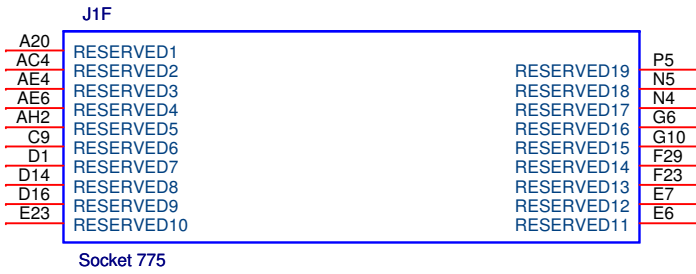
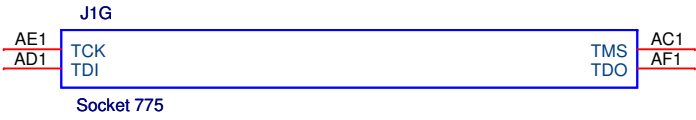
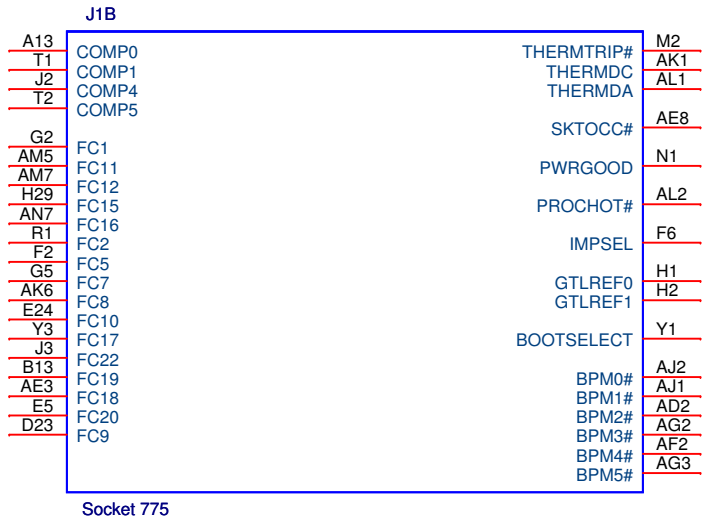
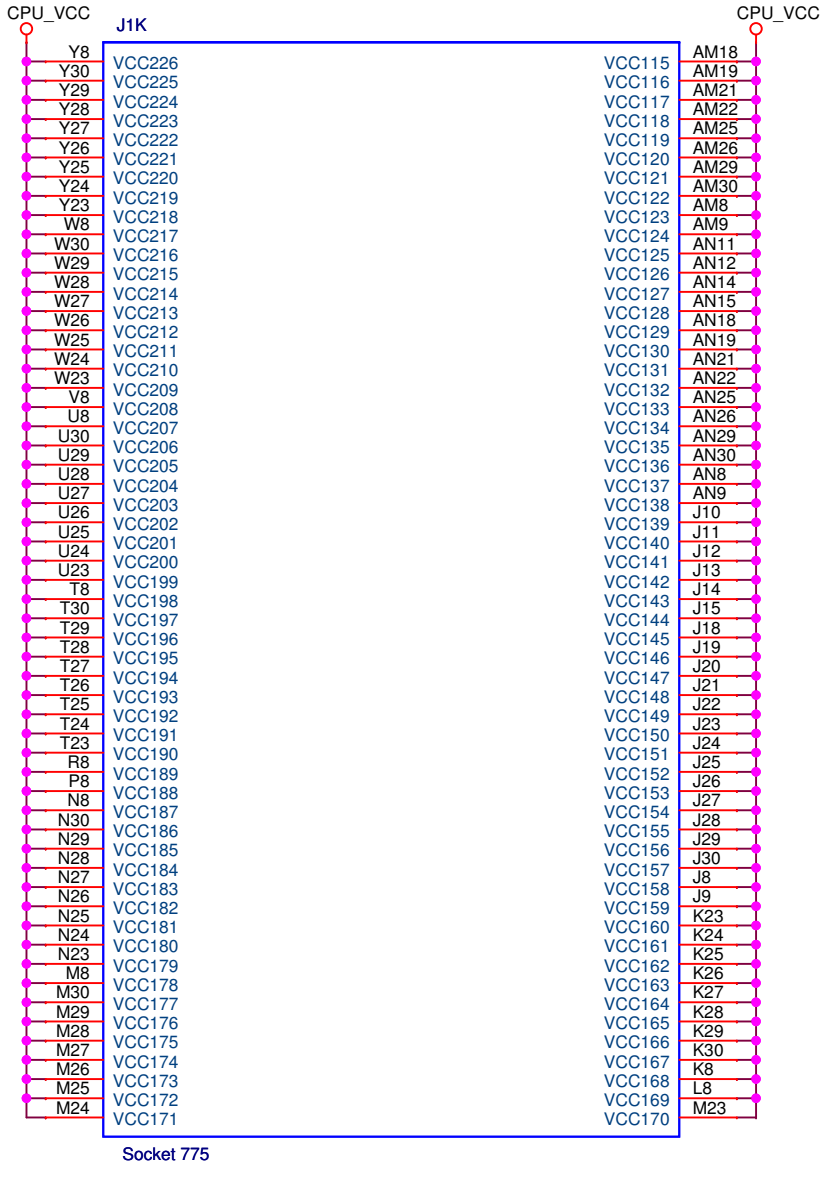
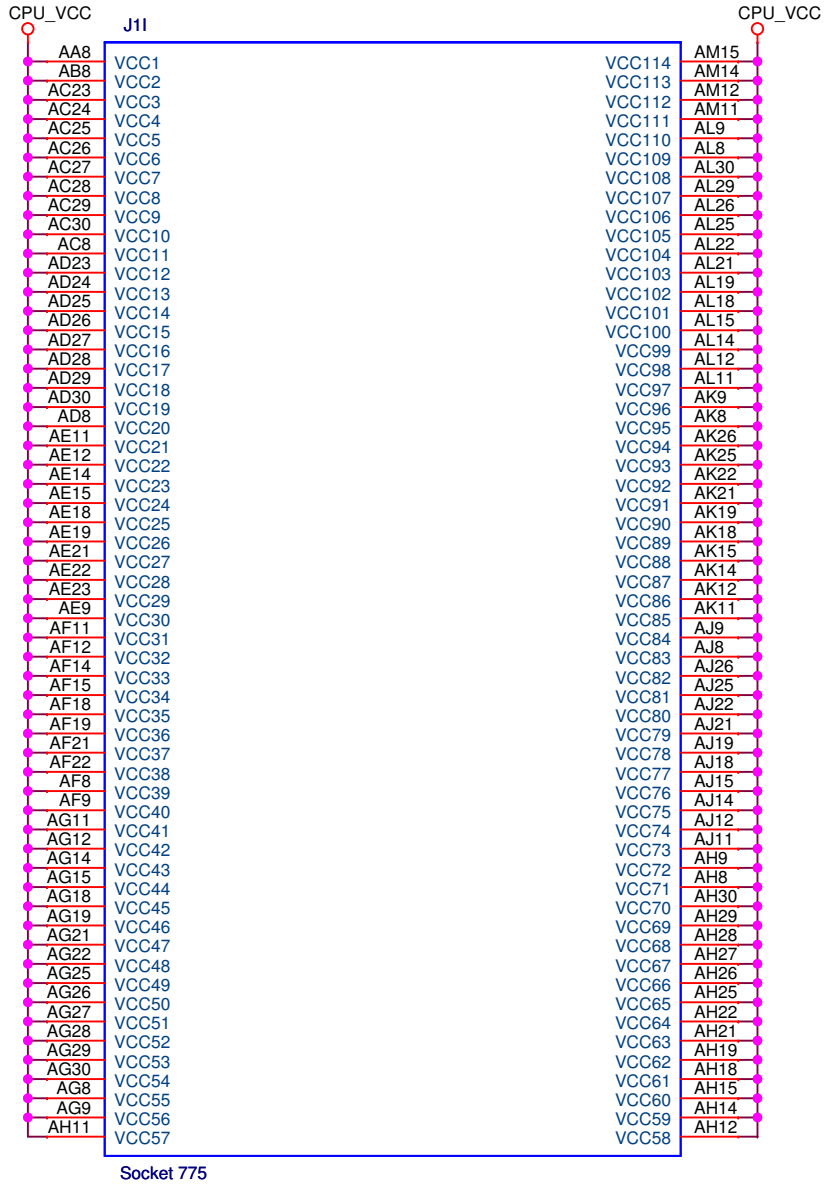


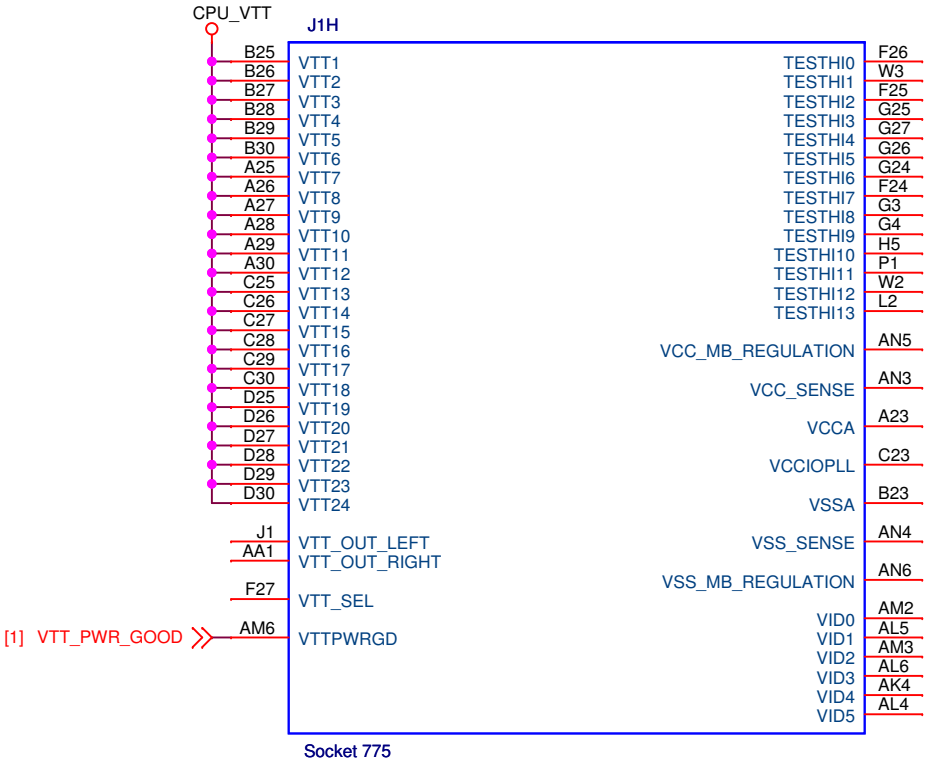
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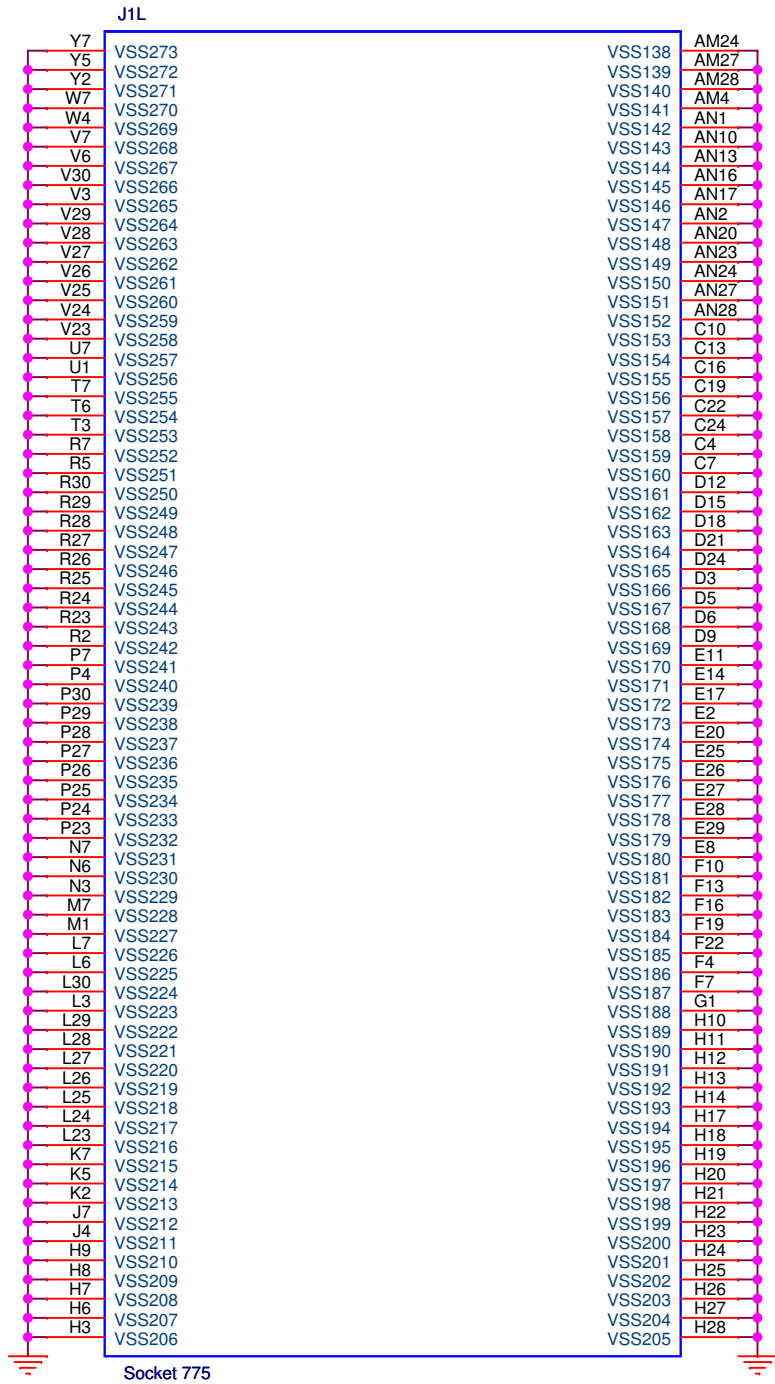
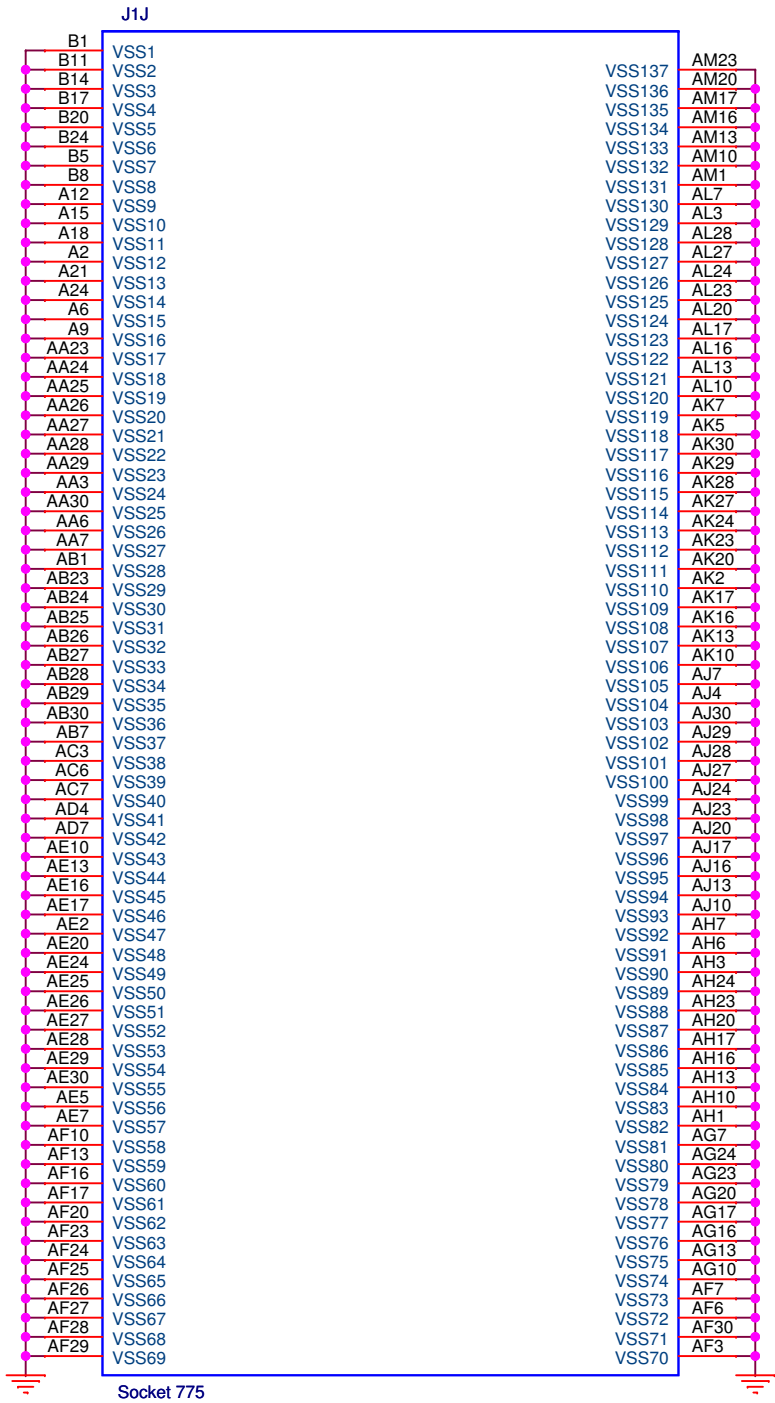
| Page # | Description |
|--------|-----------------------|
| 1 | CPU Front Side Bus |
| 2 | CPU Misc. |
| 3 | CPU VCC |
| 4 | CPU VTT |
| 5 | CPU VSS |
| 6 | X48 Front Side Bus |
| 7 | X48 PCI-X |
| 8 | X48 DDR3 Channel 0 |
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| 13 | DDR3 Channel 0 Slot 0 |
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| 15 | DDR3 Channel 1 Slot 0 |
| 16 | DDR3 Channel 1 Slot 1 |
| 17 | PCI Express Channel 0 |
| 18 | PCI Express Channel 1 |
| 19 | Clock Synthesizer |

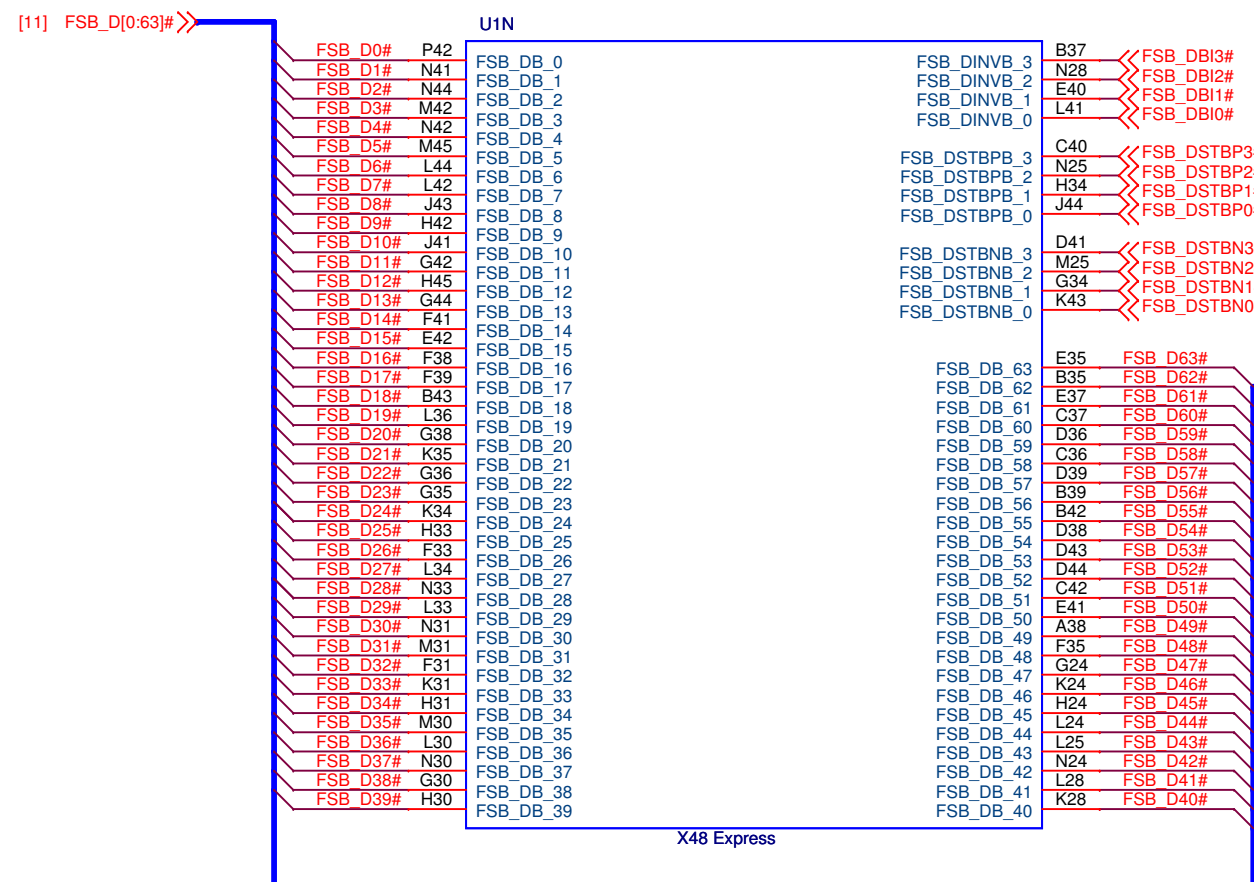
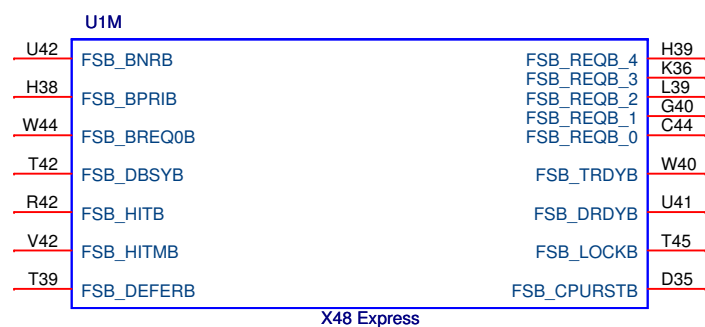
