| Parameter         | 17M<br>(XXS) | 32M<br>(XS) | 68M<br>(Small) | 150M<br>(Base) | 400M<br>(Large) | 1B<br>(XL) |
|-------------------|--------------|-------------|----------------|----------------|-----------------|------------|
| Layers            | 7            | 10          | 19             | 22             | 28              | 28         |
| Hidden Size       | 256          | 384         | 512            | 768            | 1024            | 1792       |
| Intermediate Size | 384          | 576         | 768            | 1152           | 2624            | 3840       |
| Attention Heads   | 4            | 6           | 8              | 12             | 16              | 28         |
| Learning Rate     | 3.0e-3       | 3e-3        | 3e-3           | 8e-4           | 5e-4            | 5e-4       |
| Weight Decay      | 3.0e-4       | 3.0e-4      | 3.0e-4         | 1.0e-5         | 1.0e-5          | 5.0e-5     |
| Warmup Tokens (B) | 4            | 4           | 3              | 3              | 2               | 2          |
| BS Warmup (B)     | 125          | 100         | 75             | 50             | 10              | 3          |