FIG. 1

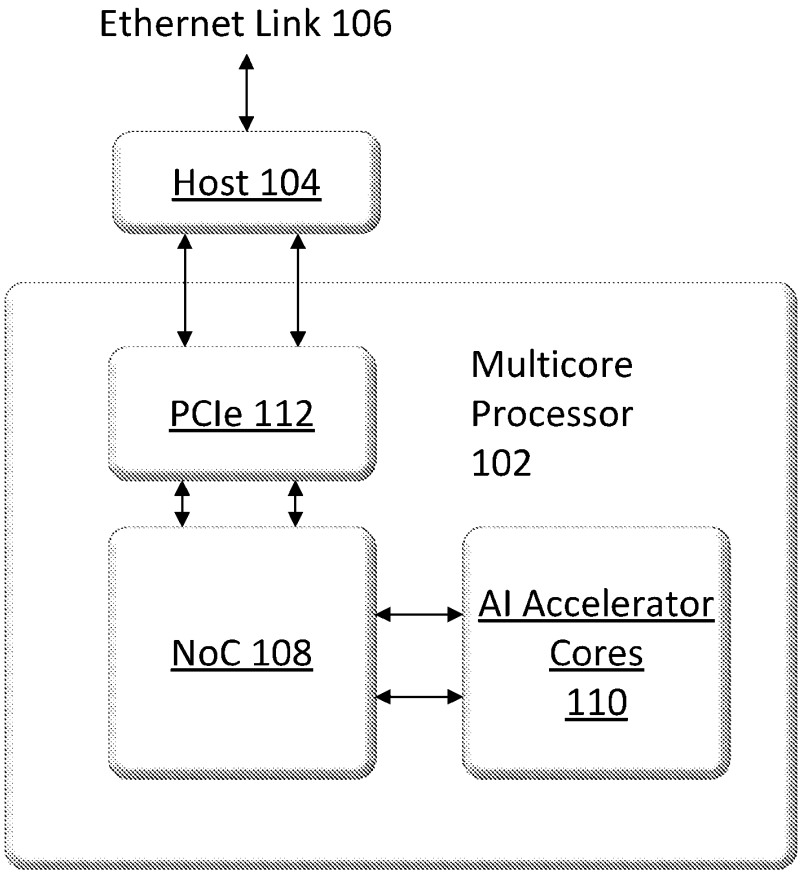

Ethernet Link 106
Host 104
PCIe 112
Multicore Processor 102
NoC 108
AI Accelerator Cores 110

