCD touch screen
- Charging status display with transaction details

#### Design

- Future-proof design with charging currents 12A - 80A
- ADA compliant selective height and pedestal design
- SAE J1772 Charge Connector
- Open Charge Point Protocol (OCPP) 1.5 and 1.6 support
- Compatible with Tesla vehicles

#### Network

- Cellular and Wi-Fi communication modes
- Over-the-air firmware management and updates
- Smart grid implementation and support for commercial use
- Smart-phone app for status changes and notifications
- Geographically separated secondary systems for disaster recovery and management

#### Energy Management

- Usage and demand energy monitor
- Real-time energy usage data evaluation
- Controllable output to support utility demand response requests

Offer Your  
Customers the  
Amenity of EV  
Charging

#### Promotion

- Promote via Google Maps, the Blink Mobile App and Blink Map
- Advertise your business and services on the Blink User Interface
- Fully customizable pedestal wraps

888.998.2546

[sales@blinkcharging.com](mailto:sales@blinkcharging.com)

\*Some items may not be included in the initial product offering.

The IQ200 is  
a stylish and  
innovative income-  
producing product  
that appeals to  
your discerning  
urban customers  
with maximum  
flexibility and



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## Veefil 350kW Fast Charger

DC Fast Charging Stations

**Liquid Cooling • Slim Compact Design**  
**Reduced Install Costs • Durable UV Resistant Exterior**  
**Low Maintenance • Blink Network and OCPP Integration**

### About the Blink Veefil DC Fast Charging Station

The Veefil-RT from Blink is a reliable and robust electric fast charger with an attractive design that is easy to own and operate. Its patented liquid-cooling system ensure maximum product life with minimum maintenance. The small footprint and lightweight design of the Veefil facilitates a wide choice of location options and easy installation.

### Veefil Features

- Liquid Cooling
- Slim Compact Design
- Reduced Install Costs
- Durable UV Resistant Exterior
- Low Maintenance
- Blink Network and OCPP Integration

Connectors	CHaDeMO and CCS (Type 1 or 2)
Power	Up to 50kW
Supply input	380–480 V AC 3ø
Supply frequency	50–60 Hz
IP rating	IP65
Efficiency	>92%
Power factor	0.99
Operating temperature	-35°C to 50°C
Network connections	3G and Gigabit Ethernet
RFID	MIFARE ISO/IEC14443A/B, ISO/IEC15693 ISO/IEC18000-3, FeliCa, NFC, EMV 2.0
Communication protocol	Blink Network, OCPP 1.5 and 1.6J
Weight	165 kg
Electrical protection	Short circuit; Over voltage: RCD
Dimensions	2000(H) × 750(W) × 330(D) mm
Freight	24 units per 20' container
Certification	CE, UL, CHAdeMO, RCM, FCC, IC, CharIN



888.998.2546

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A photograph of a Blink IQ 200 Level 2 AC EV charging station in a parking lot. The station is a black vertical pole with a white charging unit at the top. A black charging cable is plugged into the station and connected to the front of a dark-colored electric car. The background features green trees and a brick building.

**blink**

**LEVEL 2 AC EV**

**IQ 200**

**CHARGING STATIONS**

**SPECIFICATIONS**

## Level 2 AC EV Charging Stations

**The Blink IQ 200 Product Family** is a collection of Level 2 AC Electric Vehicle (EV) charging stations. The products offer a modern and stylish appearance, the versatility of multiple charging current options, the ability to be installed in wall-mounted and pedestal-mounted configurations, and a peer-to-peer communications architecture which provides the ability to support a single primary charging station (or Kiosk) and multiple secondary charging stations.

