

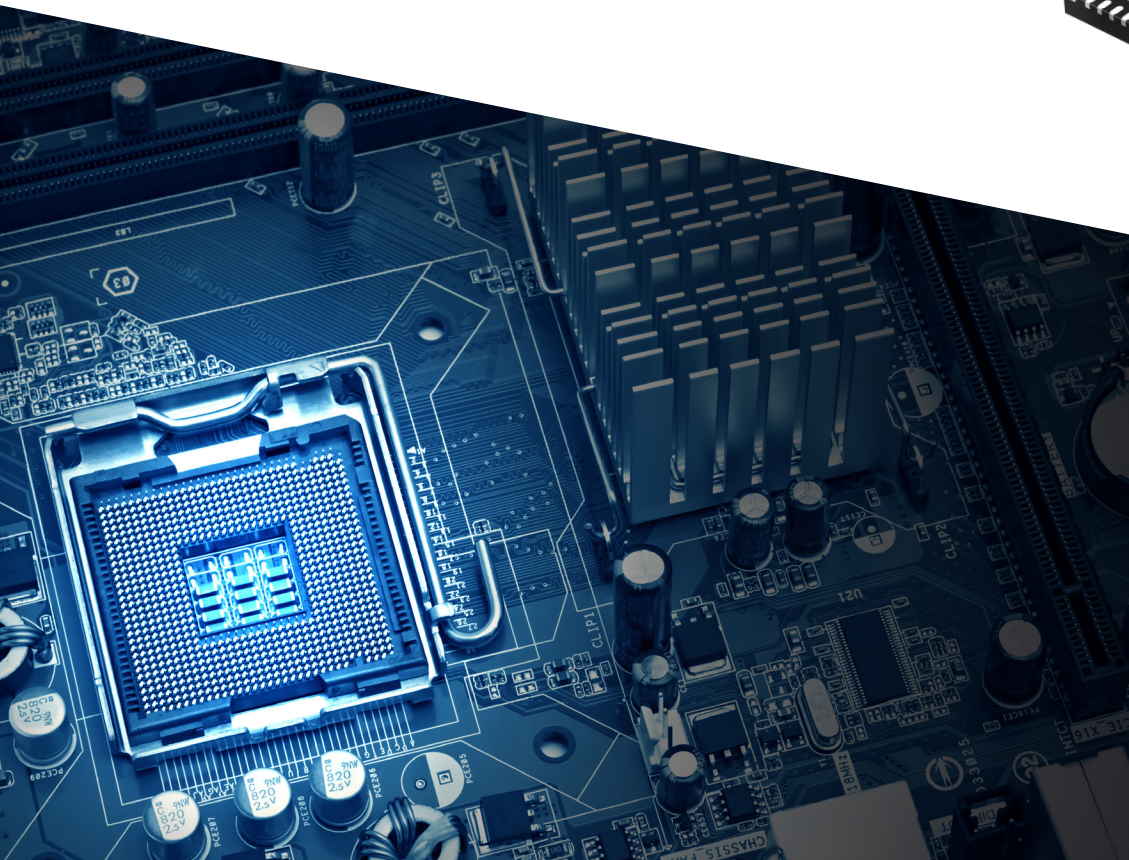
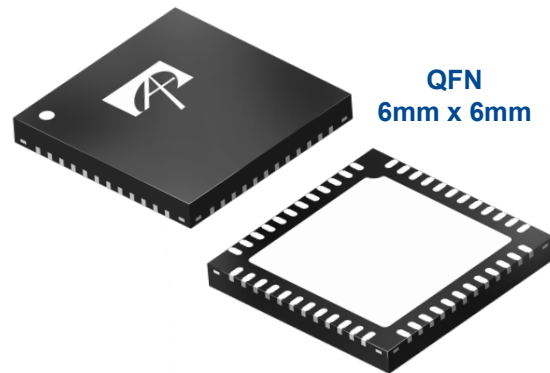


**ALPHA & OMEGA**  
SEMICONDUCTOR



# Intel Raptor Lake/ Meteor Lake PC Total Solutions

- Low  $P_Q$  Digital Controllers
- DrMOS and SPS  
(Smart Power Stage with Imon)
- COT Buck Converters