FIG. 2

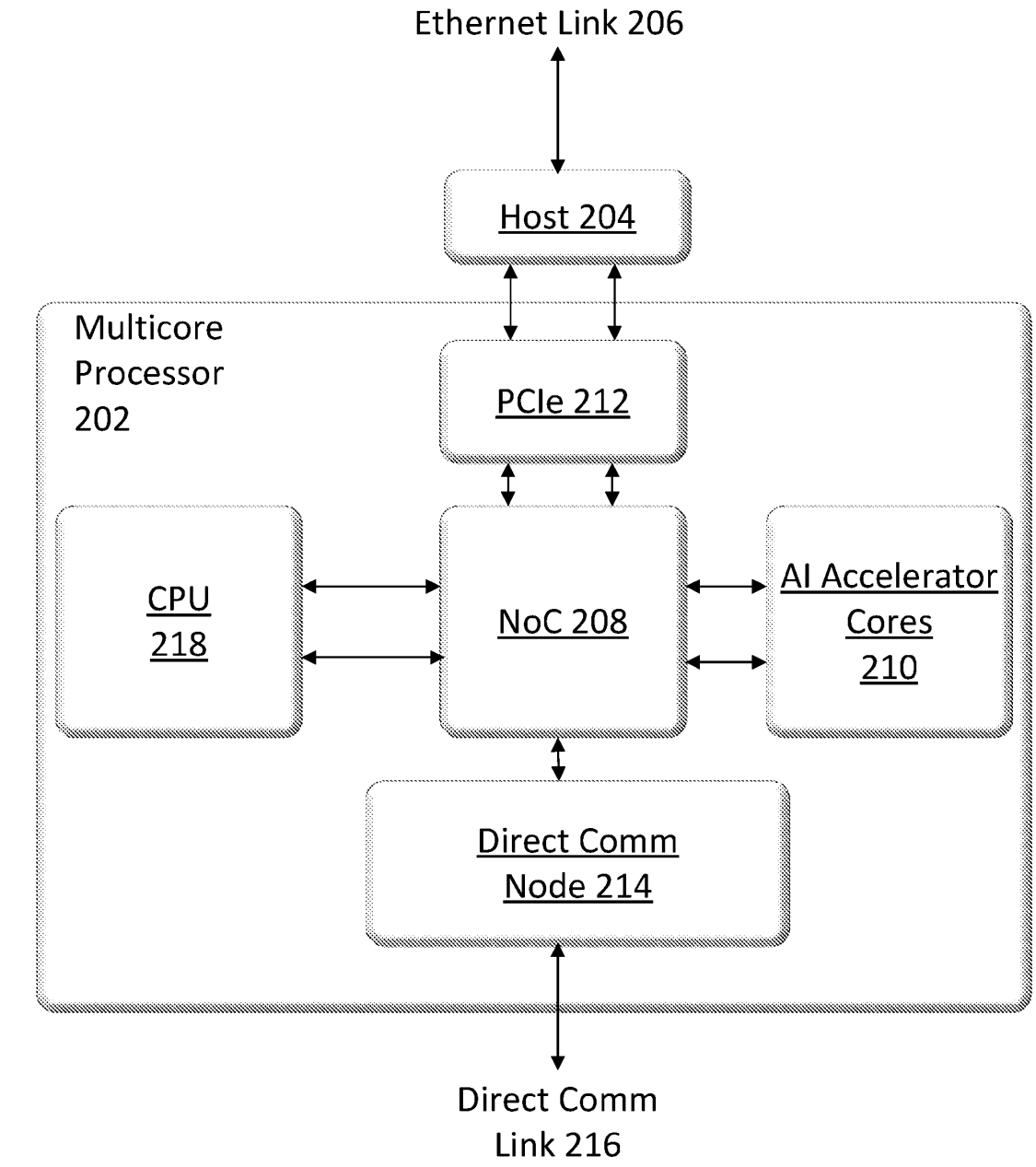

Ethernet Link 206
Host 204
Multicore Processor 202
PCIe 212
CPU 218
NoC 208
AI Accelerator Cores 210
Direct Comm Node 214
Direct Comm Link 216

