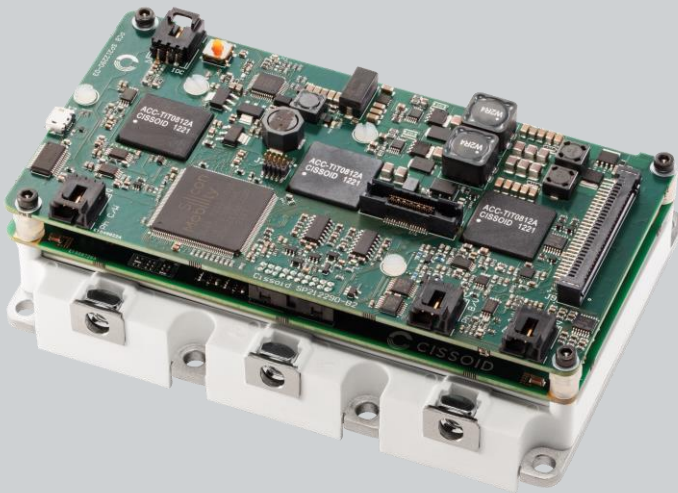


# Silicon Carbide Inverter Control Module



The SiC Inverter Control Module (ICM) is built based on CISSOIDs CXT-PLA3S series of Intelligent Power Modules and HADES2 gate driver chipset, adding the new control board to the stack.

Designed around Silicon Mobility's OLEA® T222 Field Programmable Control Unit (FPCU), the ICM forms the heart of CISSOID's modular inverter platform.

Supporting the OLEA® APP INVERTER software, the module enables fast development of electric motor drives.

## KEY FEATURES

- Ultra-fast OLEA® T222 FPCU control board
- 3-phase 1200V SiC power module
- Integrated gate driver board
- Up to 550A current range
- Supports OLEA® APP INVERTER software

Reference	Description
CXT-ICM3SA12340AAA	1200V / 340A control module, pin fin
CXT-ICM3SA12450AAA	1200V / 450A control module, pin fin
CXT-ICM3SA12550AAA	1200V / 550A control module, pin fin
CMT-ICM3SBI2340AAA	1200V / 340A control module, flat baseplate

## INTELLIGENT POWER MODULE

- MAX DRAIN-TO-SOURCE VOLTAGE: 1200V
- MAX DC CURRENT: 340A-550A @ T<sub>C</sub>=25°C
- LOW ON-RESISTANCE: DOWN TO 2.53MOHM
- LOW SWITCHING ENERGIES
- MAX OPERATING JUNCTION TEMPERATURE (175°C T<sub>J</sub>)
- HIGH TEMPERATURE GATE DRIVER BOARD (125°C T<sub>A</sub>) WITH PROTECTIONS (DESAT DETECTION, SSD, AMC)
- LIGHTWEIGHT ALSIC PIN-FIN OR FLAT BASEPLATE

## INVERTER CONTROL BOARD

- ARM® CORTEX-R5F IN LOCKSTEP
- ADVANCED MOTOR EVENT CONTROL (AMEC®): REAL-TIME ACTUATOR/SENSOR CONTROL AND PROCESSING
- CAN COMMUNICATION PORTS
- LAUTERBACH TRACE INTERFACE FOR CALIBRATION AND DEBUG

## INVERTER SOFTWARE

- HIGH CONTROL LOOP AND SWITCHING FREQUENCIES (>25 kHz TO 100 kHz) WITH OPTIMIZED DEAD TIME COMPENSATION
- ADVANCED MODULATIONS (SVPWM, DPWM)
- IMPROVED TOTAL HARMONICS DISTORTION (THD)
- REDUCED HVDC LINK VOLTAGE RIPPLE

## FUNCTIONAL SAFETY

- OLEA® T222 PROCESSOR & SOFTWARE: ISO26262 ASIL-D AND AUTOSAR 4.3 CERTIFIED
- INVERTER CONTROL MODULE: DESIGNED FOR ISO-26262 ASIL-D (CERTIFICATION ONGOING)



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