IoTecha's Combined Charging System on Module (CCSoM) is a System-on-Module solution that enables manufacturers of AC and DC EV chargers to shorten the time to market and minimize the development effort while producing an intelligent charger. In addition to being available as a Module, the CCSoM is the foundation for IoTecha's AC Charger which is available as a "white label" product, fully integrated with ISO/IEC 15118 and IoT.ON™ cloud connectivity.
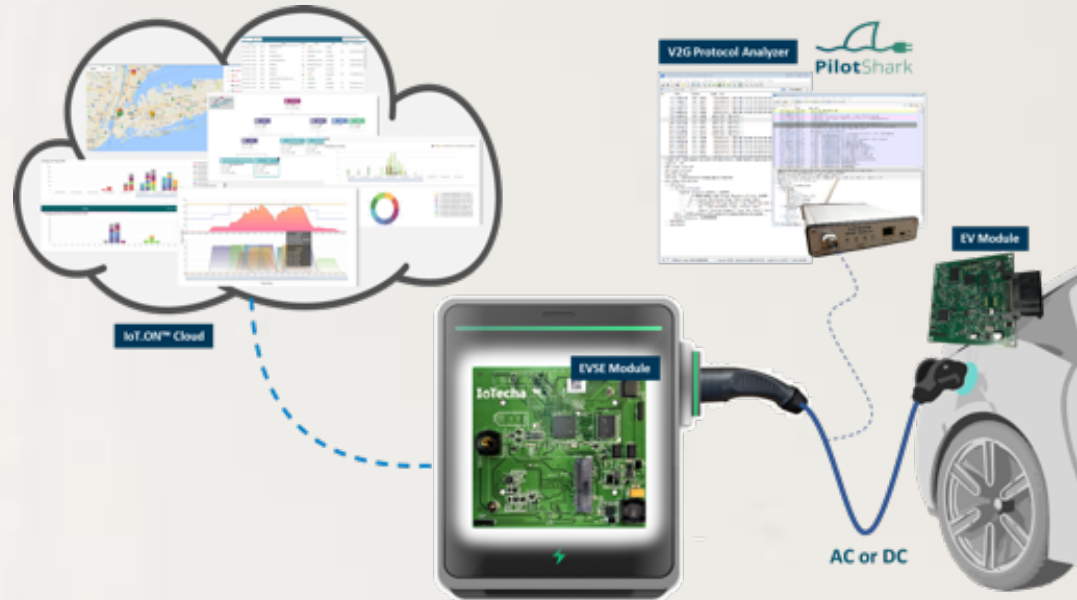
Highly Integrated SoM

- ARM 926EJ-S @ 333MHz Application Processor + HomePlug GreenPHY based ISO/IEC 15118 Subsystem + Pilot PWM Generation and Sensing Circuit
- 8-bit MCU for safety related applications

HomePlug Communication

- Supports both HomePlug AV and HomePlug GreenPHY
- SLAC

IoT ready

- ISO/IEC 15118 for AC and DC with PnC
- OCPP 1.6 JASON
- IoT.ON™ Agent
- IPv6 and IPv4 native support
- OTA Firmware upgrade

User definable I/O

- 6 User definable analog inputs for temperature sense, proximity, GFCI, etc.
- 6 User definable digital outputs for contactor control and more
- 6 User definable digital inputs

Pilot control processor

- PWM and pilot management for AC and DC applications implemented in easily auditable code outside of Linux environment.
- Pilot Drive (1 kHz, configurable cycle 0%-100%)
- Pilot State Sense

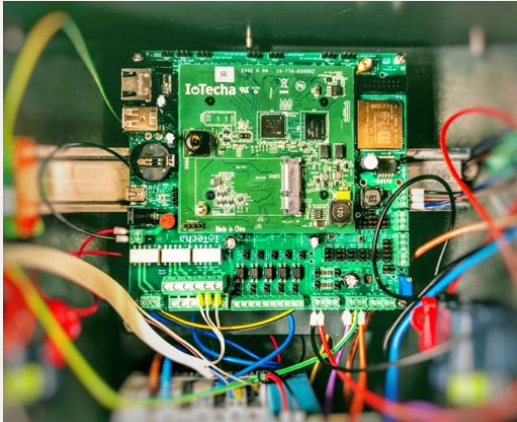### Power requirements

- 15W max; 5W

Dimensions

- 150mm x 120mm

Temperature range

- -40^0 - $+85^0$ C, noncondensing

IoT.ON™ DC EVSE Starter Kit

IoT.ON™ DC EVSE Starter Kit is a complete ready-for-deployment EV charging controller for CCS DC EVSEs with out-of-the-box cloud integration.

Features:

- Based on CCSoM module
- Compliant to IEC 61851-1 and SAE J1772 Control Pilot signaling
- Supports Type-1 or Type-2 socket
- OCPP 1.6J for communication to central system
- IoT.ON™ Agent integrated with IoTecha IoT.ON™ cloud
- Software application customization to allow for customer- specific application functions

Interfaces

- 3G UMTS modem with external antenna input and internal 3G Antenna
- Control Pilot
- Proximity (hardware configurable for Type1 or Type2)
- 4x Optically isolated digital inputs (12-24Vin) with programmable functionality:
    - User pushbutton
    - Main contactor feedback
    - Parking Sensor
    - S0 energy meter interface
    - IMD

- 3x Relay outputs
    - Main Contactor
    - Two programmable auxiliary outputs
- Driver for 12V Lock actuator
- 2x Programmable Open Drain outputs
- 2x Analog temperature inputs (PT1000)
- 1x CAN
- RJ45 10/100 Ethernet
- Micro USB for configuration
- USB Type1 (Example uses; External WiFi or RFID Card Reader)
- Jumper selectable RS232/RS485 for interfacing to Meters, RFID readers, HMI, Rectifier, etc.
- Expansion connector for:
    - Ground sense
    - Type A RCD
    - Single/Three-Phase power meter

DC Specific Features

- DIN 70121
- ISO/IEC 15118 with smart charging capabilities
    - Rate and tariff
    - PnC (Plug and Charge)
    - V2G/V2X
- Rectifier/Inverter control
    - CAN, RS232, or MODBUS interface to Rectifier
    - Logic IOs for Estop, IMD control/monitoring, and rectifier enable/disable
- Customizable rectifier control interface engineering is available