

rgb\_emb [bsz, C1, h0, w0]



sample

← r2p\_neighbor\_index  
[bsz, npts, 1]

[bsz, C1, npts, 1]

r2p\_pre\_layers



Conv2d,  $1 \times 1$ , s=1

BatchNorm2d

ReLU

r2p\_emb [bsz, C2, npts, 1]

p\_emb [bsz, C1, npts, 1]



p2r\_pre\_layers

Conv2d,  $1 \times 1$ , s=1

BatchNorm2d

ReLU

[bsz, C2, npts, 1]

nearest\_interpolation

← p2r\_neighbor\_index  
[bsz, h0\*w0, 1]

p2r\_emb [bsz, C2, h0, w0]