

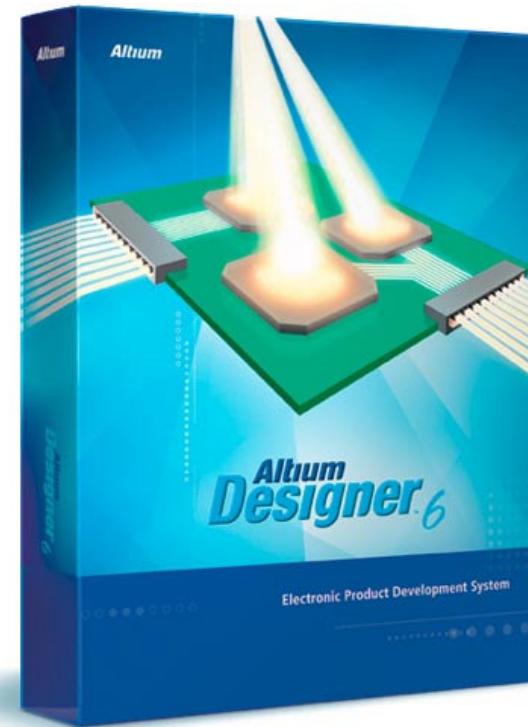


## Altium Designer 6 i Desktop NanoBoard

Altiumova svjetska serija seminara, listopad – studeni 2007

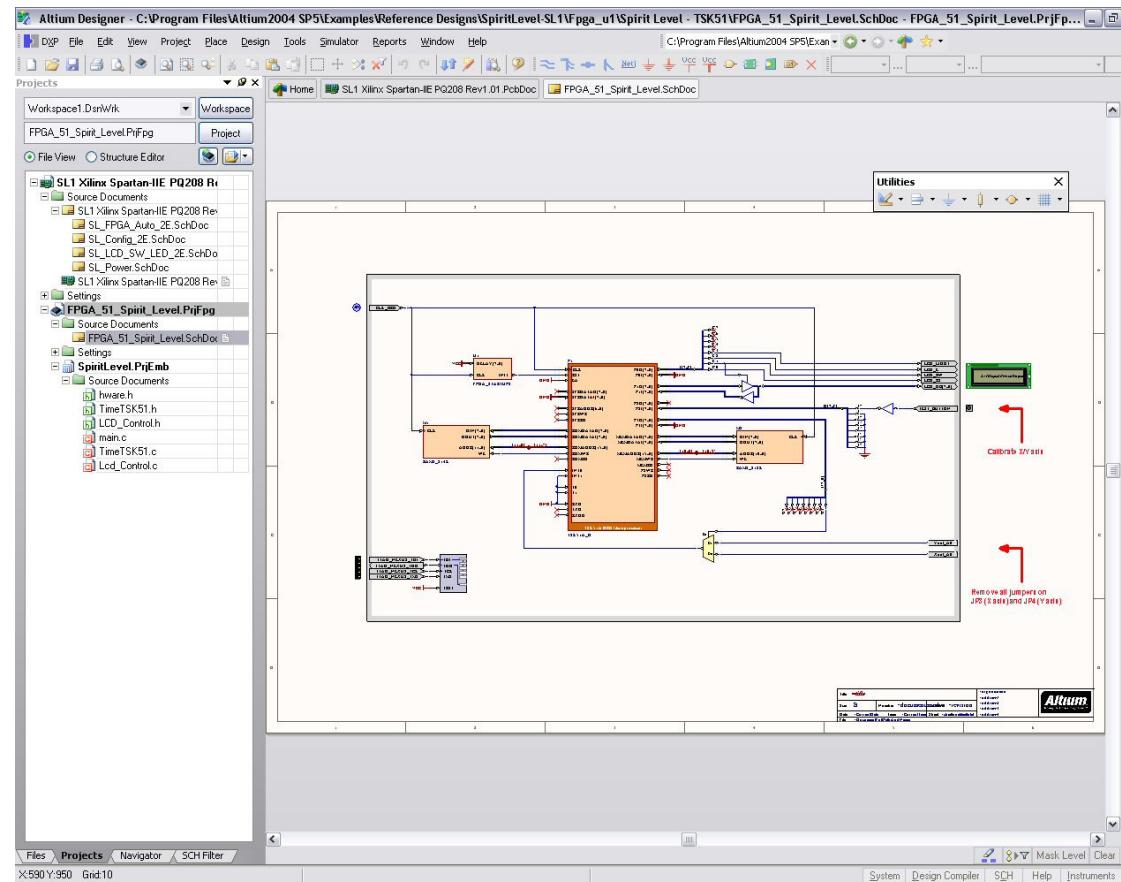
# Unificirano projektiranje i Altium Designer 6