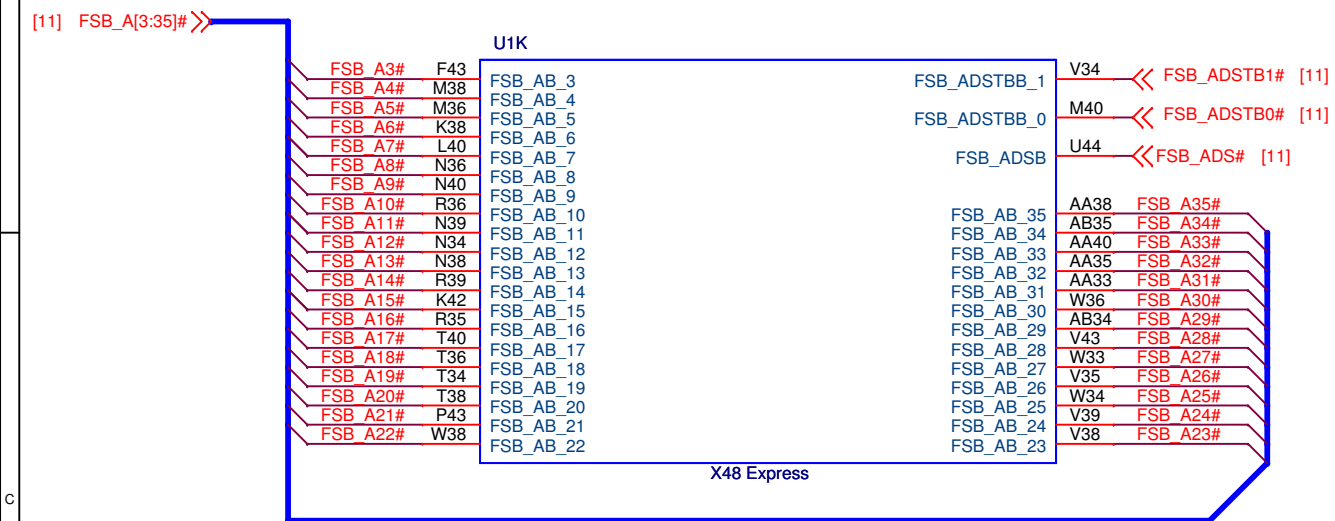


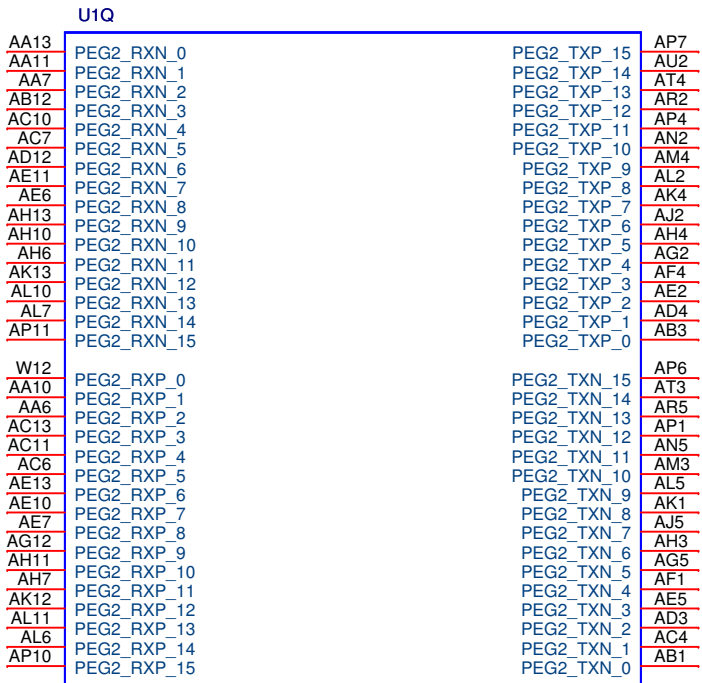
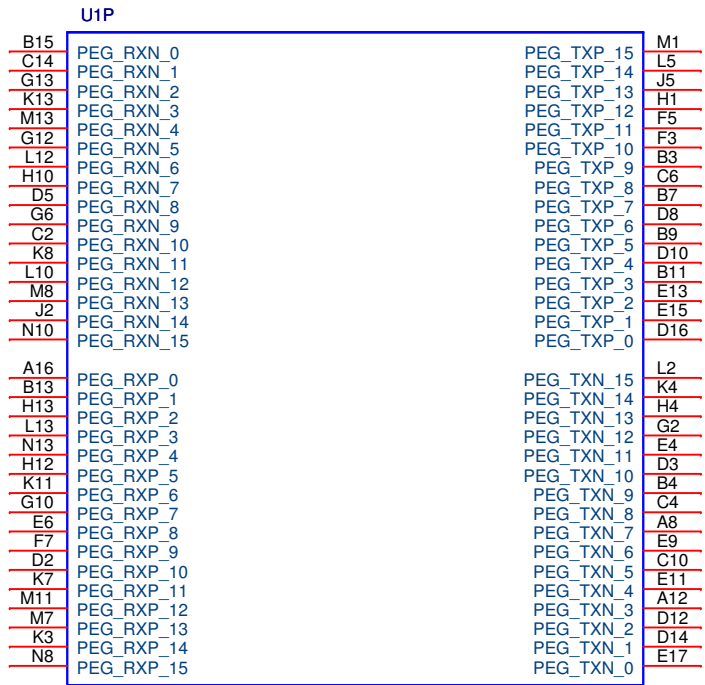


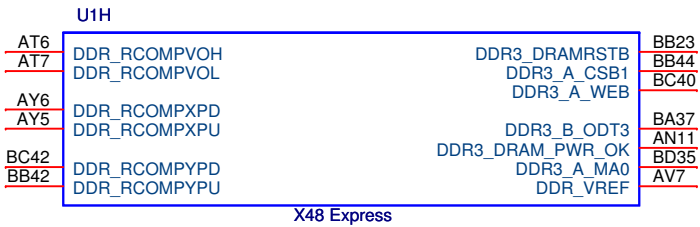
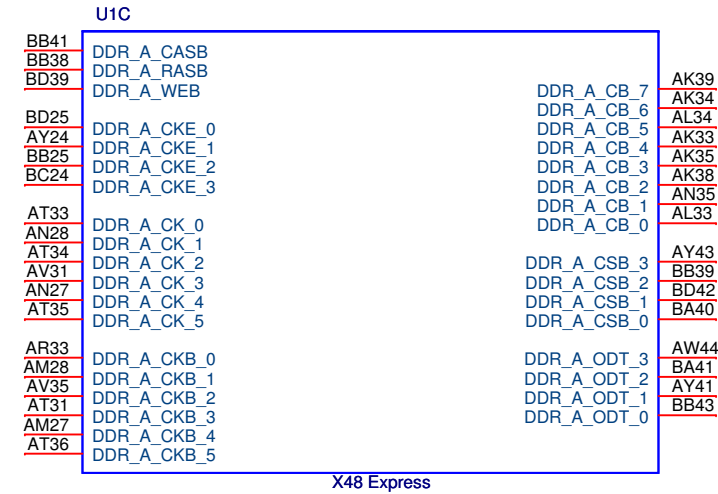
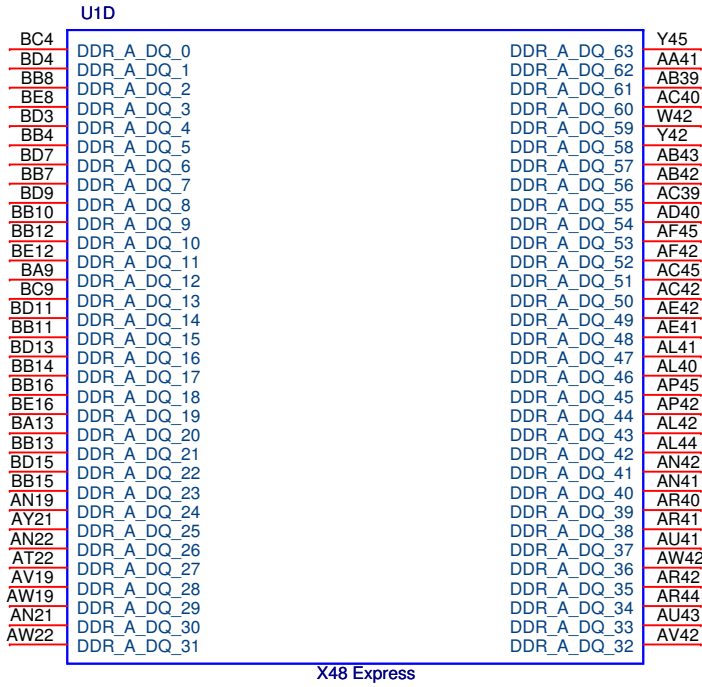
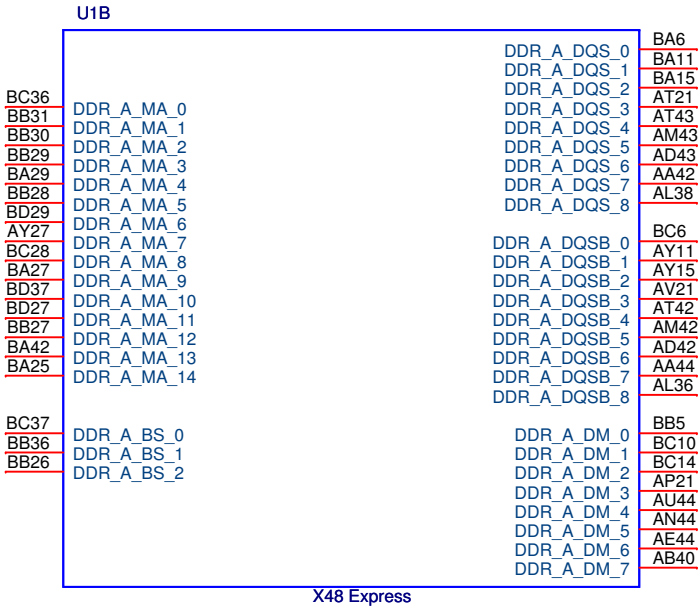


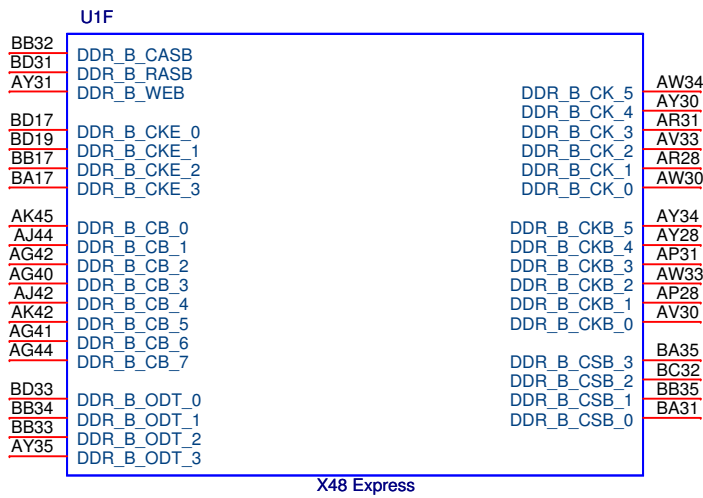
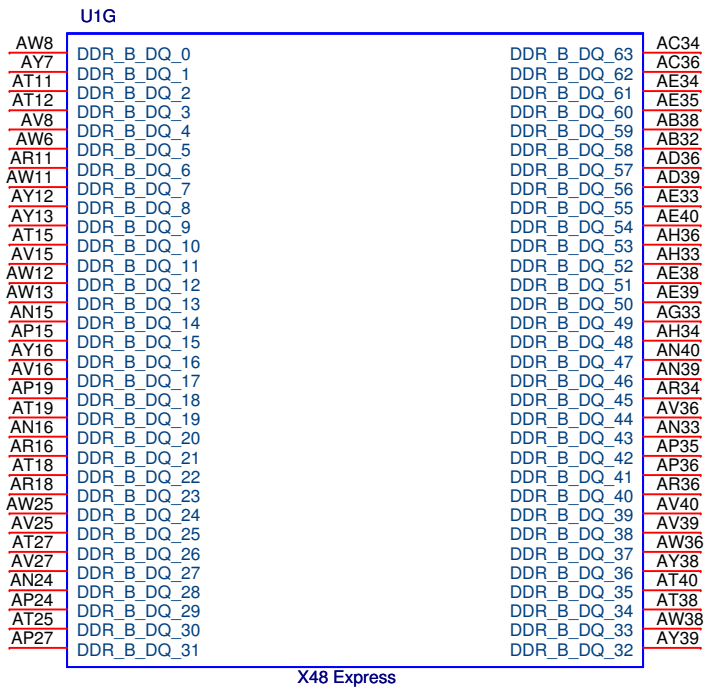
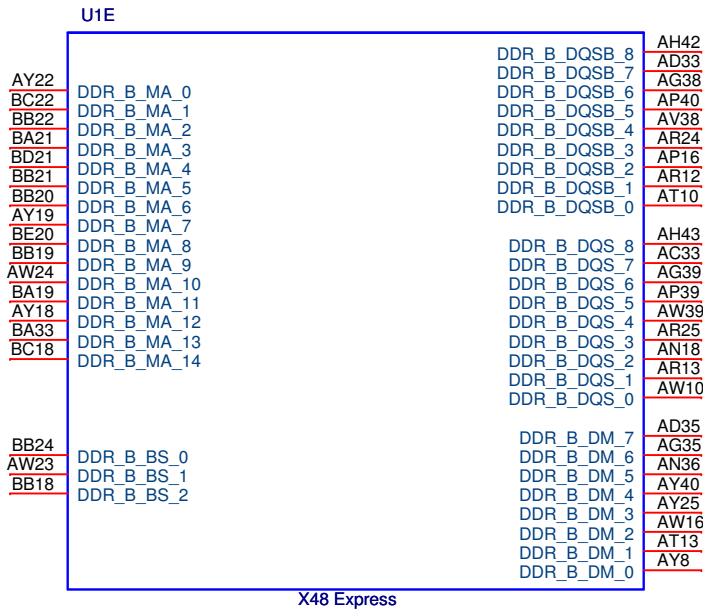


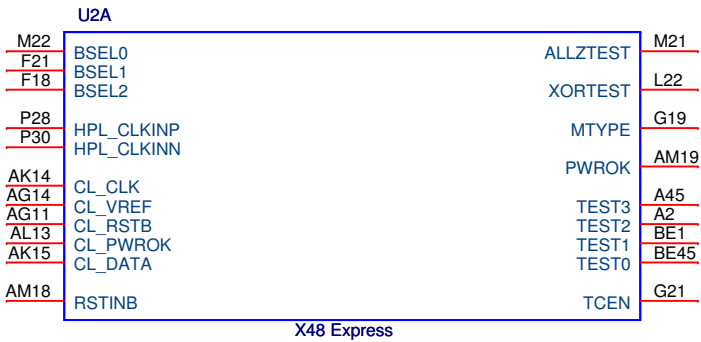
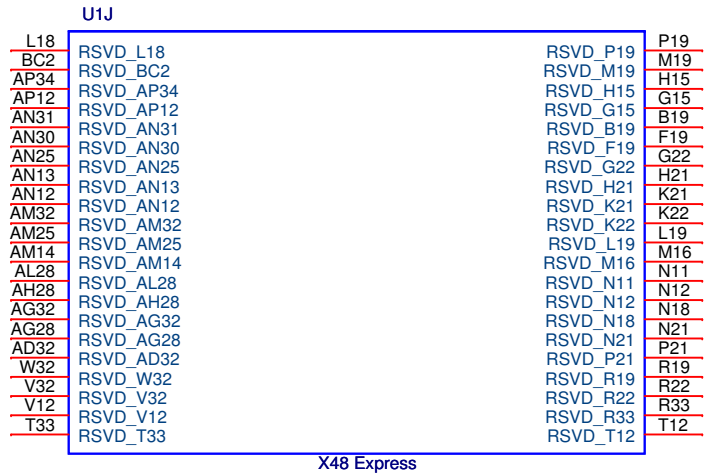


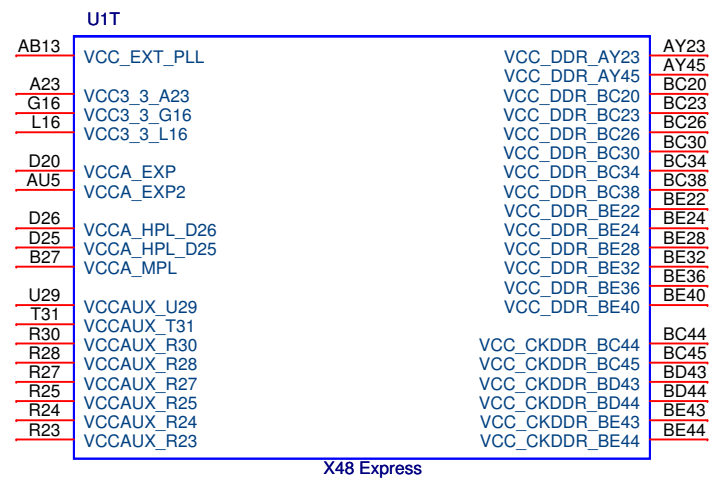
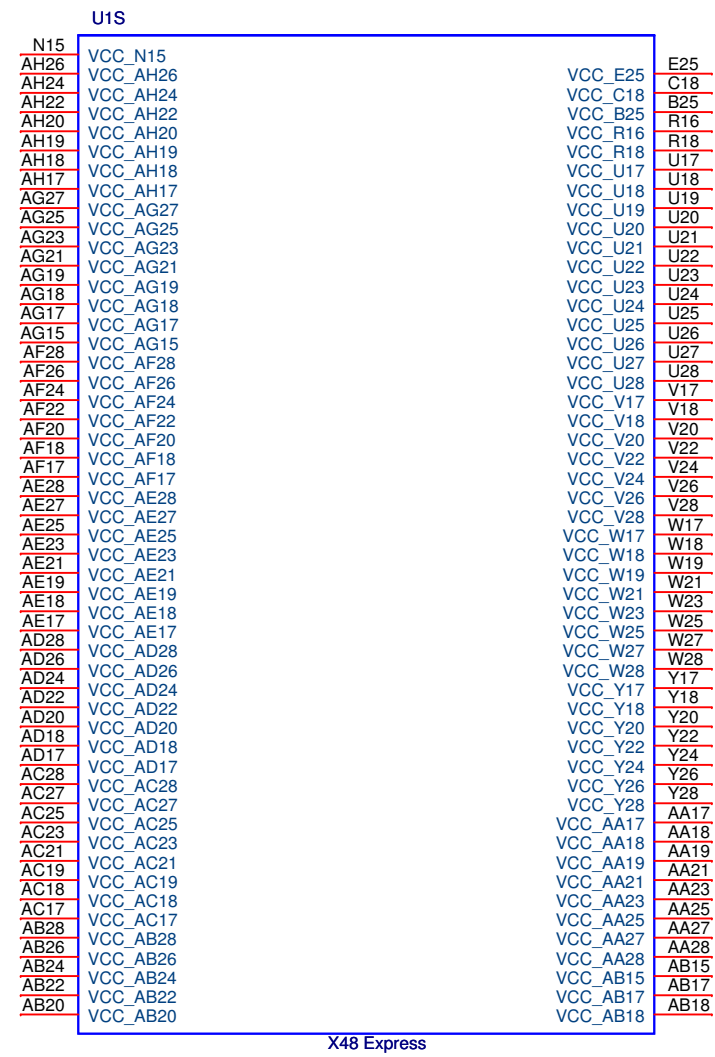
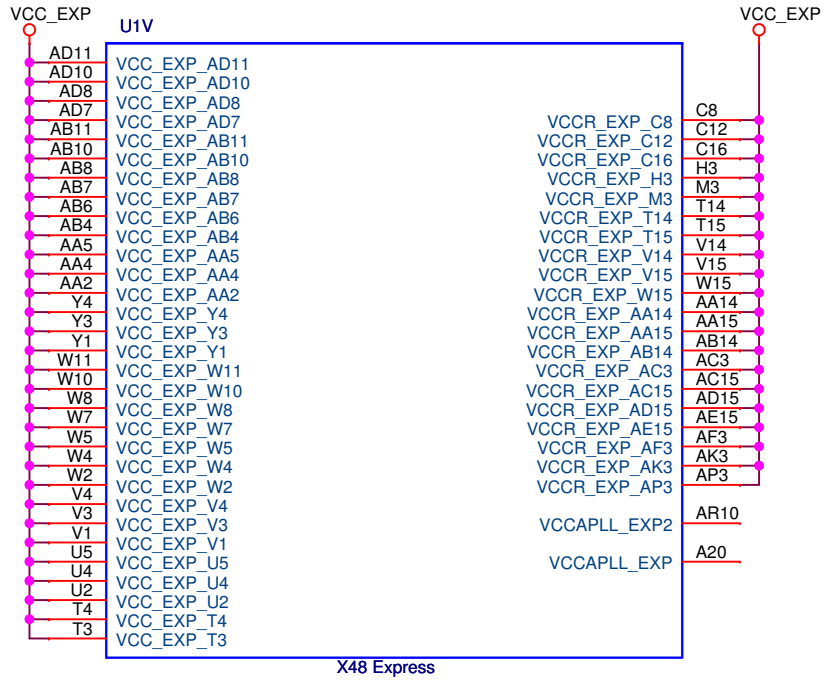
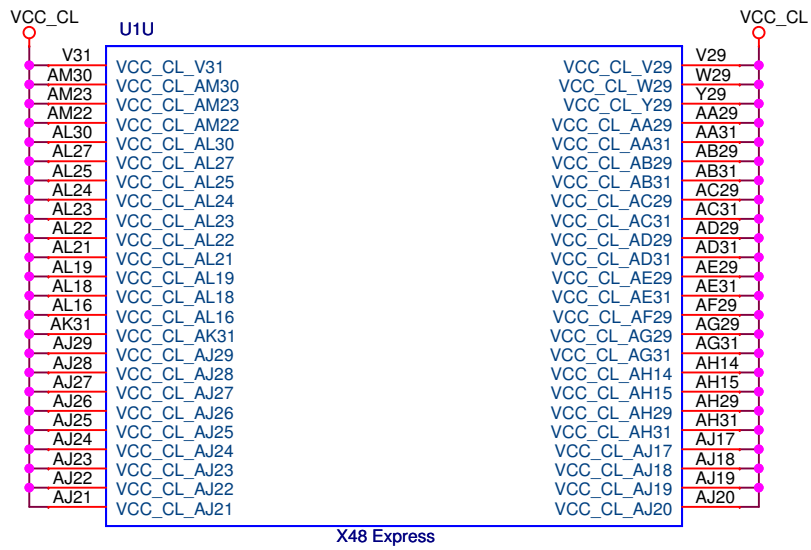












| U1W | | |
|------|----------|----------|
| B2 | VSS_B2 | VSS_AA20 |
| BE38 | VSS_BE38 | VSS_AA22 |
| BE34 | VSS_BE34 | VSS_AA24 |
| BE30 | VSS_BE30 | VSS_AA26 |
| BE26 | VSS_BE26 | VSS_AA32 |
| BE23 | VSS_BE23 | VSS_AA34 |
| BE18 | VSS_BE18 | VSS_AA36 |
| BE14 | VSS_BE14 | VSS_AA39 |
