



CyberCogs CC-SOBC100 Combined Charging Unit Product Specifications

HARDWARE SPECIFICATIONS

- **Dimensions:** 305w x 178d x 96h (mm)
- **OBC input:**
 - 80–295VAC
 - 50-60 Hz
- **OBC output:**
 - 11 Kwatts
 - 250– 450VDC
 - 32Amps
 - >96% efficient
- **OBC output (inverter mode):**
 - 6.6 Kwatts
 - 120/240 VAC (Configurable)
 - 50/60 Hz (Configurable)
- **DC/DC input:** 250-425 VDC (nominal 350V)
- **DC/DC output:**
 - 2.0Kwatts
 - 12Volts (6-16Volts)
 - 200Amps
 - >97% efficient
- **Processor:** (Lock step) Dual 32Bit C28x DSP at 200 MHz
CLA communication processor 200 Mhz
- **Memory:**
 - 768 Kbytes flash with ECC
 - 248 Kbytes of RAM with parity
- **Communication:** 2 CAN FD Ports
- **Input/Output ports:**
 - Discrete Inputs /Discrete Outputs

HARDWARE SPECIFICATIONS

- **Environmental:**
 - Operating temperature: -40 to 75 deg. C
 - Storage temperature: -40 to 95 deg. C
- **Package:**
 - Sealed Aluminum package with heatsink top
 - IP67 Rating
- **Mounting:**
 - 4 M6 or ¼-20 screws
 - Horizontal and Vertical Mounting
- **Cooling:**
 - Passive Conductive Heatsinking
 - Active water cooling (optional)
- **Input/Output Protection:**
 - Surge on input and BMS
 - Overvoltage
 - Inrush limiting
 - Short circuit protection on outputs
 - Over temperature protections
- **Connectors:**
 - AC I/O connector: **AMPENOL HVSL362022TA**
 - BMS I/O connector: **AMPENOL HVSL282022A**
 - DC/DC I/O connector: **AMPENOL PLX082X-301-10D8-C3D**
 - CAN, VHIL, IO connector: **MOLEX 34830201**
 - #8 Integrated Ground stubs**
- **Galvanic Isolation:**
 - IEC 60664-3 Insulation coordination compliant
 - Between 400V and 12V: 2500V DC
 - Between AC input and 400 V: 2500 DC



CyberCogs CC-SOBC100 Combined Charging Unit (continued)

HARDWARE SPECIFICATIONS

- **Agency Certifications:**
 - EMI/RFI standard: SAE J1113, SAE J551
 - Radiated EMI standard: SAE J1752, J2556
 - Radiated immunity: SAE J1812
 - Conducted immunity: SAE J2628
- **Safety Ratings:**
 - ASIL C compliant
 - FMVSS 305 Compliant
 - UL94-V0 Compliant
 - UL2202 AC/DC charging
 - UL 9741 Vehicle to Grid
 - UL 2231-2
 - ISO6469-3 Electrical Safety
 - ISO26262:2018 Functional Safety
- **Functional Rating:**
 - SAE J1772 Conducting Charging standards
 - IEC 61851:2017
 - ISO 14229-1 UDS
 - ISO 15765-2 CAN protocol
 - ISO 11898-2 CAN media attachment layer
 - SAE J3138 Diagnostic Link Security