FIG. 3

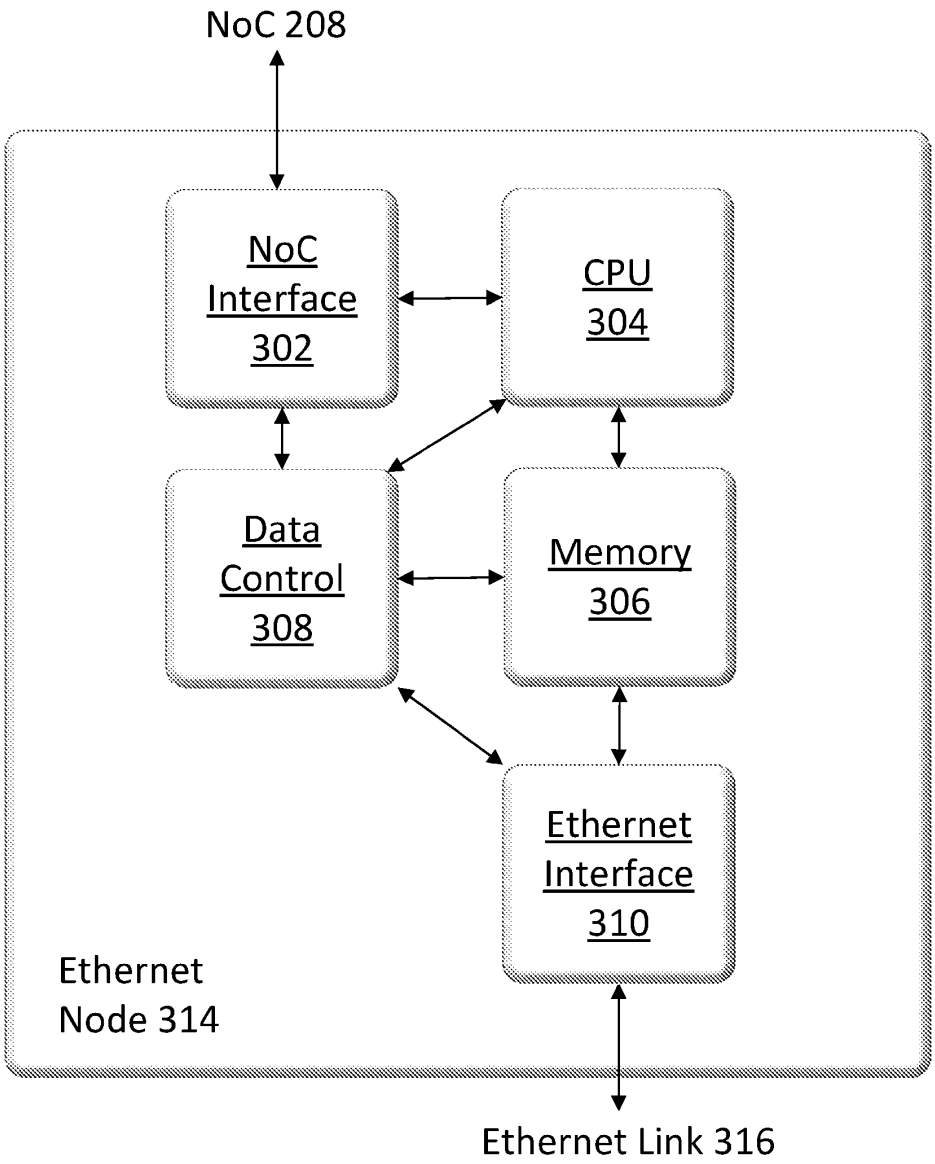

NoC 208
NoC Interface 302
CPU 304
Data Control 308
Memory 306
Ethernet Interface 310
Ethernet Node 314
Ethernet Link 316