| BE10 | VSS_BE10 | VSS_AB19 |
| BE6 | VSS_BE6 | VSS_AB21 |
| BE3 | VSS_BE3 | VSS_AB23 |
| BD2 | VSS_BD2 | VSS_AB25 |
| BC43 | VSS_BC43 | VSS_AB27 |
| BC16 | VSS_BC16 | VSS_AB33 |
| BC12 | VSS_BC12 | VSS_AB36 |
| BC8 | VSS_BC8 | VSS_AB36 |
| BC3 | VSS_BC3 | VSS_AB45 |
| BC1 | VSS_BC3 | VSS_AC1 |
| BB2 | VSS_BC1 | VSS_AC8 |
| AY36 | VSS_BB2 | VSS_AC12 |
| AY33 | VSS_AY36 | VSS_AC12 |
| AY10 | VSS_AY33 | VSS_AC14 |
| AW40 | VSS_AY10 | VSS_AC20 |
| AW35 | VSS_AW40 | VSS_AC22 |
| AW31 | VSS_AW35 | VSS_AC24 |
| AW28 | VSS_AW31 | VSS_AC26 |
| AW27 | VSS_AW28 | VSS_AC32 |
| AW21 | VSS_AW27 | VSS_AC32 |
| AW18 | VSS_AW21 | VSS_AC35 |
| AW15 | VSS_AW18 | VSS_AC38 |
| AW7 | VSS_AW15 | VSS_AC38 |
| AW4 | VSS_AW7 | VSS_AC43 |
| AV45 | VSS_AW4 | VSS_AD1 |
| AV43 | VSS_AV45 | VSS_AD6 |
| AV34 | VSS_AV43 | VSS_AD13 |
| AV28 | VSS_AV34 | VSS_AD19 |
| AV24 | VSS_AV28 | VSS_AD21 |
| AV23 | VSS_AV24 | VSS_AD23 |
| AV22 | VSS_AV23 | VSS_AD25 |
| AV18 | VSS_AV22 | VSS_AD27 |
