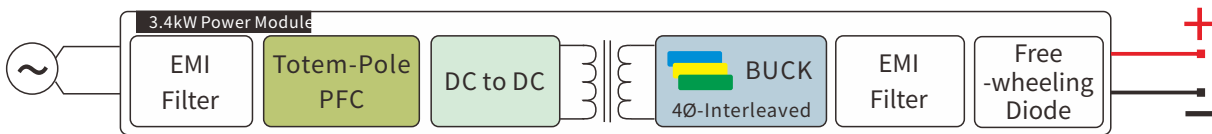


Block Diagram

Power Module

The power module of the DSP-WR 1U series uses a state-of-the-art SiC MOSFET/SBD and full 3-stage structure, with the following features:

1. Single-Phase Input: Supports a maximum input voltage of AC 305 V
2. Power modules are connected in series or parallel to form a 3.4 kW wide-range power supply unit.
3. Power modules are controlled by a single CV/CC circuit, eliminating chasing during transitions.
4. Full 3 stage structure delivers the best efficiency, with synergy efficiencies approaching 95%.
5. High Active Power Factor Correction. Totem-pole PFC design achieves $PF > 0.99$
6. The 2nd stage is an isolated with 99% high-efficiency DC to DC converter.
7. The 3rd stage BUCK circuit is with 4 x interleaved SiC MOSFET design, operating up to 400 kHz.



Control Module

1. The DSP-WR 1U series uses multiple 32-bit RAM MCUs and embedded RTOS. Each major control circuit has a dedicated embedded processor to ensure the highest performance, delivering the fastest response time in the industry.
2. Each control module signal and power circuit is completely isolated, delivering the best noise protection to ensure measurement accuracy and control stability.
3. The DSP-WR uses a Cortex M4 CPU to drive the built-in network capability for Main/SUBsidiary control. This design allows the DSP-WR family to parallel more than 32 units to form high output power systems, without additional devices.

