α-guided View-dependent representation Block (α-VdR)
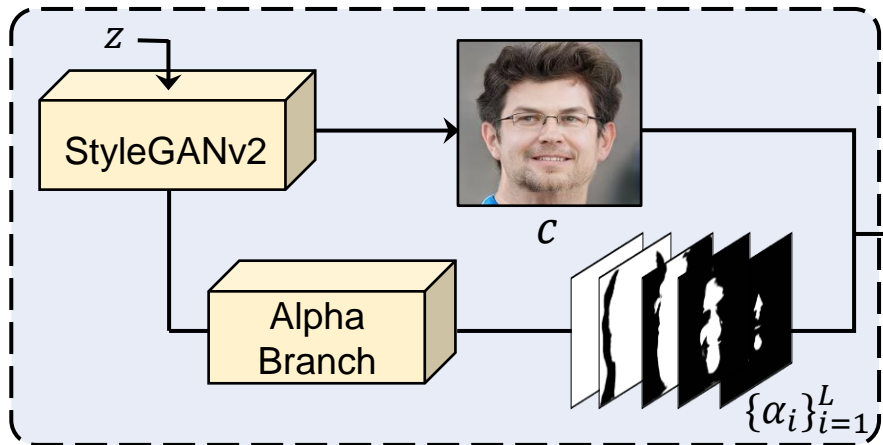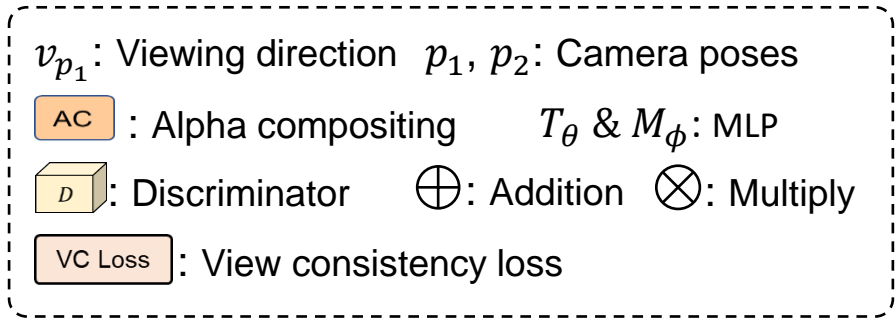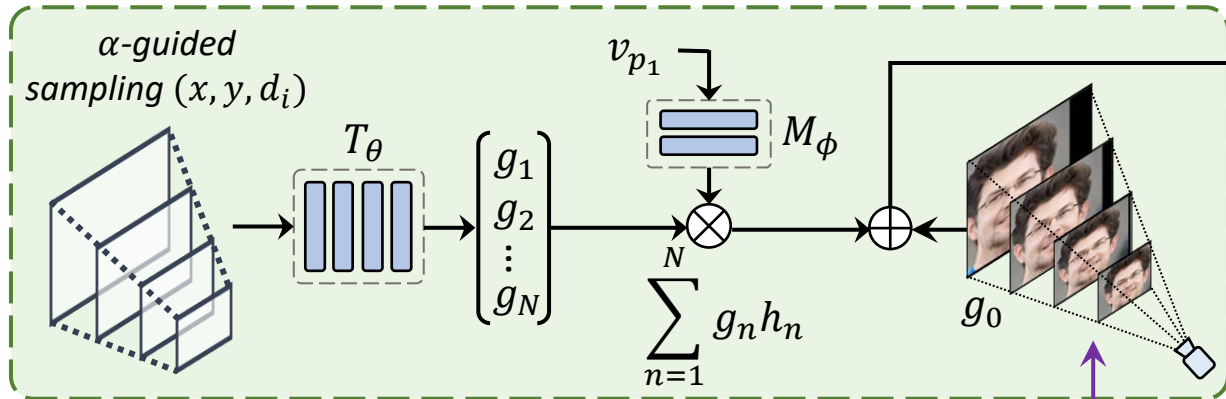
α-guided sampling (x, y, d_i)

T_θ

$\begin{cases} g_1 \\ g_2 \\ \vdots \\ g_N \end{cases}$

v_{p_1}

M_ϕ

$\otimes$

$\sum\limits_{n=1}^{N} g_n h_n$

g_0

$C^{p_1}(v)$

v_{p_1} : Viewing direction p_1, p_2: Camera poses

AC : Alpha compositing T_θ & M_ϕ: MLP

D : Discriminator $\oplus$: Addition $\otimes$: Multiply

VC Loss : View consistency loss

RGBα Generator

z

StyleGANv2

c

Alpha Branch

$\{\alpha_i\}_{i=1}^L$

Warp

p_1

p_2

Warped RGB (C^{p_1})

α^{p_1}

α^{p_2}

C^{p_2}

RGBα

AC

AC

I_{p_1}

I_{p_2}

VC Loss

Warped to p_1

D

p_1

Pose conditioning