ADDITIONAL FEATURES

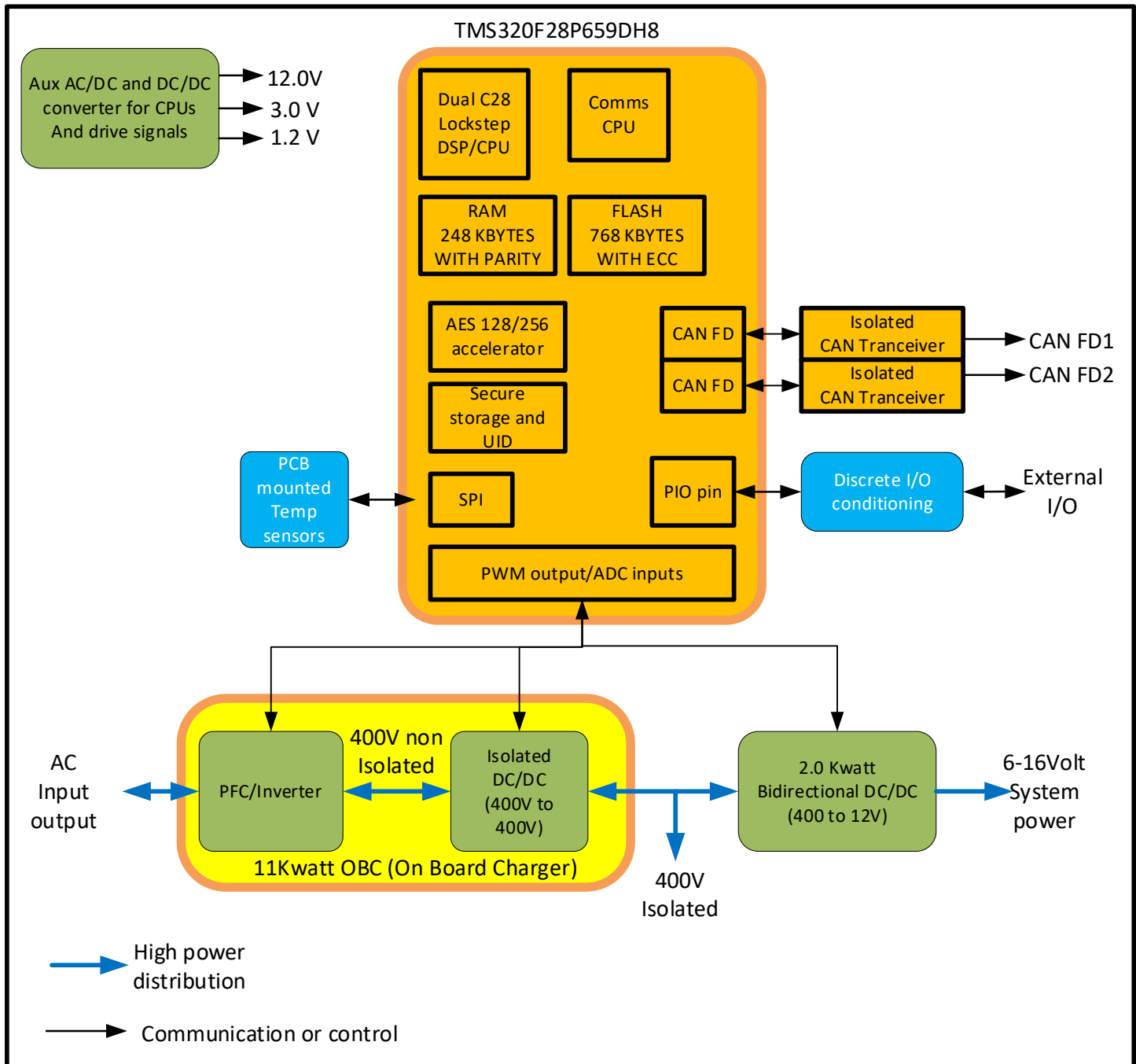
- USA designed and manufactured
- Integrated Security
- Secure boot
- Secure internal key storage for signing, verification, and encryption in secure module subcomponent

SOFTWARE FEATURES

- **DC/DC outputs adjustable thru CAN bus include:**
 - Output voltage settable
 - Maximum output current
- **DC/DC measurements thru CAN bus include:**
 - Input voltage
 - Input current
 - Output voltage
 - Output current
 - Output power
- **OBC outputs adjustable thru CAN bus include:**
 - Inverter mode
 - Charge mode (CC, CV)
- **OBC measurements thru CAN bus include:**
 - Input voltage
 - Input current
 - Input frequency
 - Output voltage
 - Output current
 - Output power
- ISS FlexHSM pre-ported through partnership with ISS
- ISS FlexUpdate pre-ported through partnership with ISS
- ISS DLM Trust for provisioning through partnership with ISS

