IE120L Single Chip Image Encoder
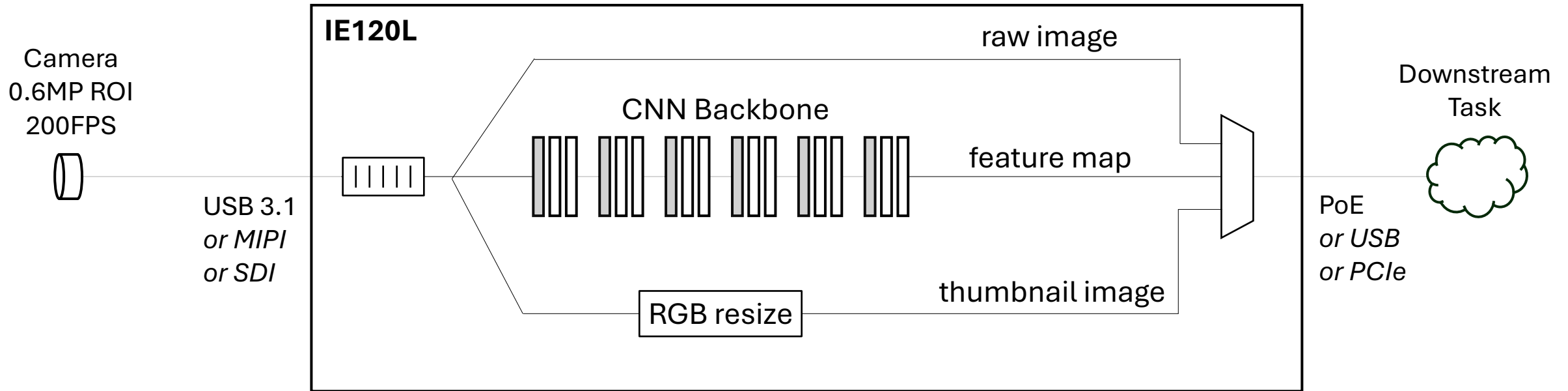
IE120L Data Sheet

Compute Fabric	Agilex AGF 014, 8M weights (FP8), 1.6 TFLOP/s (FP32)
PyTorch Model	VGG-like CNN backbone, 18 layers, 7.8M weights, 1.5 TFLOP/s
Input Shape	768x768 RGB image (FP32)
Output Shape	3x3x512 feature map (FP32)
Throughput	200 frames/s
Latency	150 µs + transport
Power	<10 W
Camera Interface	USB 3.1 5Gb/s, USB3 Vision Standard
Downstream Interface	PoE 12W, ARP, UDP, RTP/RTSP, HTTPS

IE120L PyTorch Model

weights	5088	23136	92352	369024	1475328	5899776
GFLOP @120MP/s	218	246	235	224	201	448
channels	16	32	64	128	256	512

[768,768,3] → ... → [3,3,512]

| kernel | 3 3 3 | 3 3 3 | 3 3 3 | 3 3 3 | 3 3 3 | 3 3 3 |
| stride | 2 1 1 | 2 1 1 | 2 1 1 | 2 1 1 | 2 1 1 | 2 1 1 |

```
Conv2d(channels,kernel,stride)
BatchNorm2d(channels)
ReLU()
```