| AV13 | VSS_AV18 | VSS_AD34 |
| AV12 | VSS_AV13 | VSS_AD38 |
| AV11 | VSS_AV12 | VSS_AD45 |
| AV10 | VSS_AV11 | VSS_AE4 |
| AV6 | VSS_AV10 | VSS_AE8 |
| AV4 | VSS_AV6 | VSS_AE12 |
| AV3 | VSS_AV4 | VSS_AE20 |
| AV1 | VSS_AV3 | VSS_AE22 |
| AU3 | VSS_AV1 | VSS_AE24 |
| AT45 | VSS_AU3 | VSS_AE26 |
| AT39 | VSS_AT45 | VSS_AE32 |
| AT30 | VSS_AT39 | VSS_AE36 |
| AT28 | VSS_AT30 | VSS_AE36 |
| AT24 | VSS_AT28 | VSS_AF19 |
| AT23 | VSS_AT24 | VSS_AF21 |
| AT16 | VSS_AT23 | VSS_AF23 |
| AT8 | VSS_AT16 | VSS_AF25 |
| AT1 | VSS_AT8 | VSS_AF27 |
| AR39 | VSS_AT1 | VSS_AF43 |
| AR38 | VSS_AR39 | VSS_AG4 |
| AR35 | VSS_AR38 | VSS_AG6 |
| AR30 | VSS_AR35 | VSS_AG7 |
| AR27 | VSS_AR30 | VSS_AG8 |
| AR23 | VSS_AR27 | VSS_AG10 |
| AR22 | VSS_AR23 | VSS_AG13 |
| AR21 | VSS_AR22 | VSS_AG20 |
| AR19 | VSS_AR21 | VSS_AG22 |
| AR15 | VSS_AR19 | VSS_AG24 |
| AR8 | VSS_AR15 | VSS_AG26 |
| AR7 | VSS_AR8 | VSS_AG34 |
| AR6 | VSS_AR7 | VSS_AG36 |
| AR4 | VSS_AR6 | VSS_AH1 |