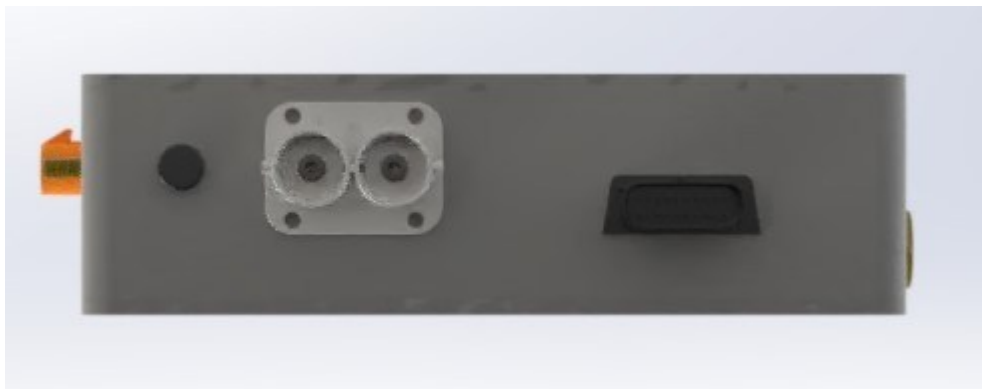
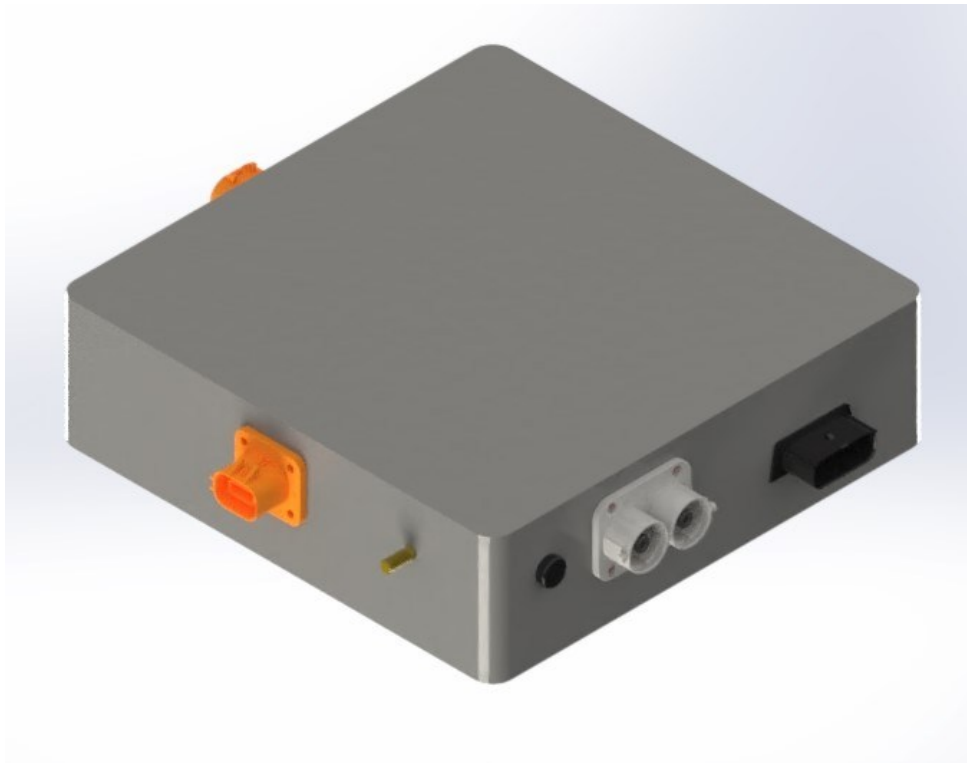


