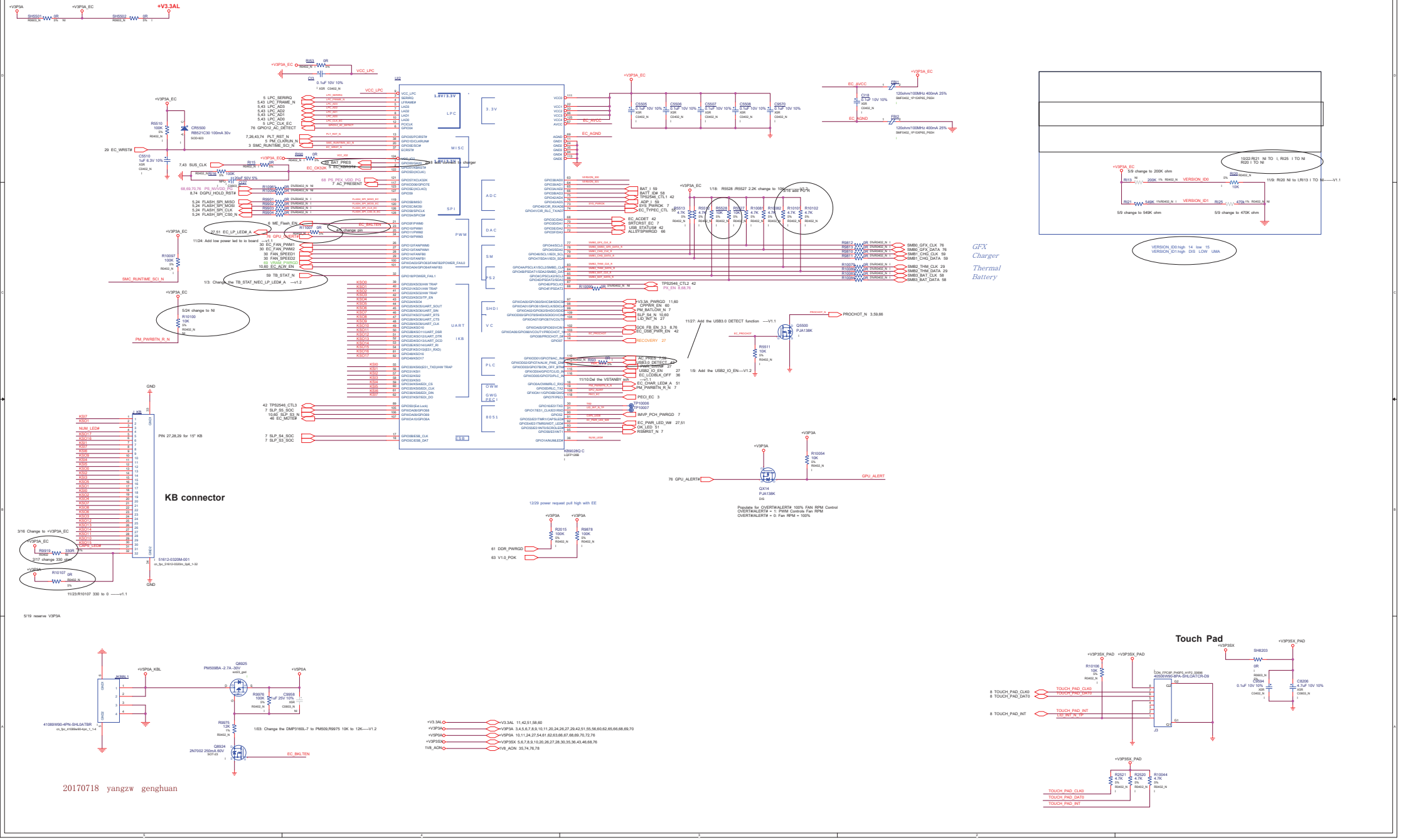EC controller