- Izdvojite se iz mase
- Istražite svoje ideje
- Ograničenja trenutnog pristupa
- Odstranite implementacijske barijere
- Unificirajte vaš projekt



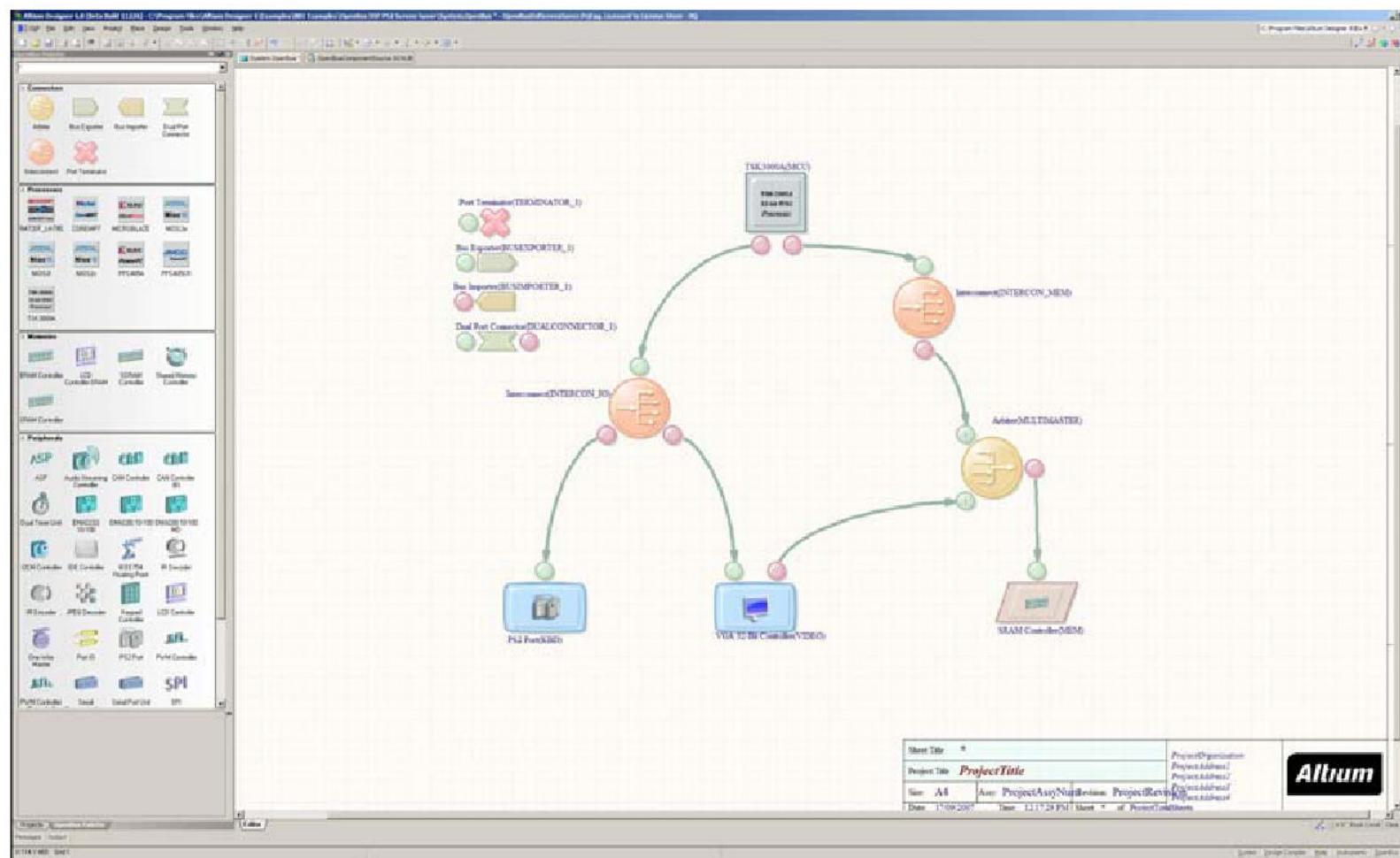
# Sumirajte svoje ideje i istražite svoje opcije

- FPGA projektiranje visoke razine
  - idealna platforma za procesiranje signala i podataka
  - postavite i povežite pre-verificirane komponente
  - miješano shematsko i/ili HDL okruženje