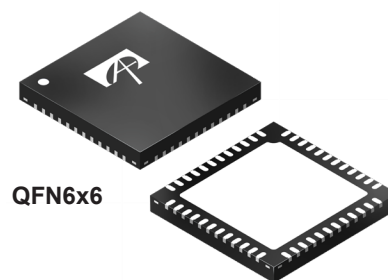
Power IC  
Notebook  
Solutions



## Complete Hybrid Multiphase Controller Solution for Intel Meteor Lake/Arrow Lake Notebook/Desktop

### Features

- Intel MTL IMVP 9.2 Hybrid Multiphase Controller
- Pairing DrMOS/SPS
- COT Buck Converter for POLs
- USB3.0/3.1 Protection IC/MOS/TVS
- MOSFETs for system/adaptor/battery



### Hybrid Multiphase Controller

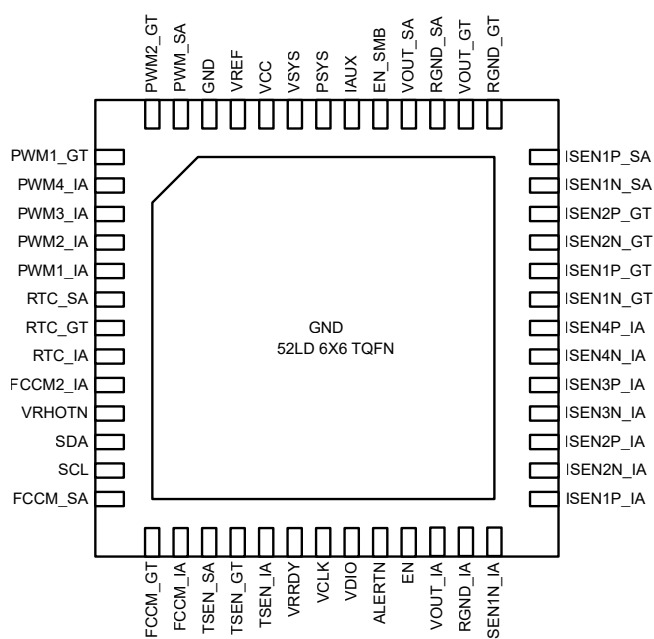
- Lowest Iq on market to meet below 10mW per Rail requirement by Intel
- Up to 9+1+1 Output; Support Intel IMVP8/9/9.1/9.2 SVID
- Pin strap is added with 6 configurations table to minimize SKU
- Digital GUI for easy tuning through SMBUS with minimal RC and MTP (supports configuration change >10 times)
- Supports FVM and Physical FVM pin instead of IAUX pin
- A<sup>2</sup>TM ensure fast transient performance while keeping phase current balance
- 5x5 40L to 7x7 60L to cover all applications

### DrMOS

- BIC robustness with 30V BV; UIS testing
- High efficiency and BIC heavy load capability
- Up to 120A peak current for 10ns
- 5x5 and 3.5x4.5 industrial standard pinout
- FCCM pin for less Quiescent power at low power state

