Modular converter with an auxiliary wave shaping circuit

Present invention offers a modular converter with an auxiliary wave shaping (WS) circuit to obtain a higher voltage levels in an output. Also, it provides a method for balancing a capacitor voltage in a sub-module associated with an auxiliary wave shaping circuit in the modular converter.

- The modular converter includes a main wave shaping (WS) circuit and an auxiliary WS circuit.
- The main WS circuit comprises a sub-module;
- And the sub-module comprises a capacitor.
- The auxiliary WS circuit comprises the sub-module, where the sub-module comprises a capacitor.
- The modular converter is configured to increase a voltage level based on number of the sub-module in the auxiliary WS circuit.
- The modular converter is further configured to balance a voltage of the capacitor in the sub-module of the auxiliary WS circuit.

FIG. 1: Example of modular convertor