FIG. 4

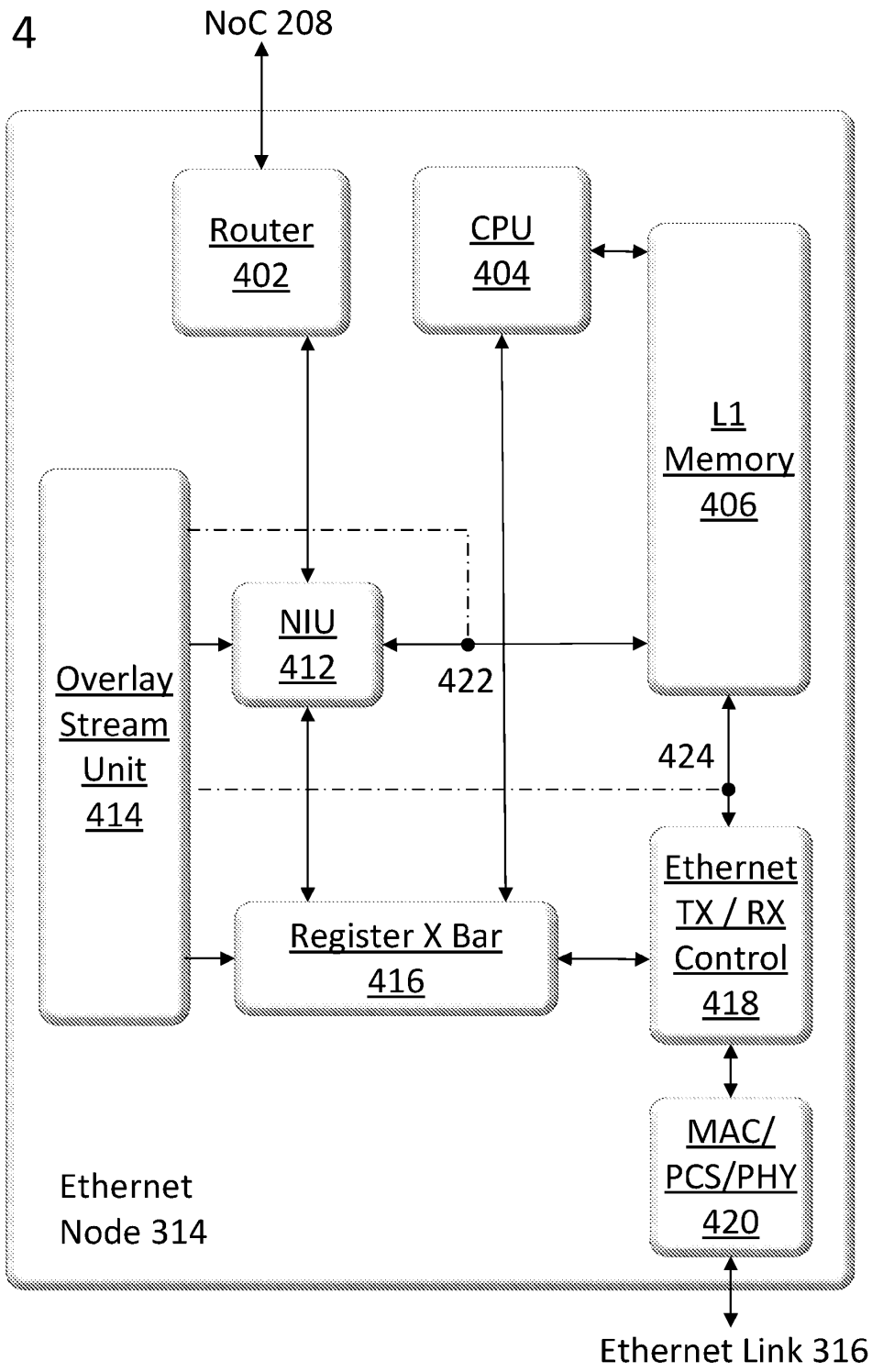

NoC 208
Router 402
CPU 404
L1 Memory 406
Overlay Stream Unit 414
NIU 412
422
424
Register X Bar 416
Ethernet TX / RX Control 418
MAC/ PCS/PHY 420
Ethernet Node 314
Ethernet Link 316

FIG. 5

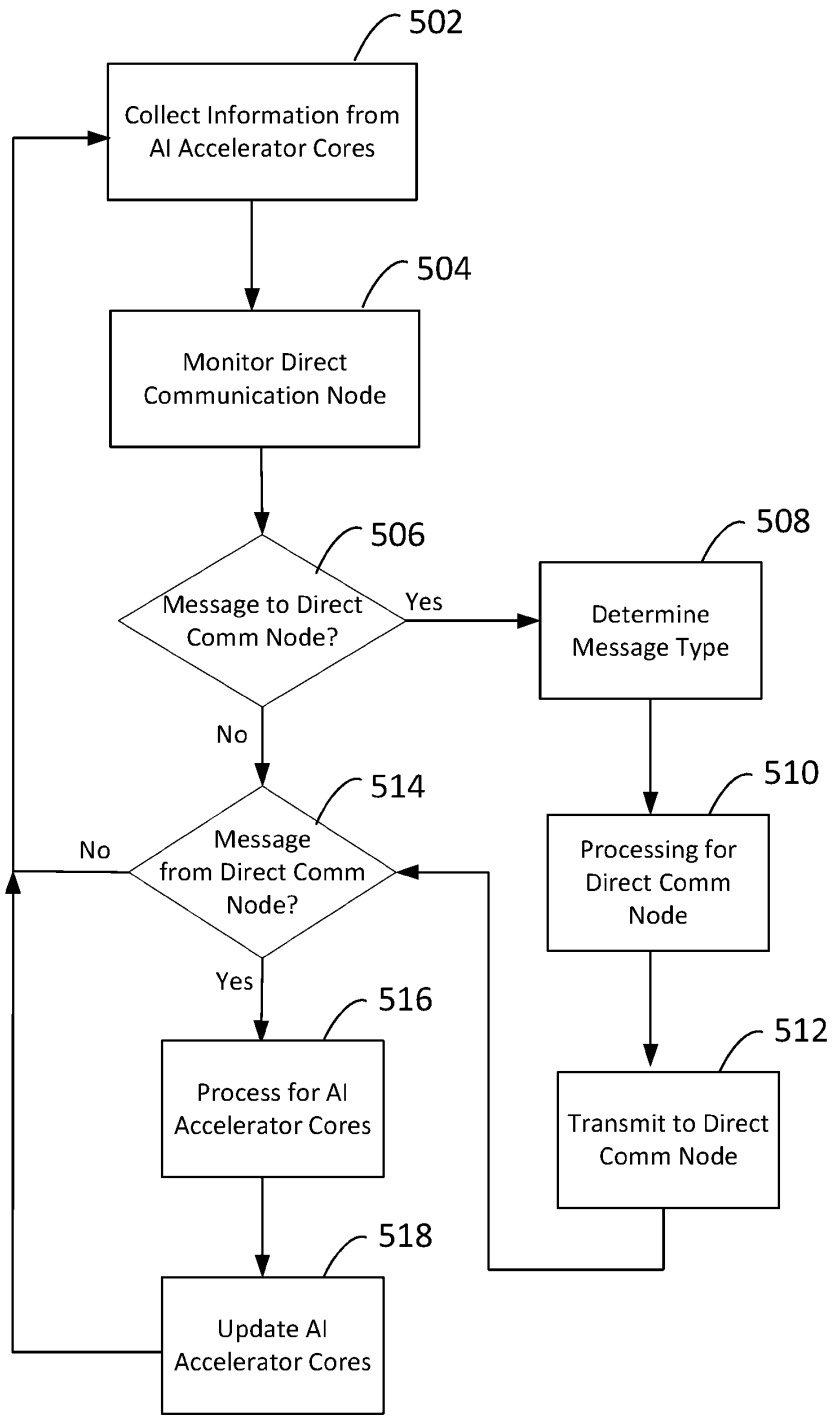

502
Collect Information from AI Accelerator Cores
504
Monitor Direct Communication Node
506
Message to Direct Comm Node?
Yes
508
Determine Message Type
No
514
Message from Direct Comm Node?
No
510
Processing for Direct Comm Node
Yes
516
Process for AI Accelerator Cores
512
Transmit to Direct Comm Node
518
Update AI Accelerator Cores

