

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**

Figure 13.6 Example uses of the programmable processors on a network processor chip. Programmable I/O processors handle many of the basic packet processing tasks.