

```

RGBToYCbCr[c_, opts___] :=
Module[{k, cols, t, d,
  a =
    {{.299, .587, .114}, {-.299, -.587, .886} / 1.772, {.701, -.587, -.114} / 1.402} / 255.,
    r, g, b, v = {219, 224, 224}, w = {16, 128, 128}, m, dflag = 0},
m = DisplayMode /. {opts} /. Options[RGBToYCbCr];
If[m === True, dflag = 1];
d = Depth[c];
If[d == 2, t = a.c; If[dflag == 0, Return[t], Return[v * t + w]]];
If[d == 3, t = Transpose[a.Transpose[c]]; If[dflag == 0, Return[t], Return[\
Transpose[v * Transpose[t] + w]]];
If[d == 4, {r, g, b} = c; cols = Dimensions[r][[2]];
  t =
    Partition[Flatten[Transpose[{Flatten[r], Flatten[g], Flatten[b]}]],
      3];
  t = Transpose[a.Transpose[t]];
  If[dflag == 1, t = Transpose[v * Transpose[t] + w]];
  Return[
    Table[Partition[Take[Flatten[t], {k, 3 * Length[t], 3}], cols], {k, 1,
      3}]];];
];

```