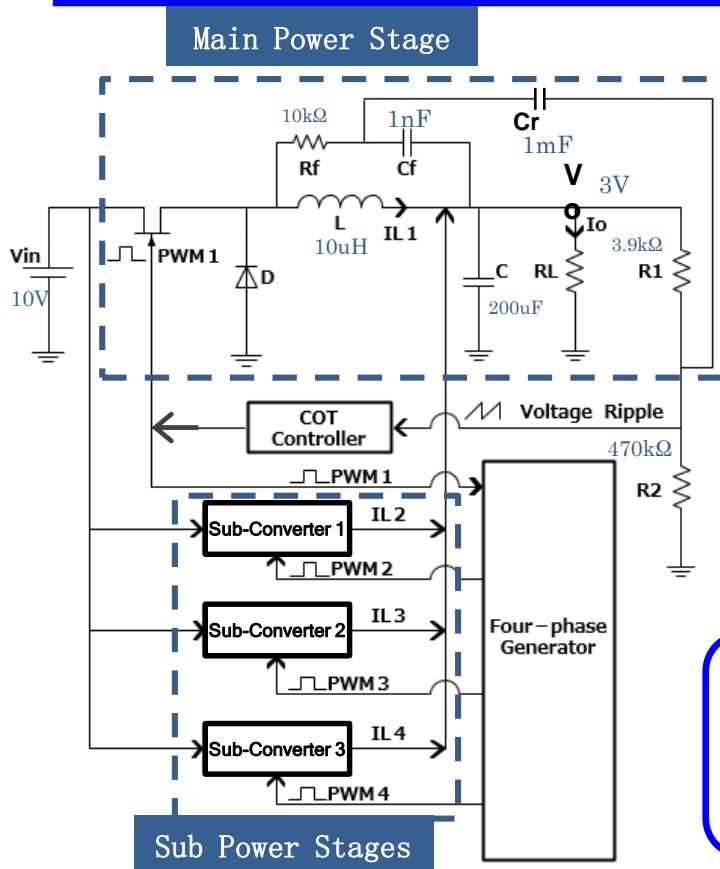


## Four-Phase Ripple Controlled Switching Converter with EMI Noise Reduction Circuit

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### Why multi-phase ?

Power supplies (PCs, servers) : demand **fast response**,  
**large load current**, **low output voltage ripple**.

### Conventional multi-phase method

with external clock

For much **faster response**

**Ripple-controlled converter**

problem

difficult to  
multiphase

without external clock

### Point of this work

**Four-phase ripple (Constant-on-time)** controlled  
converter with **EMI reduction** is proposed