FIG. 6

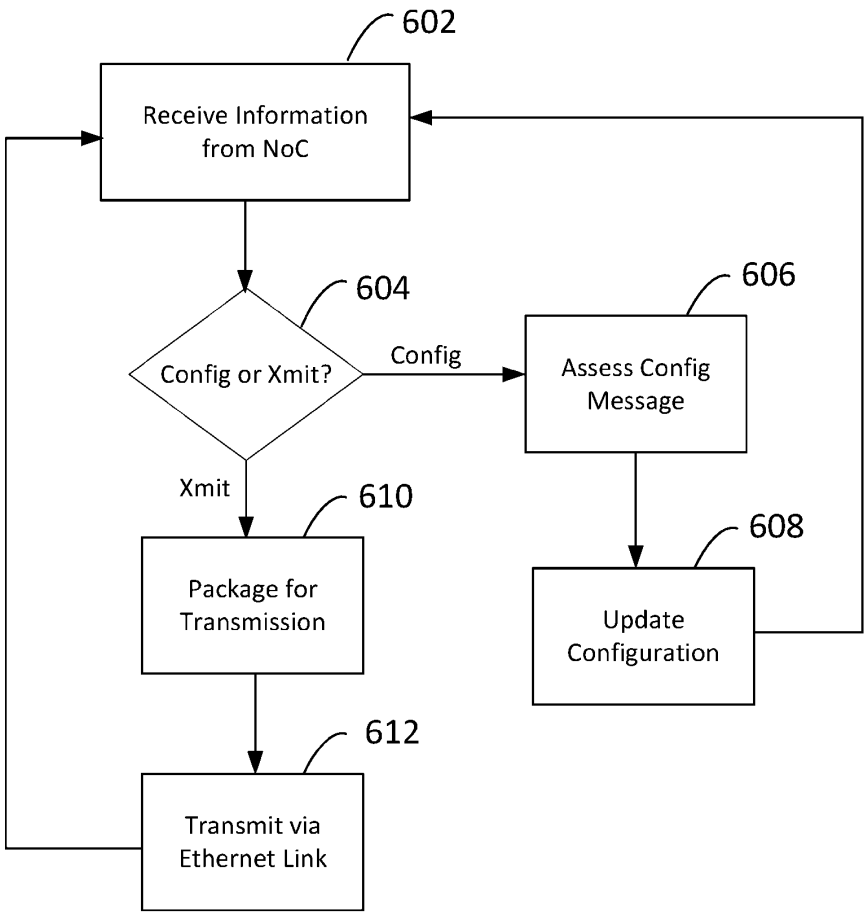
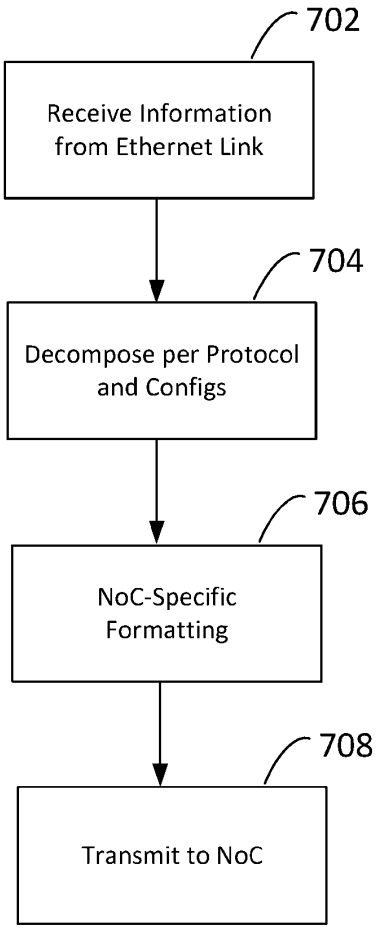

602
Receive Information from NoC
604
Config or Xmit?
Config
606
Assess Config Message
Xmit
610
Package for Transmission
608
Update Configuration
612
Transmit via Ethernet Link

FIG. 7


702
Receive Information from Ethernet Link
704
Decompose per Protocol and Configs
706
NoC-Specific Formatting
708
Transmit to NoC