The electronic structure, screening properties, and charge distribution in stacks of graphene layers is studied. We analyze: i) The stability of Dirac points as function of the ordering of the stack and the number of layers, ii) The existence of surface bands at the top and bottom layers for some stack orderings, iii) The appearance of gaps induced by inhomogeneous charge distributions, and iv) The charge induced by external electric fields. We find that electronic bands with linear, Dirac like, dispersion exist in stacks with the Bernal stacking and an odd number of layers, and for rhombohedral stacking. In the last case, a dispersionless surface band is also formed. In the presence of interlayer hopping, the dielectric response of a stack with the Bernal ordering favors the formation of a charge density wave with periodicity equal to twice the interlayer spacing. In doped stacks, the charge will accumulate at the surfaces, and present an even-odd modulation.