### FEATURES

#### Blink IQ 200 Unique Design

- Future-proof design supports charging currents from 12A to 80A
- Intuitive charge connector holster provides protection and storage
- Multi-colored high visibility illuminator indicates charging station's status
- Convenient cable management design supports a long reach and storage between uses
- Selective height design conforms with ADA requirements
- Fee options include time-based, kWh-based, or session-based billing functionality
- Payment methods: RFID, Apple Pay, Google Wallet, and all major credit cards
- Pedestal accessories include single, dual, and triple port options
- OCPP support

#### Touch Screen

- Daylight readable 7" color LCD with touch screen and 800 x 480 resolution
- Convenient, user-friendly user interface
- Displays charging station status and transaction details
- Pre-loaded with the Blink commercial user interface
- SAE J1772 Charge Connector (Standard in the United States)
- Updated 25ft. cable with an ergonomic design
- Prevents accidental disconnection
- Grounded pole – first to make contact, last to break contact
- Designed for more than 10,000 cycles
- Can withstand being driven over by a vehicle
- Safe for use in wet or dry locations
- Compatible with integrated charge connector holster



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## Level 2 AC EV Charging Stations



### Energy Management

- Internal meter to monitor energy and demand usage
- Supports real-time energy usage data evaluation
- Controllable output to support utility demand response requests

### Safety and Compliance

- Ground monitoring circuit
- Charge circuit interrupting device (CCID) with automatic test
- Nuisance tripping avoidance and auto re-closure
- Cold load pickup (randomized auto-restart following a power outage)

### Network, Product, and Customer Support

- Multiple modes of communication, including Wi-Fi and cellular
- Over-the-air firmware management enables remote updates
- Blink Customer Support Center with tracking system
- Blink Network Operations Center actively monitors/manages network
- Smart grid implementation and support for commercial use
- Smart-phone applications for status changes and notifications
- Role-based features to manage permissions and access levels
- Ability to manage multiple chargers with detailed data sets
- Secure, high-availability, enterprise-grade infrastructure
- Geographically separated secondary systems for disaster recovery and management

### Promotion and Advertising

In addition to promoting locations and Blink charging stations to EV drivers across the country via the Blink Mobile App and Blink Map, the Blink IQ 200 charging stations support the opportunity to promote and/or advertise businesses, properties, products, and services.

- Rich multimedia touch screen can be easily customized via Blink Ad Loop functionality
- Station panels can also be customized for branding and advertising and can be updated as necessary

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# Charging Stations Comparison

