**Area Savings: 50-70%**

Ferric’s Integrated Inductor Voltage Regulators (ILVR) are small enough to be moved inside SoC package, significantly reducing PCB area.

Conventional VR Solution: $1373 \text{ mm}^2$

- 1.5V, 5A
- 2x 0.9V, 3A
- 1.2V, 2A
- 2x 1.8V, 2A
- 1.8V, 1A

Ferric ILVR Solution: $605 \text{ mm}^2$

- 1.8V, 90A

No change in organic package area.
**Improved Power Integrity**

**Conventional Power Delivery Network (PDN)**

**Ferric Power Delivery Network (PDN)**

- Smaller loop inductance
- Less bulk capacitance
- Higher feedback bandwidth
- Fewer parasitics
- Less impedance overall
Power Savings: 15-30%

- **Lower Conduction Losses**
  - Shorter routing of power domains

- **Improved Voltage Regulation**
  - Tighter voltage margins lead to quadratic improvement in power performance

- **Improved Power Management**
  - Faster Dynamic Voltage Scaling
  - Faster Telemetry Readings
  - Faster Loadline

- **Granular Power Domains with Individual Control**