CyberCogs CC-SOBC100 Block Diagram



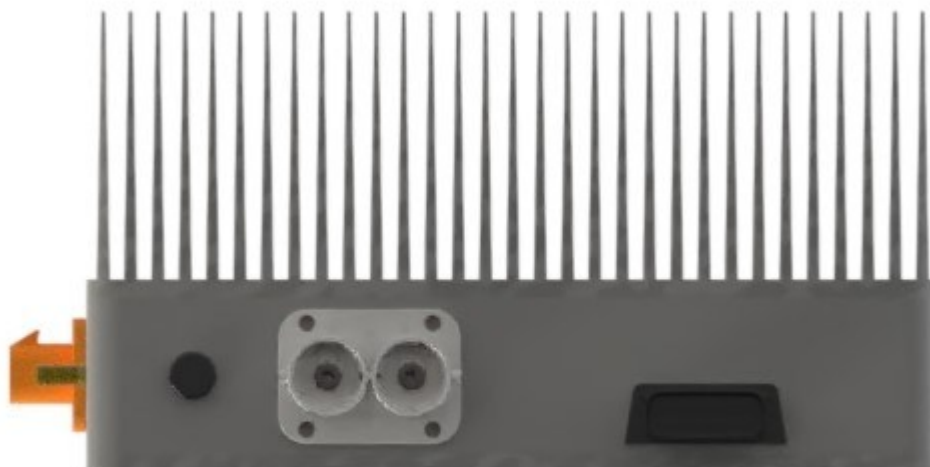
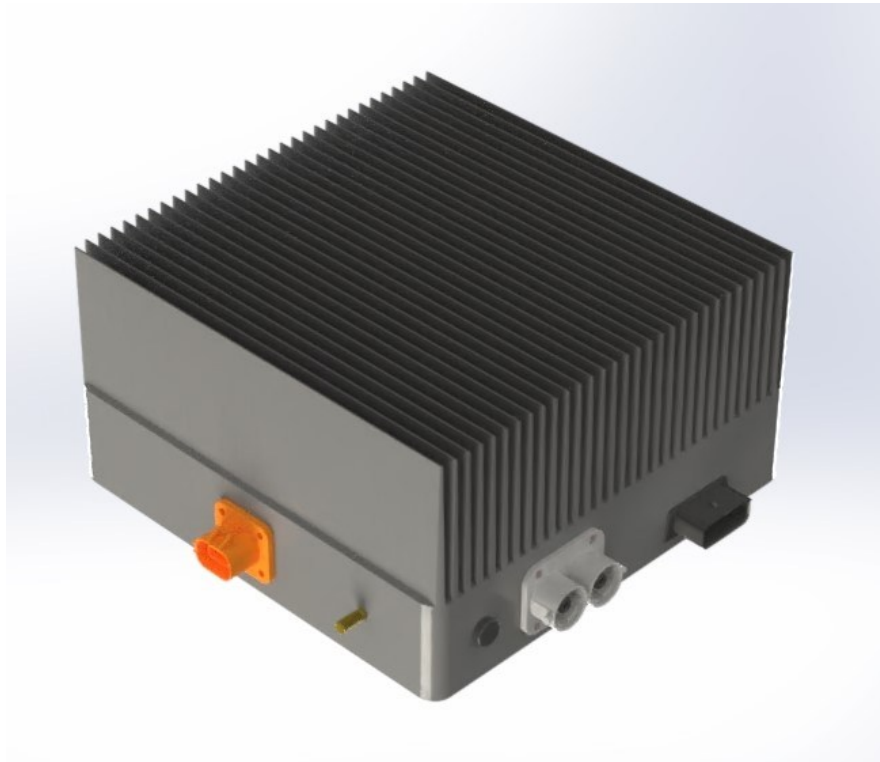


