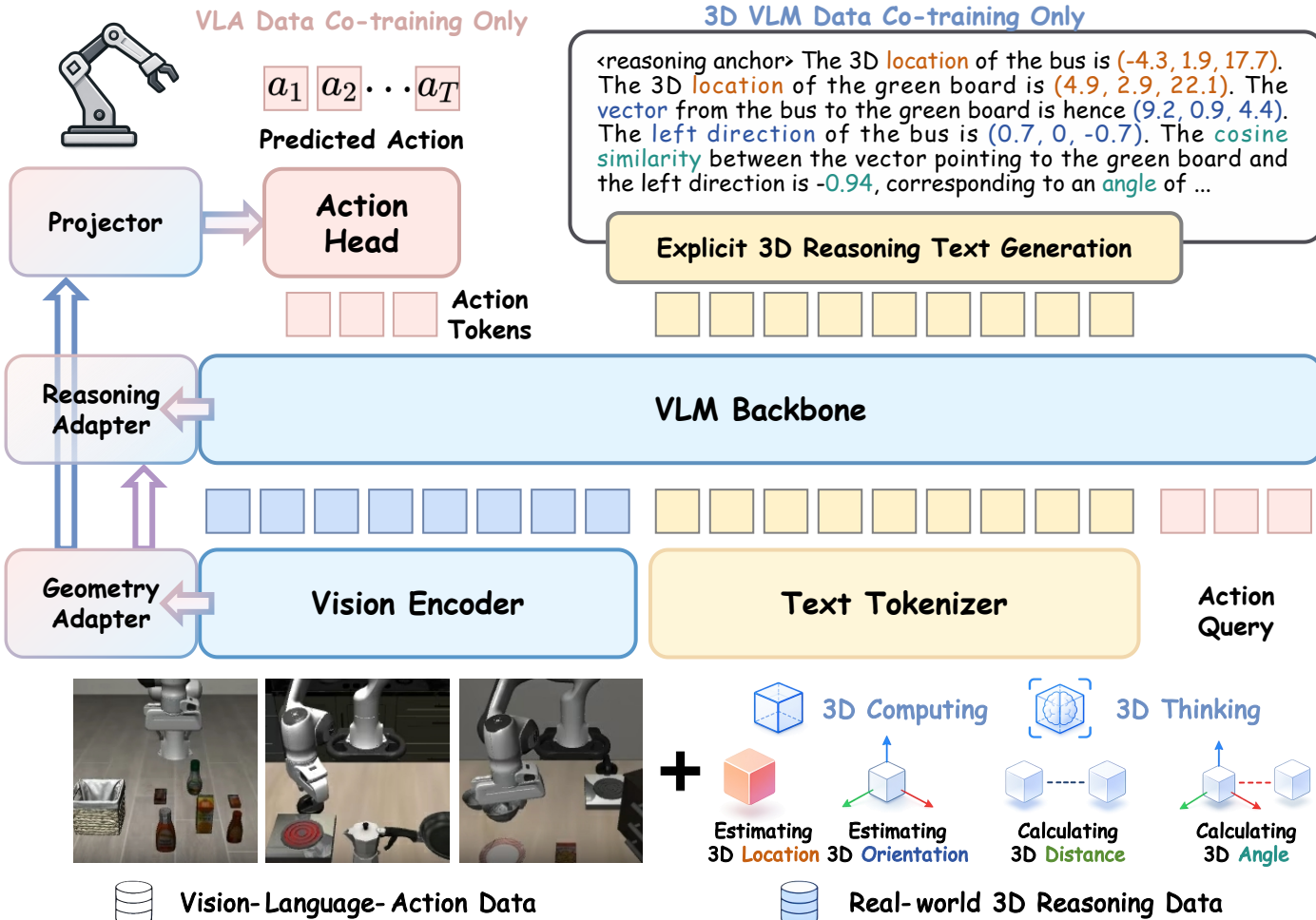
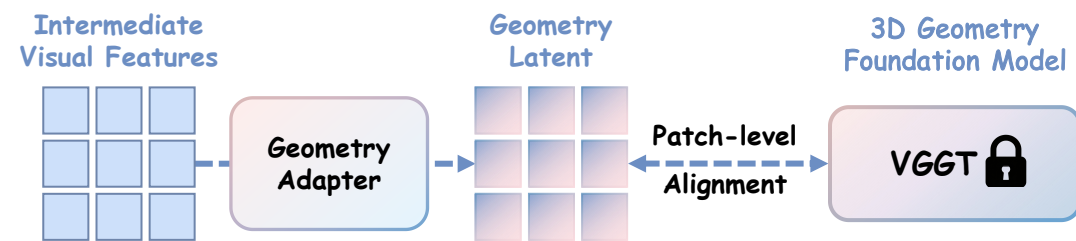


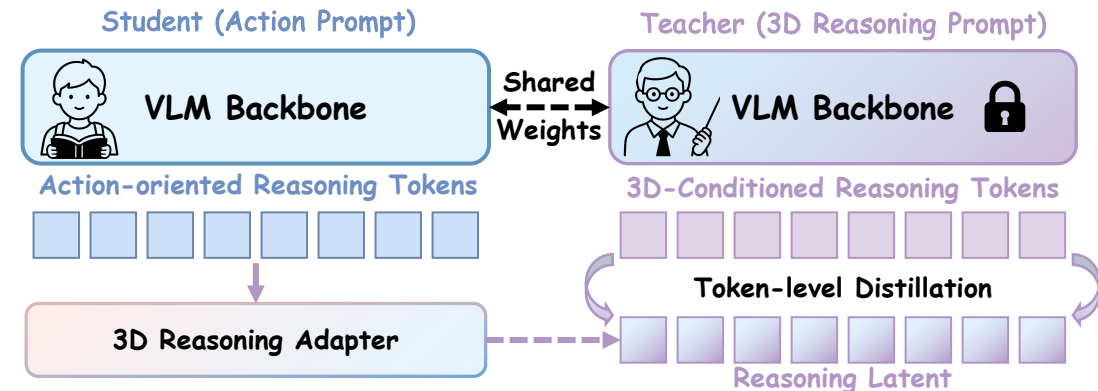
### (a) 3D-Thinking-Guided Co-training Framework



### (b) Latent 3D Geometry Perception Module



### (c) Online 3D Reasoning Distillation Module



### (d) Spatially Augmented Action Integration