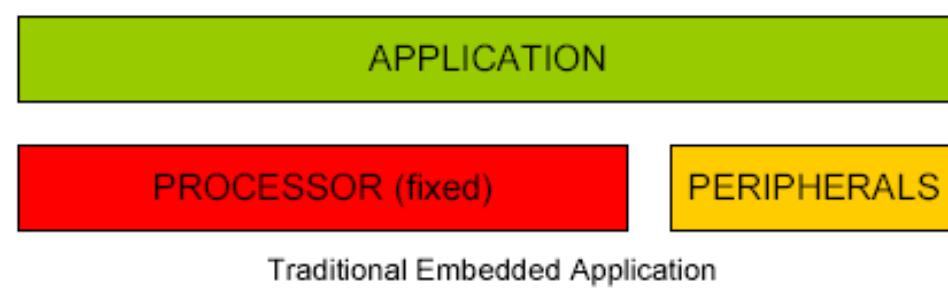
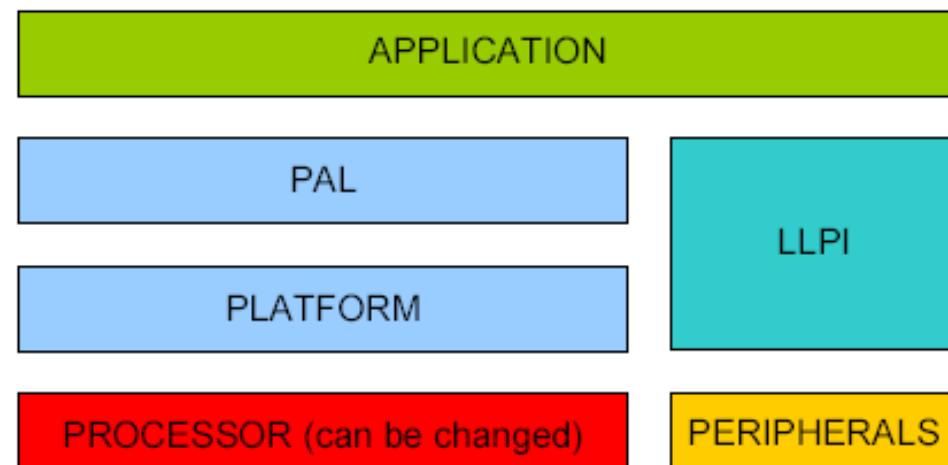
# Sumirajte svoje ideje i istražite svoje opcije

- OpenBus – novi pristup sistemskom projektiranju
  - apstraktno projektiranje visoke razine
  - integrirajte OpenBus i tradicionalno projektiranje



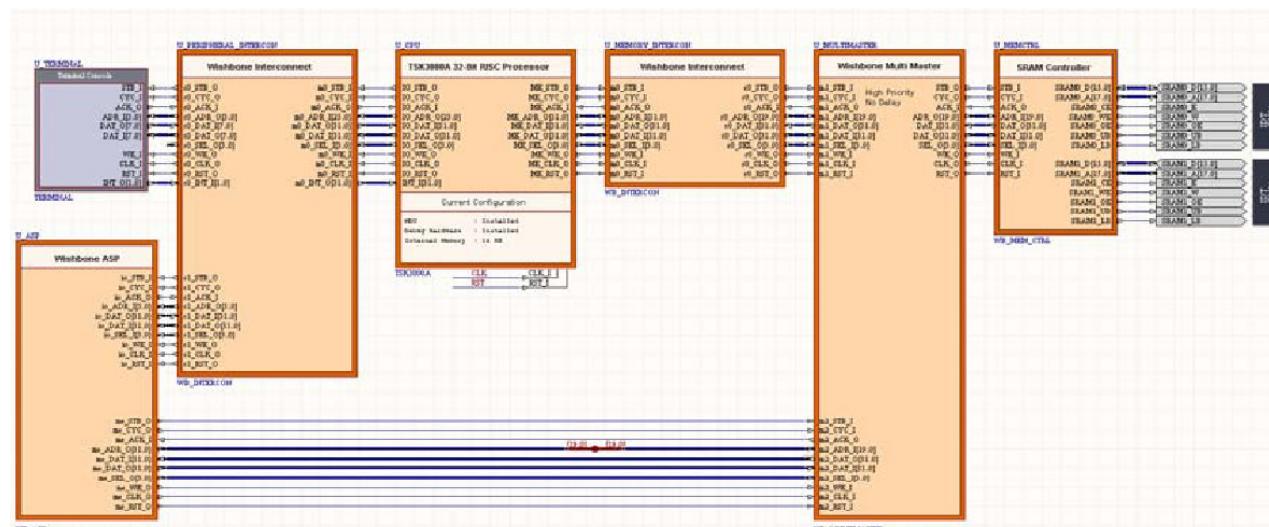
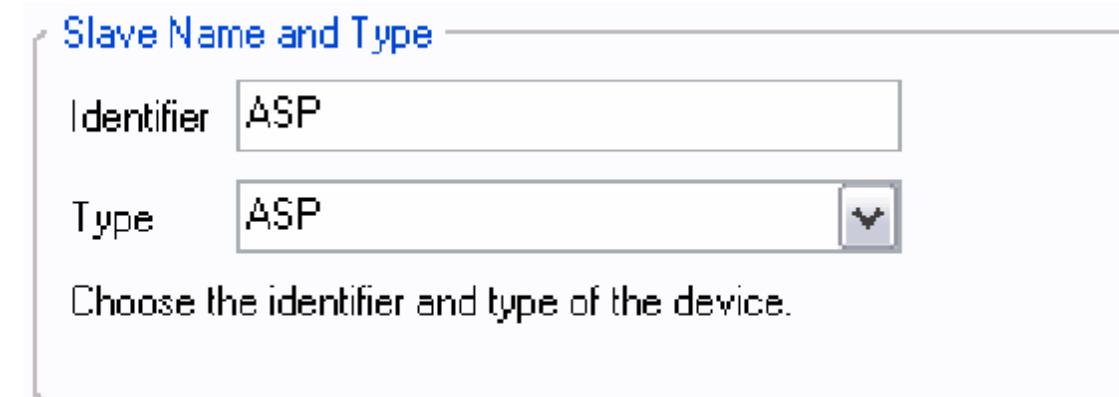
# Sumirajte svoje ideje i istražite svoje opcije

