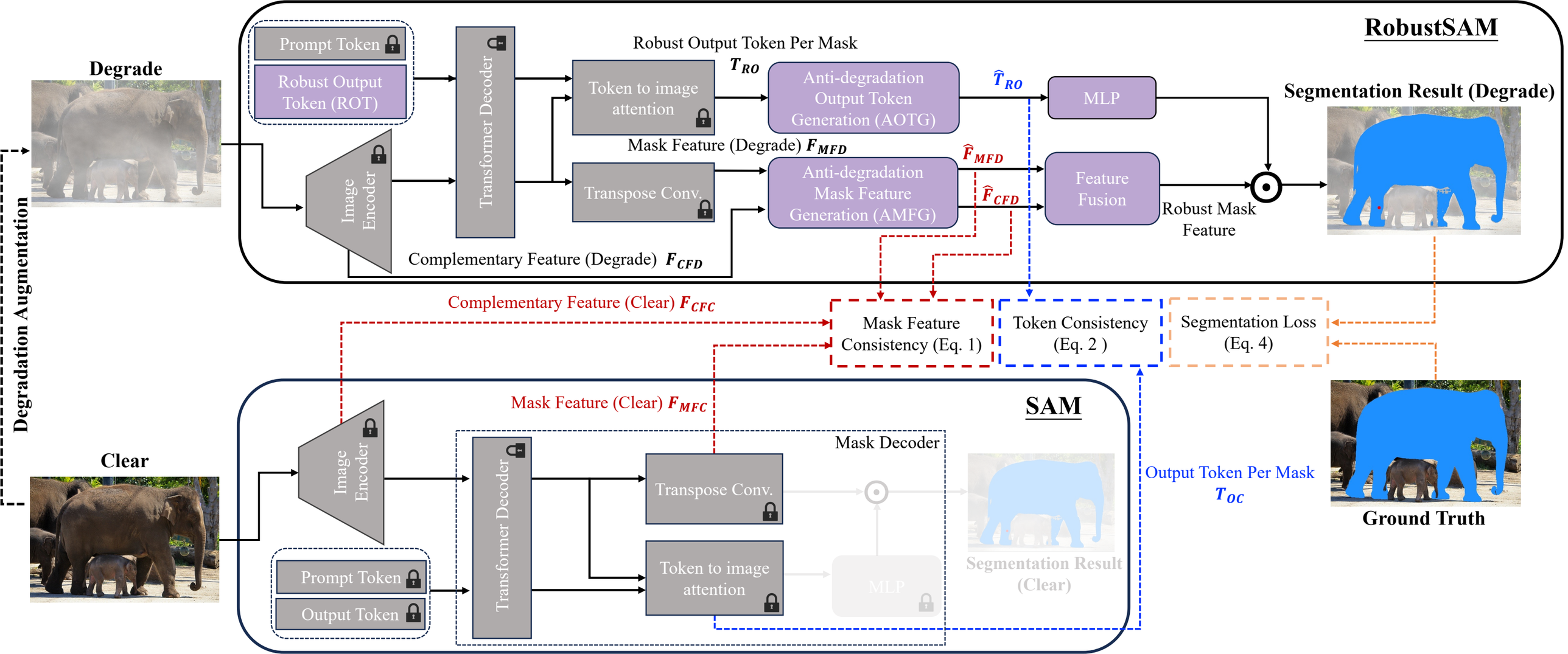
RobustSAM
Degrade
Prompt Token
Robust Output Token (ROT)
Image Encoder
Transformer Decoder
Robust Output Token Per Mask
$T_{RO}$
Token to image attention
Anti-degradation Output Token Generation (AOTG)
$\hat{T}_{RO}$
MLP
Segmentation Result (Degrade)
Mask Feature (Degrade) $F_{MFD}$
Transpose Conv.
Anti-degradation Mask Feature Generation (AMFG)
$\hat{F}_{MFD}$
$\hat{F}_{CFD}$
Feature Fusion
Robust Mask Feature
Complementary Feature (Degrade) $F_{CFD}$
Degradation Augmentation
Complementary Feature (Clear) $F_{CFC}$
Mask Feature Consistency (Eq. 1)
Token Consistency (Eq. 2 )
Segmentation Loss (Eq. 4)
Clear
Mask Feature (Clear) $F_{MFC}$
SAM
Mask Decoder
Image Encoder
Transformer Decoder
Transpose Conv.
Token to image attention
MLP
Prompt Token
Output Token
Segmentation Result (Clear)
Output Token Per Mask
$T_{OC}$
Ground Truth