BLINK IQ 200 PRODUCT SPECIFICATIONS			
MODELS	SMART CHARGING STATION	ADVANCED CHARGING STATION	KIOSK
Model Number	IQW2-80U-W1-N1-N-25	IQW2-80U-M1-R2-N-25	IQW2-00U-M1-R2-N-00
POWER SPECIFICATIONS			
Input/Output Power	19.2kW Max., <10W Standby		19.2W Max. Input Only, <10W Standby
Input Amperage	80A Continuous		0.08A Continuous Input Only
Output Power (kW)	2.9kW, 3.8kW, 7.7kW, 9.6kW, 15.4kW, 17.3kW, 19.2kW		Not Applicable
Output Amperage (A)	12A, 16A, 24A, 32A, 40A, 64A, 72A, 80A		Not Applicable
Circuit Breaker Options (A)	15A, 20A, 30A, 40A, 50A, 80A, 90A, 100A		10A
Input/Output Nominal Voltage	208VAC/240VAC		120/208/240VAC Input
Input / Output Voltage Range	180VAC to 264VAC		90 to 132VAC Input; 180 to 264VAC Input
Input / Output Frequency	60Hz		
Input Wiring Type	Hardwired		
Input Wiring Scheme	L1, L2, GND		L1, N, GND or L1, L2, GND
Cold-Load	Pickup Randomized delay between 120 and 720 seconds before charge resumes after a power failure.		Not Applicable
Power Measurement Accuracy	Embedded meter with a ±1% accuracy at the nominal input.		Not Applicable
Surge Protection	Up to 6kV at 3,000A		
FUNCTIONAL SPECIFICATIONS			
Charge Connector Type	SAE J1772		Not Applicable
Charge Cable Length	25 ft.		Not Applicable
Demand Response	Yes <sup>2</sup>		Not Applicable
Status Indicator	LED and Audio		
User Interface	None <sup>1</sup>	LCD, 7", Color, 800x480, w/Touch Panel	
Access Control	None <sup>1</sup>	Contactless Reader: RFID Cards: ISO/IEC 14443A/B, ISO/IEC 15693, MIFARE Plus, HID iCLASS, NEMA Smart Credit Cards: Visa, Master Card, Discover, American Express NFC: ISO 18092, Apple Pay, Google Wallet	
NETWORK SPECIFICATIONS			
Local Area Network (LAN)	2.4GHz Wi-Fi (802.11 b/g/n)		
Wide Area Network (WAN)	None	Cellular (3G GSM, 3G CDMA)	
Network Interface	OCPP v1.5, OCPP v1.6		
Mounting Type	Pedestal or Wall Mount		
SAFETY & COMPLIANCE SPECIFICATIONS			
Ground Fault Detection	CCID20, 20mA per UL 2231, Automatic Reset Feature and Manual Reset Feature		
Ground Monitor	Ground Monitor per UL 2231		
Safety Compliance	UL and cUL, NEC Article 625, RoHS		
Protection	Over-Voltage Protection (OVP), Under-Voltage Protection (UVP), Over-Current Protection (OCP), Over-Temp Protection (OTP), Short-Circuit Protection		
EMC Compliance	FCC Part 15		
ADA Compliance	Yes		
Energy Star Certified	Yes		Not Applicable
OPERATIONAL SPECIFICATIONS			
Enclosure Rating	NEMA Type 3R Indoor/Outdoor		
Operating Temperature	-30°C to +50°C (-22°F to +122°F)		
Storage Temperature	-40°C to +80°C (-40°F to +176°F)		
Operating Humidity	0 to 95% Relative Humidity, Non-Condensing		
Charger Dimensions	13.95"H × 10.65"W × 5.23"D		
Charger Weight (Unpackaged)	TBD		
Charger Weight (Packaged)	TBD		

Blink Charging Co. reserves the right to alter product offerings and specifications at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

<sup>1</sup>If applicable, an adjacent primary Advanced Charging Station or Kiosk can provide access control for up to 20 secondary Smart Charging Stations.

<sup>2</sup>May not be included in the initial product offering.

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## Pedestal Specifications

BLINK IQ 200 PEDESTAL SPECIFICATIONS				
MODELS	RECTANGLE, SINGLE	RECTANGLE, DUAL	TRIANGLE, DUAL	TRIANGLE, TRIPLE
Model Number	01-0210	01-0211	01-0212	01-0213
Number of Supported Charging Stations	1	2	2	3
User Interface Height	48"	48"	48"	48"
Pedestal Dimensions	56.04" H × 13.58" W × 4.28" D	56.04" H × 13.58" W × 4.28" D	59.00" H × 12.50" W × 11.19" D	59.00" H × 12.50" W × 11.19" D
Pedestal Weight (unpackaged)	TBD	TBD	TBD	TBD
Pedestal Weight (packaged)	TBD	TBD	TBD	TBD



### Triangle Pedestal

Maximizing space, the triangle pedestal can securely mount 1-3 independent charging stations.

### Dual Pedestal

For busy parking lots, the dual pedestal can securely mount 2 independent charging stations.

### Single Pedestal

The kiosk and smart unit deployment is best for high density, multiple unit installations.

## IQ 200 Smart Units

The IQ 200 design allows for multiple deployment configurations including the innovative and cost-saving Smart/Kiosk units for high density, multiple unit, and fleet installations. Up to 20 Smart units can be connected to one Kiosk unit in which the charging session is initiated.