| AP43 | VSS_AR4 | VSS_AH8 |
| AP38 | VSS_AP43 | VSS_AH12 |
| AP33 | VSS_AP38 | VSS_AH21 |
| AP30 | VSS_AP33 | VSS_AH21 |
| AP25 | VSS_AP30 | VSS_AH23 |
| AP23 | VSS_AP25 | VSS_AH25 |
| AP22 | VSS_AP23 | VSS_AH27 |
| AP18 | VSS_AP22 | VSS_AH32 |
| AP13 | VSS_AP18 | VSS_AH35 |
| AP8 | VSS_AP13 | VSS_AH38 |
| AN38 | VSS_AP8 | VSS_AH39 |
| AN34 | VSS_AN38 | VSS_AH40 |
| AN23 | VSS_AN34 | VSS_AH45 |
| AN7 | VSS_AN23 | VSS_AJ4 |
| AN6 | VSS_AN7 | VSS_AJ4 |
| AN4 | VSS_AN6 | VSS_AJ41 |
| AM45 | VSS_AN4 | VSS_AK6 |
| AM24 | VSS_AM45 | VSS_AK7 |
| AM21 | VSS_AM24 | VSS_AK8 |
| AM16 | VSS_AM21 | VSS_AK10 |
| AM1 | VSS_AM16 | VSS_AK11 |
| AL39 | VSS_AM1 | VSS_AK32 |
| | VSS_AL39 | VSS_AK36 |
| | | VSS_AK40 |
| | | VSS_AK43 |
| | | VSS_AL4 |
| | | VSS_AL8 |
| | | VSS_AL12 |
| | | VSS_AL35 |

X48 Express

| U1X | | |
|------|----------|---------|
| AA12 | VSS_AA12 | VSS_W31 |
| AA8 | VSS_AA8 | VSS_M15 |
| Y43 | VSS_Y43 | VSS_K16 |
| Y27 | VSS_Y27 | VSS_K16 |
