General purpose CPU

Highest level functionality

Administrative interface

System control

Overall management functions

Routing protocols

Embedded processor

Intermediate functionality

Higher-layer protocols

Control of I/O processors

Exception and error handling

High-level ingress (e.g., reassembly)

High-level egress (e.g., traffic shaping)

I/O processor

Basic packet processing

Classification

Forwarding

Low-level ingress operations

Low-level egress operations