CyberCogs CC-SOBC100 Depiction Water Cooled version



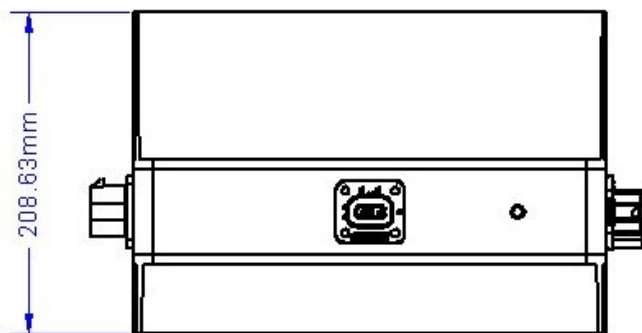
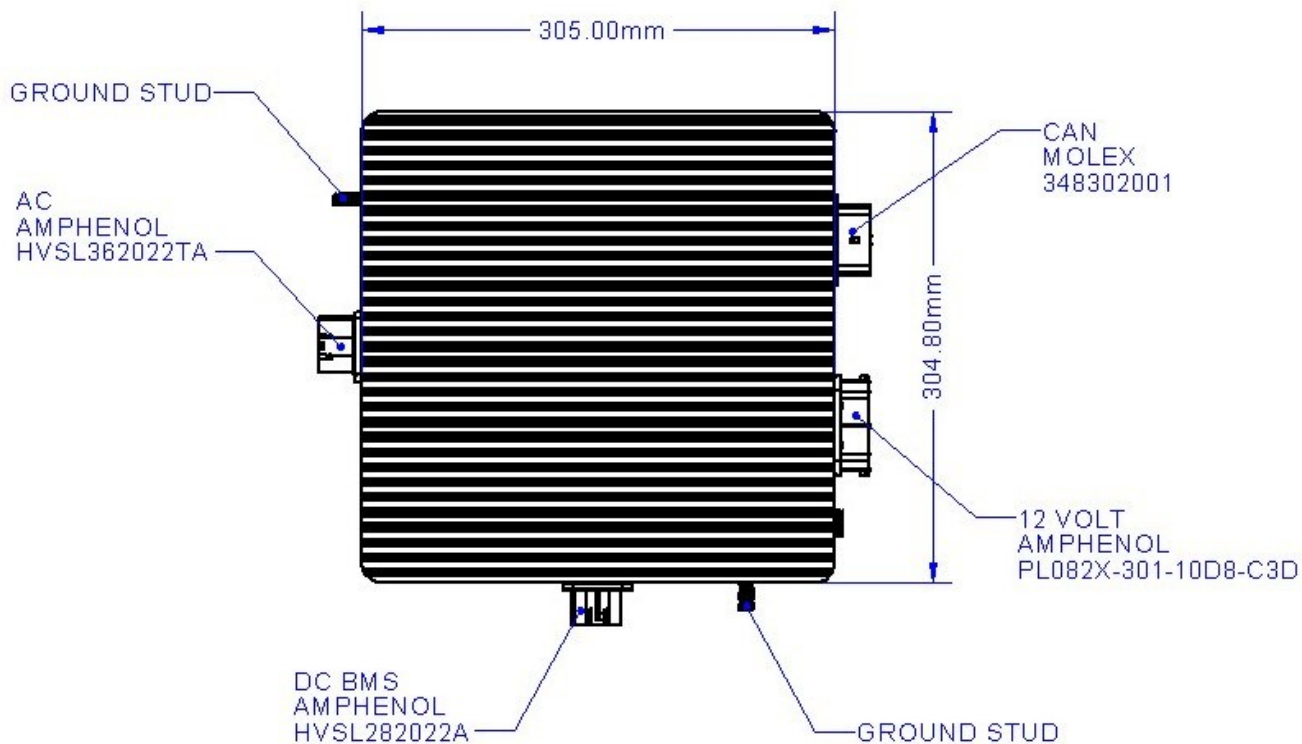


CyberCogs CC-SOBC100 Depiction Passive Cooled version





CyberCogs CC-SOBC100 Passive cooling Dimensional Drawings and Connector Specification





CyberCogs CC-SOBC100 water cooled Dimensional Drawings and Connector Specification