| Y25 | VSS_Y25 | VSS_H16 |
| Y23 | VSS_Y23 | VSS_F22 |
| Y21 | VSS_Y21 | VSS_D24 |
| Y19 | VSS_Y19 | VSS_D22 |
| W39 | VSS_W39 | VSS_D21 |
| W35 | VSS_W35 | VSS_D21 |
| W26 | VSS_W26 | VSS_C24 |
| W24 | VSS_W24 | VSS_C23 |
| W22 | VSS_W22 | VSS_BB3 |
| W20 | VSS_W20 | VSS_BA5 |
| W14 | VSS_W14 | VSS_BA4 |
| W13 | VSS_W13 | VSS_B21 |
| W6 | VSS_W6 | VSS_B17 |
| V45 | VSS_V45 | VSS_AY3 |
| V40 | VSS_V40 | VSS_AY1 |
| V36 | VSS_V36 | VSS_AW2 |
| V33 | VSS_V33 | VSS_A24 |
| V27 | VSS_V27 | VSS_A3 |
| V25 | VSS_V25 | VSS_A6 |
| V23 | VSS_V23 | VSS_A10 |
| V21 | VSS_V21 | VSS_A14 |
| V19 | VSS_V19 | VSS_A18 |
| V13 | VSS_V13 | VSS_A22 |
| V8 | VSS_V8 | VSS_A26 |
| T43 | VSS_T43 | VSS_A34 |
| T35 | VSS_T35 | VSS_A36 |
| T32 | VSS_T32 | VSS_A40 |
| T13 | VSS_T13 | VSS_A43 |
| T11 | VSS_T11 | VSS_B29 |
| T6 | VSS_T6 | VSS_B44 |
| R40 | VSS_R40 | VSS_C1 |
| R38 | VSS_R38 | VSS_C3 |
| R34 | VSS_R34 | VSS_C9 |
| R21 | VSS_R21 | VSS_C20 |
| R13 | VSS_R13 | VSS_C22 |