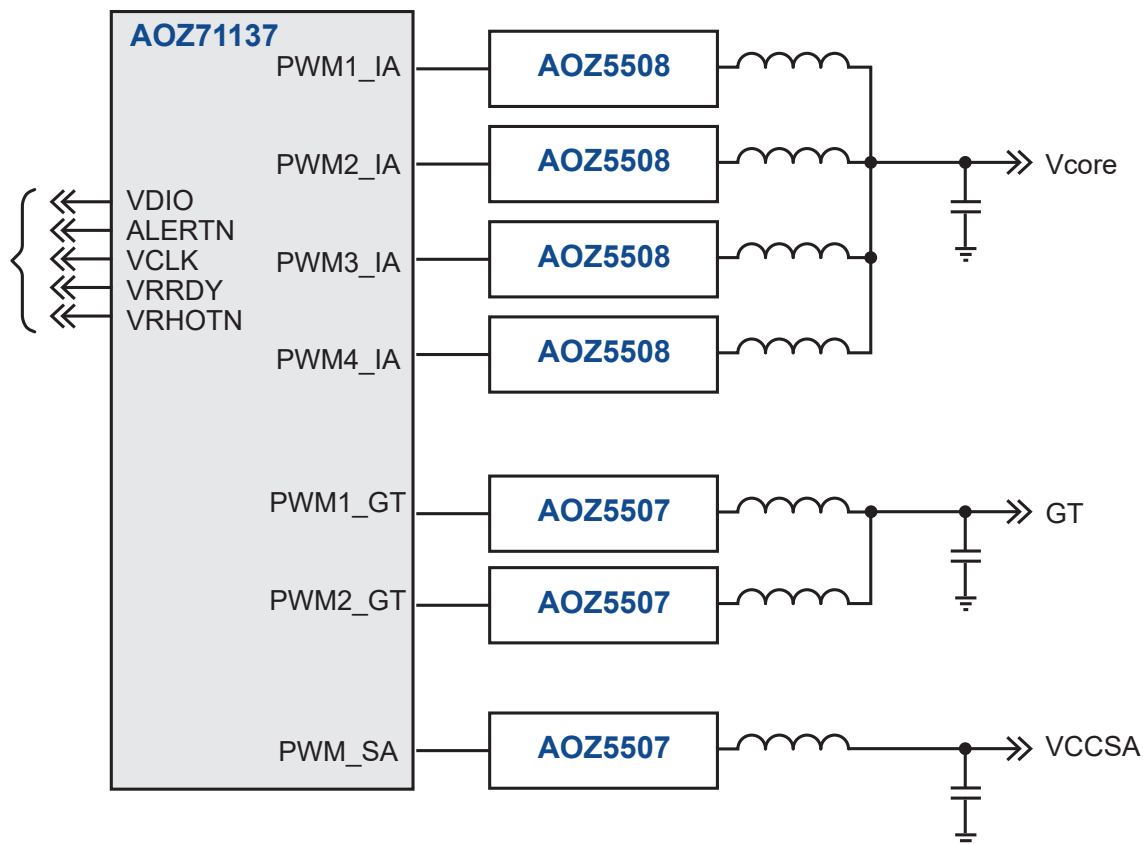
### COT Buck Converter

- Wide Vin Range with high Iout 6A-26A capability
- Integration within 4x4 or 5x5 QFN package
- High efficiency with Low R<sub>DS(ON)</sub> FETs
- Better thermal balance while high current



**AOZ71137QI 4+2+1 Controller for MTL Notebook**

## Typical Application of AOS Low P<sub>Q</sub> Digital Controller for ADL/RPL



### Product Solutions Tables

| Controller Part Number | Package | Configuration       | Vin Range   | Communication |
|------------------------|---------|---------------------|-------------|---------------|
| AOZ71137QI             | QFN6x6  | Up to 4+2+1 for NB  | 5.2V to 24V | SVID & SMBus  |
| AOZ71031QI             | QFN7x7  | Up to 9+1+1 for DT  |             |               |
| AOZ71120QI             | QFN6x6  | Up to 8+2 for DT/DG |             |               |

| DrMOS & SPS PN | Package    | Current Rating | 10ms Peak Current | BV  |
|----------------|------------|----------------|-------------------|-----|
| AOZ5517/5516   | QFN5x5     | 60A/55A        | 80A               | 30V |
| AOZ5508/5507   | QFN3.5x4.5 | 35A/30A        | 60A               |     |
| AOZ52183/52173 | QFN4x5     | 45A/30A        | 60A               |     |
| AOZ52627       | QFN5x6     | 60A            | 100A              |     |

| COT Part Number   | Package | Current Rating | Vin Range | BV  |
|-------------------|---------|----------------|-----------|-----|
| AOZ22645/55/95RQI | QFN5x5  | 16A/18A/25A    | 4V to 28V | 30V |
| AOZ22539QI        | QFN4x4  | 15A            |           |     |
| AOZ22559QI        | QFN5x5  | 20A            |           |     |
| AOZ23567QI        | QFN5x5  | 25A            |           |     |
| AOZ2260AQI-10     | QFN4x4  | 6A             |           |     |



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