- Fleksibilnost sa kodom nezavisnim o procesoru
  - Viper C-Compiler nezavisan o procesoru
  - Device Software Framework omogućava portabilnost koda



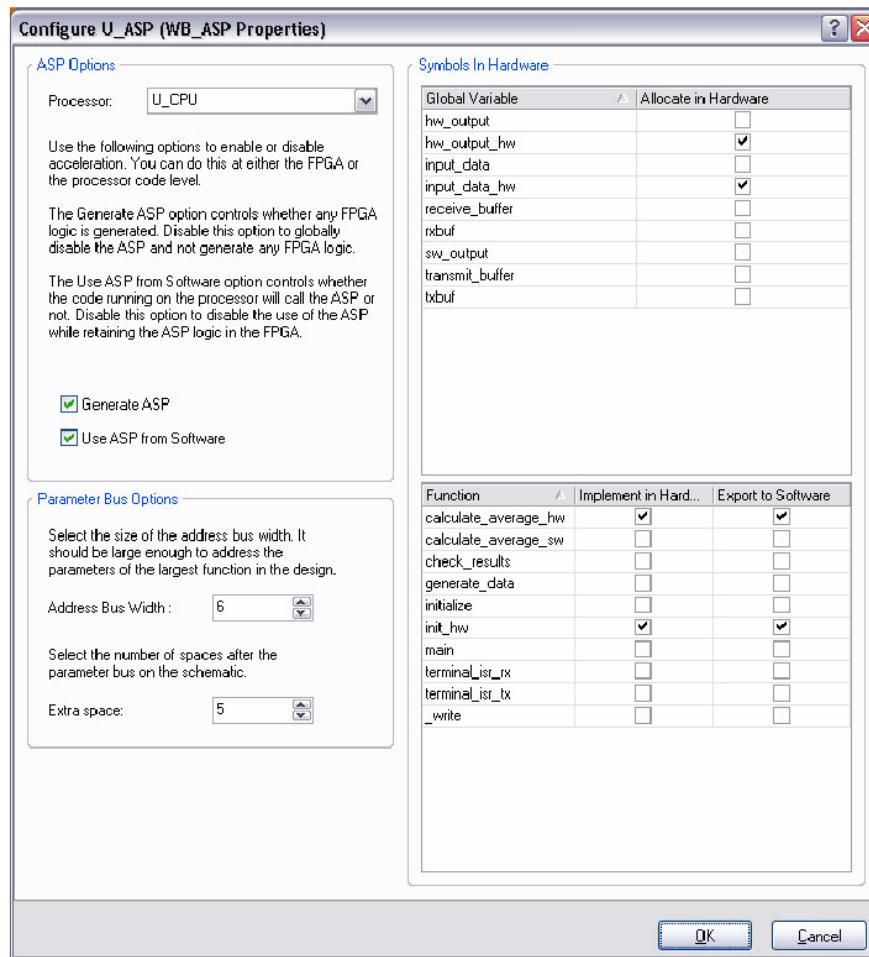
# Sumirajte svoje ideje i istražite svoje opcije