| R12 | VSS_R12 | VSS_C22 |
| R11 | VSS_R11 | VSS_C30 |
| R8 | VSS_R8 | VSS_C34 |
| R4 | VSS_R4 | VSS_C38 |
| P45 | VSS_P45 | VSS_C43 |
| P32 | VSS_P32 | VSS_C43 |
| P27 | VSS_P27 | VSS_C45 |
| P25 | VSS_P25 | VSS_D4 |
| P24 | VSS_P24 | VSS_D7 |
| P23 | VSS_P23 | VSS_D7 |
| P22 | VSS_P22 | VSS_D11 |
| P18 | VSS_P18 | VSS_D13 |
| P14 | VSS_P14 | VSS_D15 |
| P1 | VSS_P1 | VSS_D17 |
| N35 | VSS_N35 | VSS_D23 |
| N27 | VSS_N27 | VSS_D29 |
| N23 | VSS_N23 | VSS_D34 |
| N22 | VSS_N22 | VSS_D42 |
| N19 | VSS_N19 | VSS_E5 |
| N16 | VSS_N16 | VSS_E19 |
| N7 | VSS_N7 | VSS_E21 |
| N6 | VSS_N6 | VSS_F1 |
| N4 | VSS_N4 | VSS_F1 |
| M43 | VSS_M43 | VSS_F6 |
| M39 | VSS_M39 | VSS_F8 |
| M35 | VSS_M35 | VSS_F10 |
| M34 | VSS_M34 | VSS_F11 |
| M33 | VSS_M33 | VSS_F12 |
| M28 | VSS_M28 | VSS_F13 |
| M24 | VSS_M24 | VSS_F15 |
| M23 | VSS_M23 | VSS_F16 |
| M18 | VSS_M18 | VSS_F23 |
| M12 | VSS_M12 | VSS_F24 |
| M10 | VSS_M10 | VSS_F34 |
| M6 | VSS_M6 | VSS_F36 |