Wall Mount with Kiosk



Pedestal with Kiosk

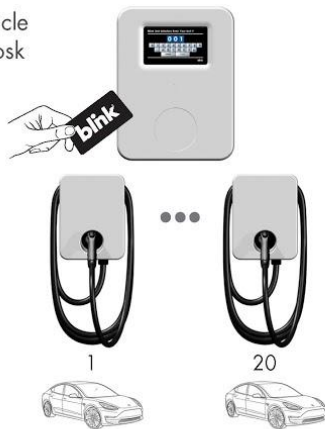


# UI and Network Architecture Options

## USER INTERFACE OPTIONS

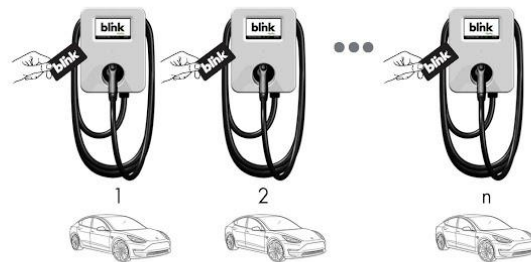
### Kiosk

- Driver plugs in vehicle then proceed to Kiosk
- Kiosk controls all charging stations
- Up to 20 smart charging stations per Kiosk

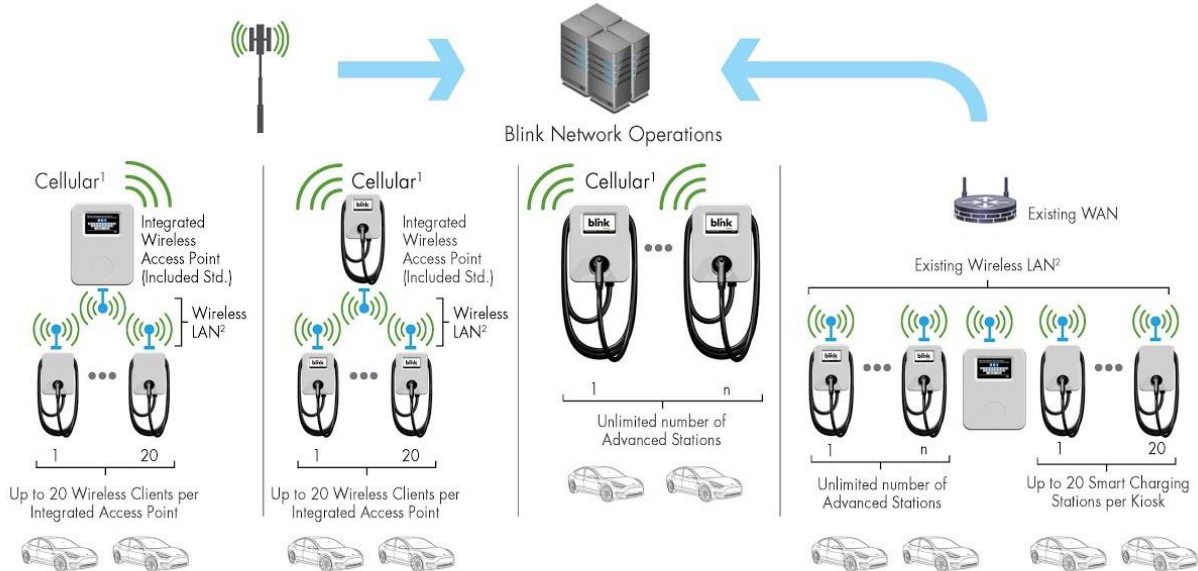


### Standalone

- Driver plugs in vehicle then utilizes the UI within the Blink Advanced Charging Station
- Each station operates independently



