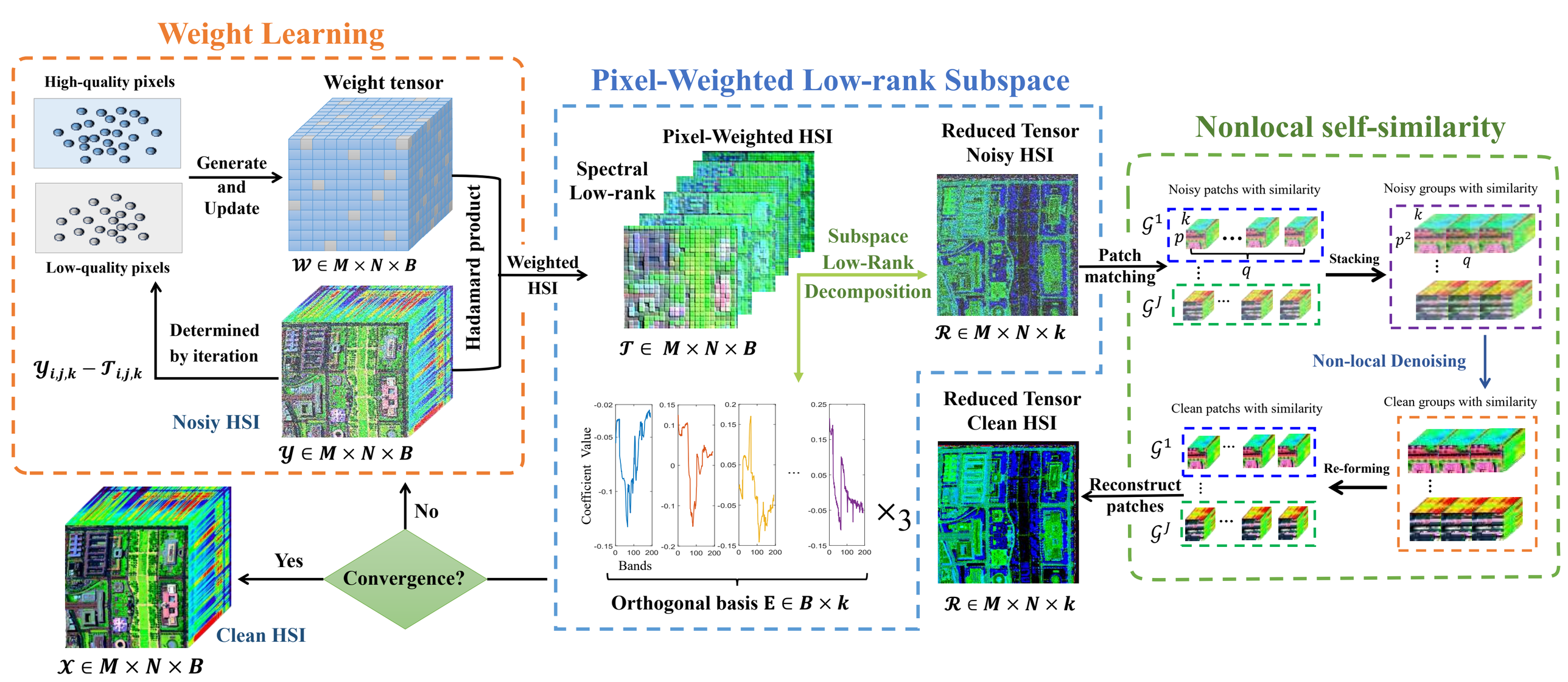
Weight Learning
High-quality pixels
Low-quality pixels
Generate and Update
Weight tensor
$\mathcal{W} \in M \times N \times B$
Hadamard product
Weighted HSI
Determined by iteration
$\mathcal{Y}_{i,j,k} - \mathcal{T}_{i,j,k}$
Nosiy HSI
$\mathcal{Y} \in M \times N \times B$
Pixel-Weighted Low-rank Subspace
Pixel-Weighted HSI
Spectral Low-rank
$\mathcal{T} \in M \times N \times B$
Subspace Low-Rank Decomposition
Reduced Tensor Noisy HSI
$\mathcal{R} \in M \times N \times k$
Coefficient Value
Bands
Orthogonal basis E $\in B \times k$
$\times 3$
Reduced Tensor Clean HSI
$\mathcal{R} \in M \times N \times k$
Convergence?
No
Yes
Clean HSI
$\mathcal{X} \in M \times N \times B$
Nonlocal self-similarity
Noisy patchs with similarity
Patch matching
Noisy groups with similarity
Stacking
Non-local Denoising
Clean groups with similarity
Re-forming
Clean patchs with similarity
Reconstruct patches