| L38 | VSS_L38 | VSS_F40 |
| L35 | VSS_L35 | VSS_F45 |
| L31 | VSS_L31 | VSS_G4 |
| L23 | VSS_L23 | VSS_G7 |
| L21 | VSS_L21 | VSS_G8 |
| L15 | VSS_L15 | VSS_G8 |
| L11 | VSS_L11 | VSS_G11 |
| L8 | VSS_L8 | VSS_G18 |
| L7 | VSS_L7 | VSS_G23 |
| L6 | VSS_L6 | VSS_G31 |
| L4 | VSS_L4 | VSS_G31 |
| K45 | VSS_K45 | VSS_G33 |
| K40 | VSS_K40 | VSS_G39 |
| K39 | VSS_K39 | VSS_H6 |
| K33 | VSS_K33 | VSS_H7 |
| K30 | VSS_K30 | VSS_H8 |
| K23 | VSS_K23 | VSS_H11 |
| K18 | VSS_K18 | VSS_H18 |
| K15 | VSS_K15 | VSS_H19 |
| K12 | VSS_K12 | VSS_H22 |
| K10 | VSS_K10 | VSS_H23 |
| | | VSS_H35 |
| | | VSS_H36 |
| | | VSS_H40 |
| | | VSS_H43 |
| | | VSS_J3 |
| | | VSS_K1 |
| | | VSS_K6 |

X48 Express

| | | |
|-----------------------------|----------------------------|---------------|
| Core2 X48 Intel Motherboard | | |
| Title | | |
| X48 Express Northbridge VSS | | |
| Size | Document Number | Rev |
| | | 1.0 |
| Date: | Wednesday, August 18, 2010 | Sheet 12 of 1 |

