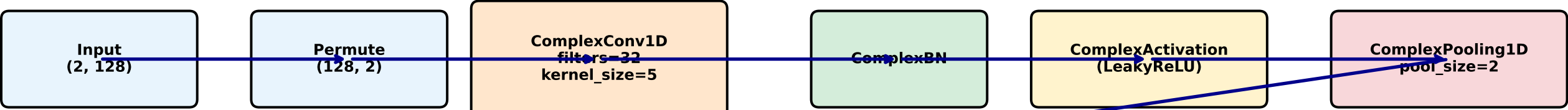


Lightweight Hybrid ResNet-ComplexCNN Model Architecture  
for Radio Signal Modulation Classification  
(Parameters: ~1.3M, Inference: ~2.3ms)

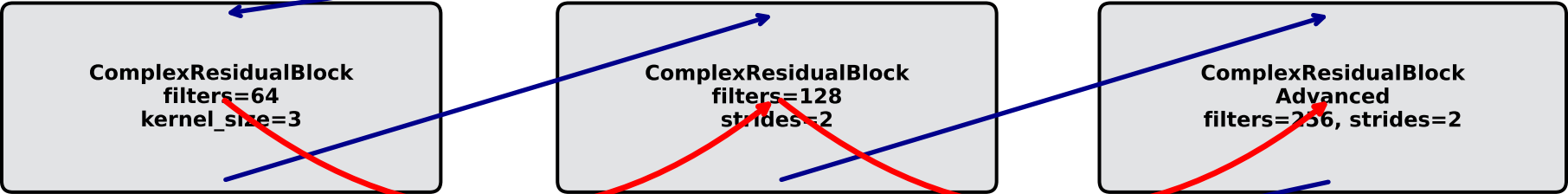
Model Statistics:

- Input Shape: (2, 128)
- Output Classes: 11
- Complex Layers: 8
- Residual Blocks: 3
- Total Parameters: ~1.3M
- Training Accuracy: 65.38%

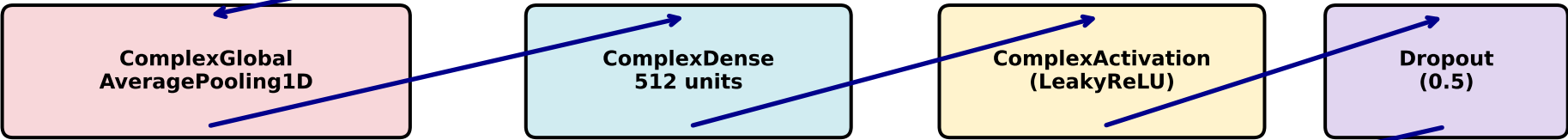
Phase 1: Complex Feature Extraction



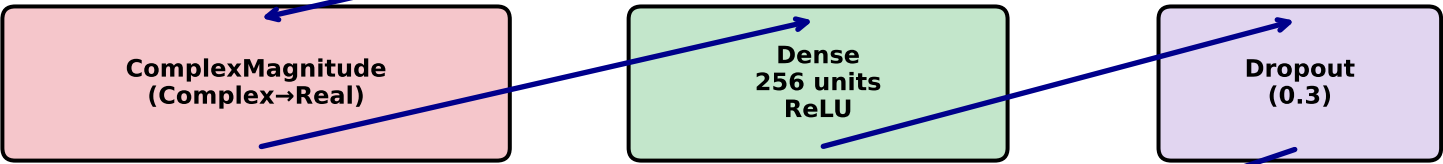
Phase 2: Complex Residual Learning



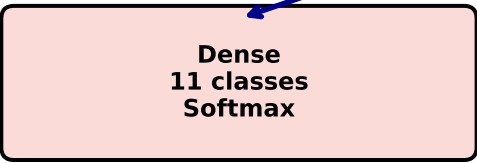
Phase 3: Complex Global Features



Phase 4: Complex→Real Conversion



Phase 5: Real Classification



- Input/Reshape
- Complex Convolution
- Complex BatchNorm
- Complex Activation
- Complex Pooling
- Complex Residual Block
- Complex Dense
- Complex→Real Conversion
- Real Dense
- Dropout
- Output Layer

Red arrows: Residual skip connections