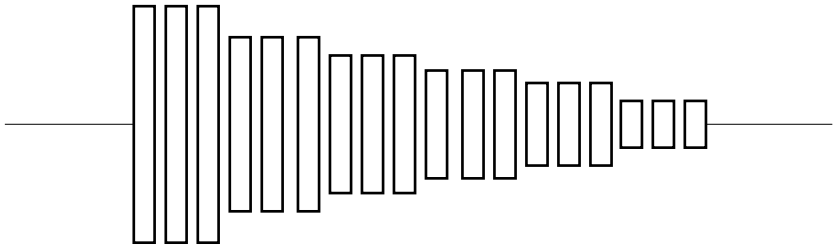
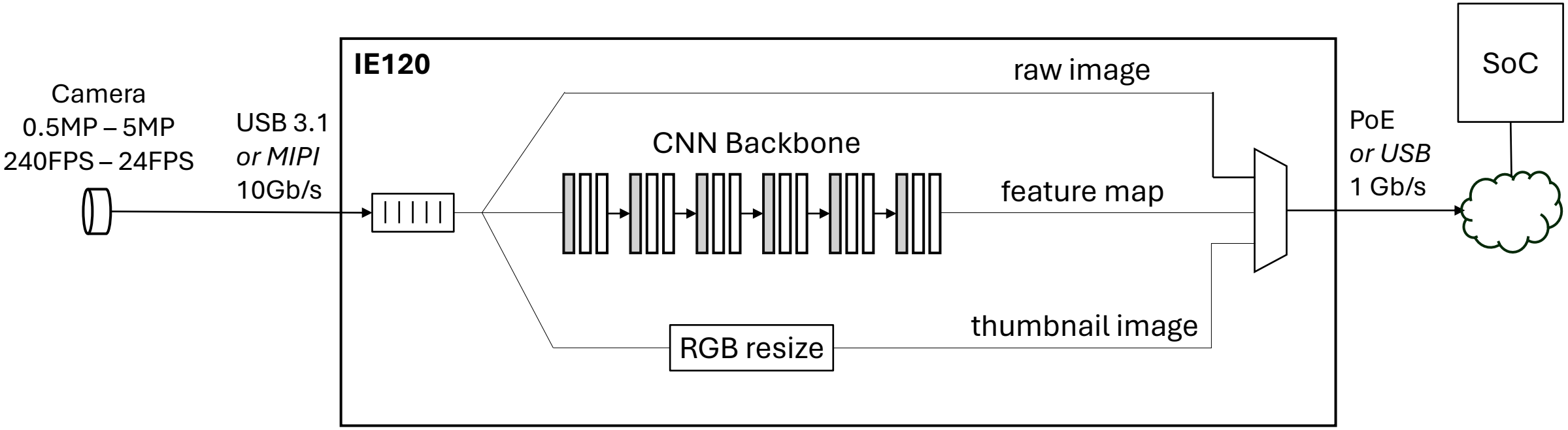
Silicon Perception



High Speed AI

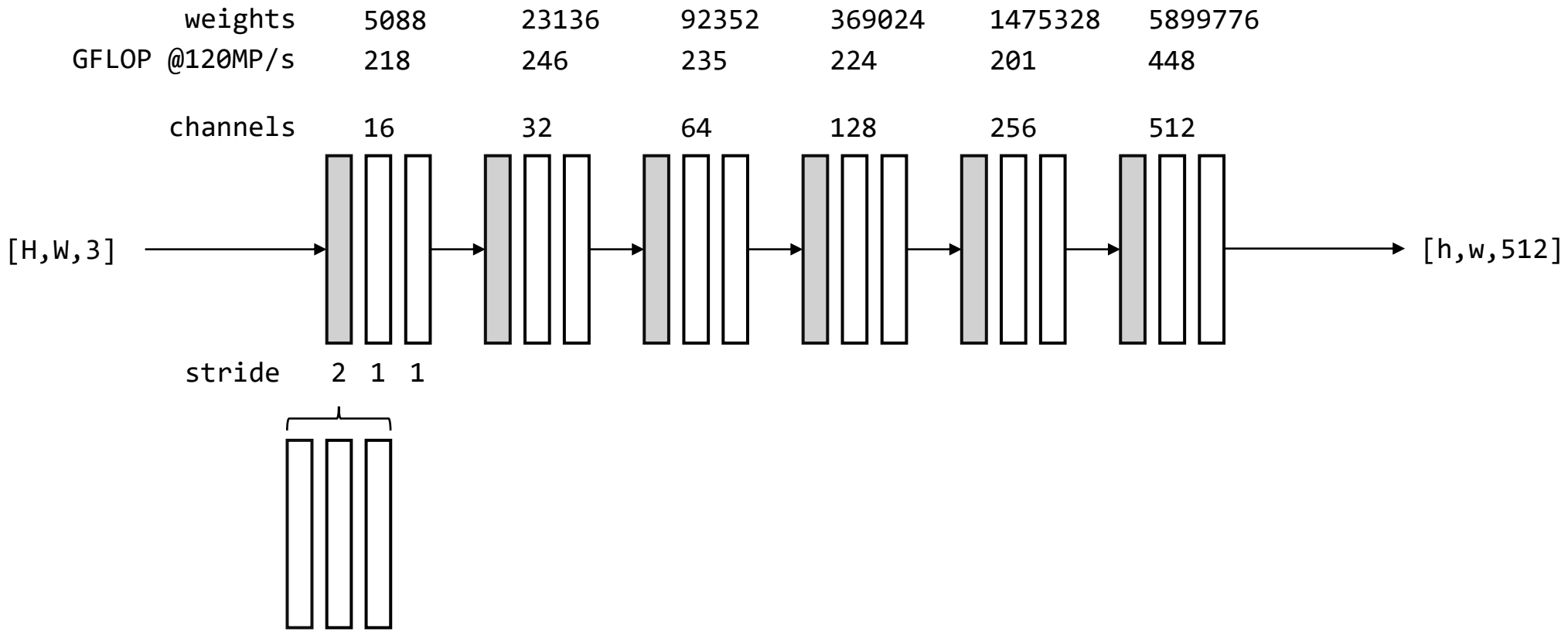
IE120 Single Chip Image Encoder

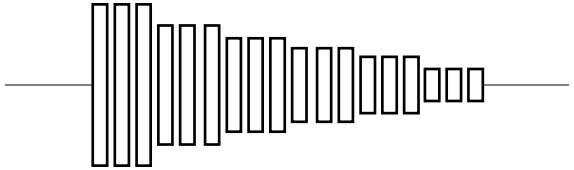


IE120 Data Sheet

Compute Fabric	Agilex 7 014, 8M weights (FP8), 1.6 TFLOP/s (FP32)
Encoder Models	VGG-like CNN backbone, 18 layers, 7.8M weights, 1.5 TFLOP/s Model IE120-050-240 : 700x700 RGB → 2x2x512 features @ 240 FPS Model IE120-200-60 : 1920x1080 RGB → 21x8x512 features @ 60 FPS Model IE120-500-24 : 2448x2048 RGB → 29x23x512 features @ 24 FPS https://github.com/siliconperception/models
Throughput	120M pixels/s
Latency	<1 ms
Power	<10 W
Camera Interface	USB 3.1 5Gb/s, USB3 Vision Standard
Downstream Interface	PoE 12W, ARP, UDP, RTP/RTSP, HTTPS

IE120 CNN Backbone Architecture




```
Conv2d(channels,kernel=[3,3],stride)
BatchNorm2d(channels)
ReLU()
```