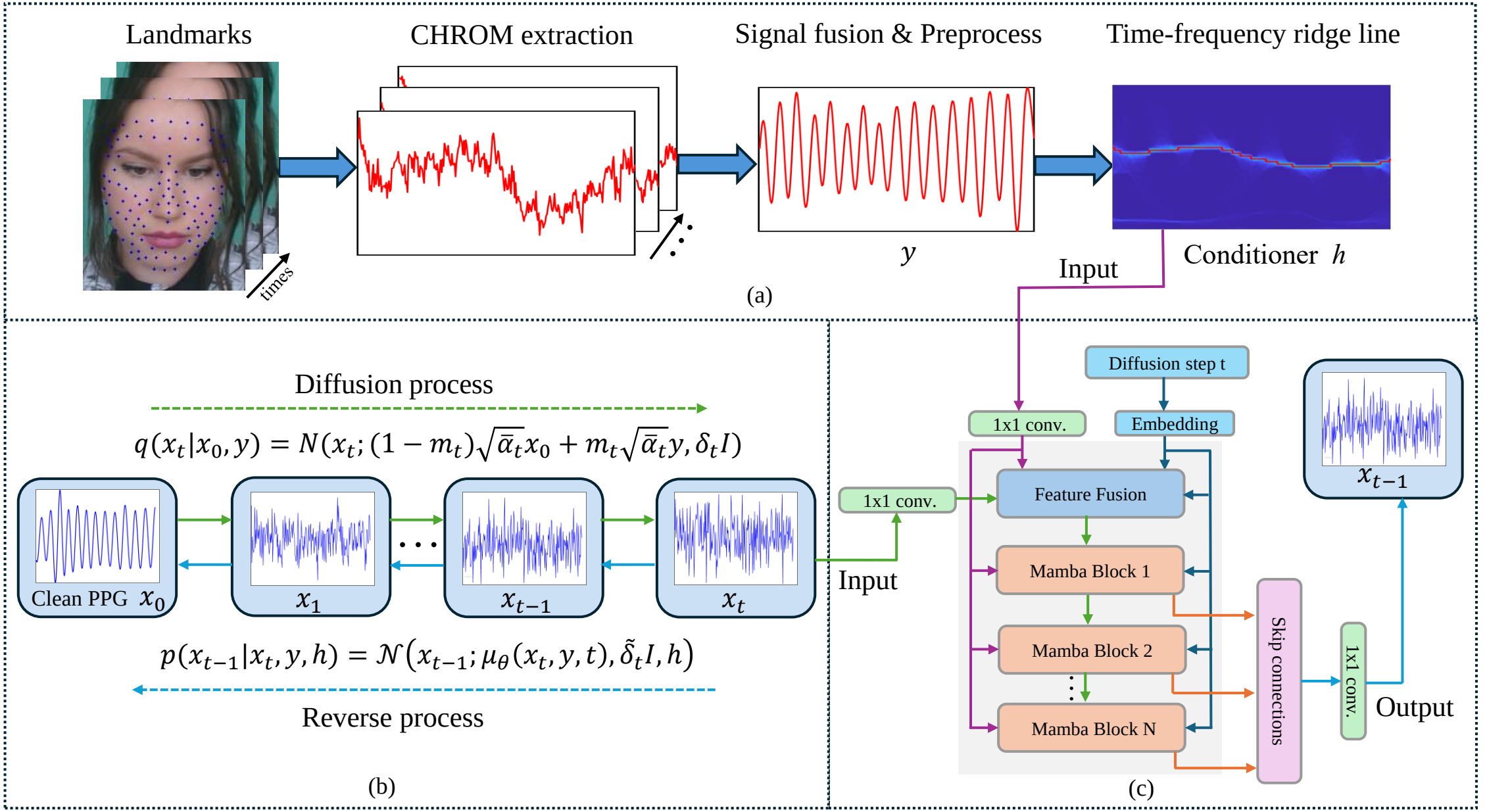
Landmarks
CHROM extraction
Signal fusion & Preprocess
Time-frequency ridge line
times
y
Input
Conditioner h
(a)
Diffusion process
$q(x_t|x_0, y) = N(x_t; (1 - m_t)\sqrt{\bar{\alpha}_t}x_0 + m_t\sqrt{\bar{\alpha}_t}y, \delta_t I)$
Clean PPG x_0
x_1
x_{t-1}
x_t
$p(x_{t-1}|x_t, y, h) = \mathcal{N}(x_{t-1}; \mu_\theta(x_t, y, t), \tilde{\delta}_t I, h)$
Reverse process
(b)
Diffusion step t
1x1 conv.
Embedding
1x1 conv.
Feature Fusion
Mamba Block 1
Mamba Block 2
Mamba Block N
Skip connections
1x1 conv.
Output
Input
x_{t-1}
(c)