## NETWORK ARCHITECTURE OPTIONS



<sup>1</sup>Cellular 3G GSM / CDMA Capable

<sup>2</sup>Integrated Wireless LAN is 802.11 b/g/n capable

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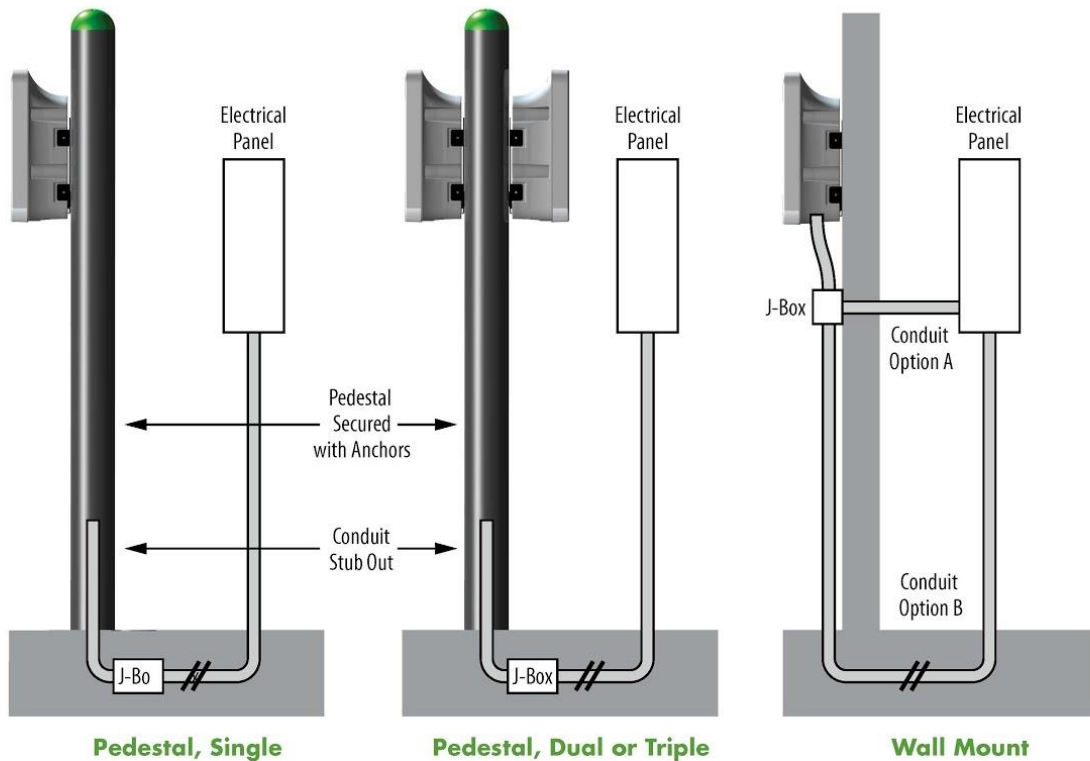


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# Pre-Installation Guide

ELECTRICAL WIRING SPECIFICATIONS					
Max. Continuous Current	Typical Circuit Breaker <sup>3</sup>	Typical Wire Specs <sup>3</sup>	Typical Conduit Size <sup>3</sup>	Blink IQ Conduit Size	Notes/Assumptions
8A	10A	Two #10AWG Wires (Line) One #12AW Wire (Ground)	1/2"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
12A	15A	Two #10AWG Wires (Line) One #12AW Wire (Ground)	1/2"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
16A	20A	Two #10AWG Wires (Line) One #8AW Wire (Ground)	3/4"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
24A	30A	Two #10AWG Wires (Line) One #10AW Wire (Ground)	3/4"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
32A	40A	Two #8AWG Wires (Line) One #10AW Wire (Ground)	3/4"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
40A	50A	Two #6AWG Wires (Line) One #8AW Wire (Ground)	3/4"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
64A	80A	Two #4AWG Wires (Line) One #8AW Wire (Ground)	1"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
72A	90A	Two #3AWG Wires (Line) One #8AW Wire (Ground)	1"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop
80A	100A	Two #2AWG Wires (Line) One #8AW Wire (Ground)	1"	1"	≤ 150 ft. One-way Distance ≤ 3% Voltage Drop

<sup>3</sup>Consult with a licensed contractor, licensed electrician, or trained installation expert to ensure compliance with local building codes and safety standards.



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