- Prenesite software u hardware
  - C-to-hardware
  - izgradite svoj vlastiti “Application Specific Processor”



# Sumirajte svoje ideje i istražite svoje opcije

- Prenesite software u hardware
  - C-to-hardware
  - izgradite svoj vlastiti “Application Specific Processor”

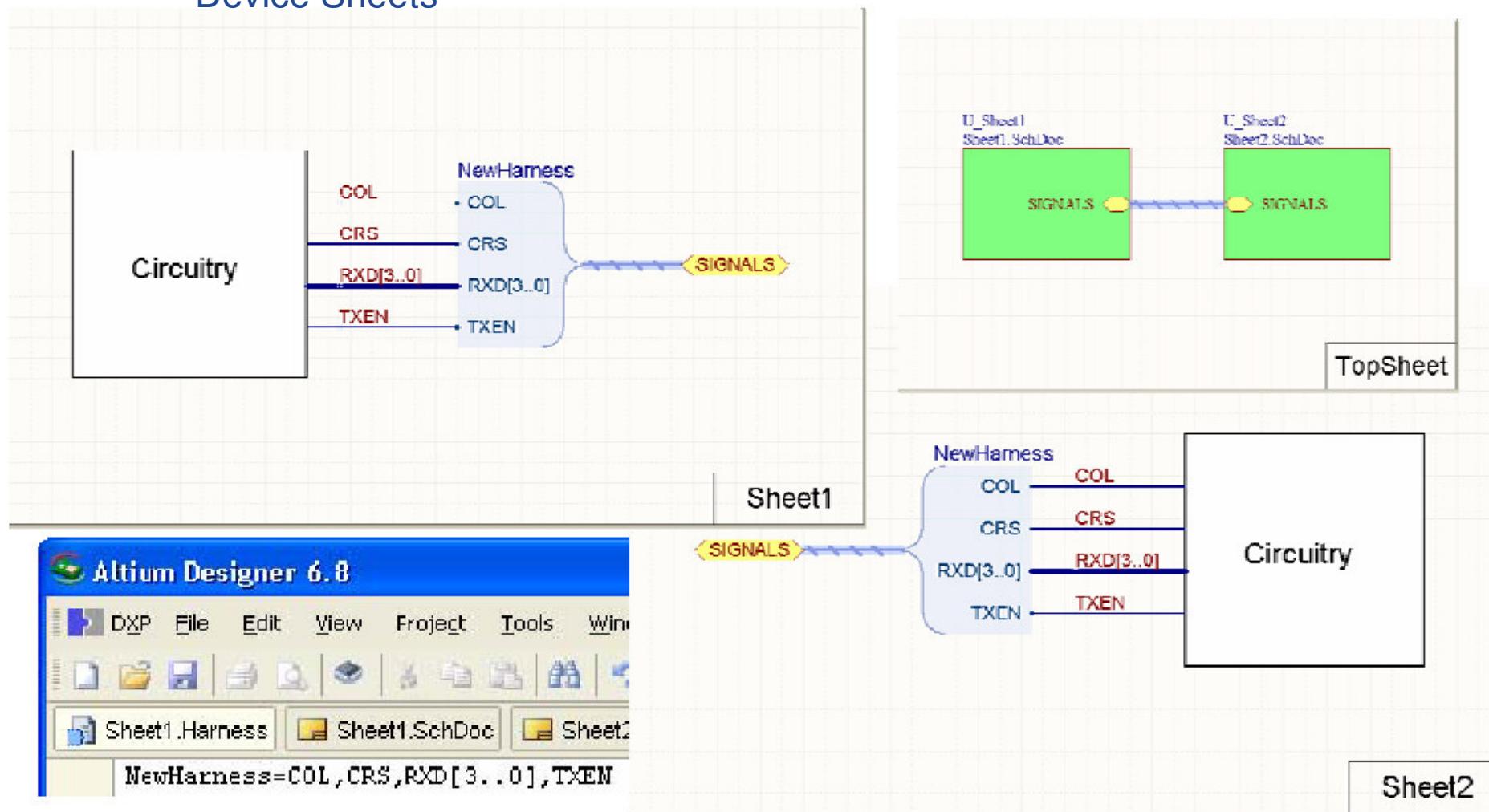


```
void calculate_average_sw(void)
{
    for (uint32_t i = 0; i < TAPS; i++)
    {
        uint32_t input_data_hw;
        uint32_t hw_output_hw;
        ...
    }
}
```

# Sumirajte svoje ideje i istražite svoje opcije

## Pojednostavite strukturu i ubrzajte projektiranje

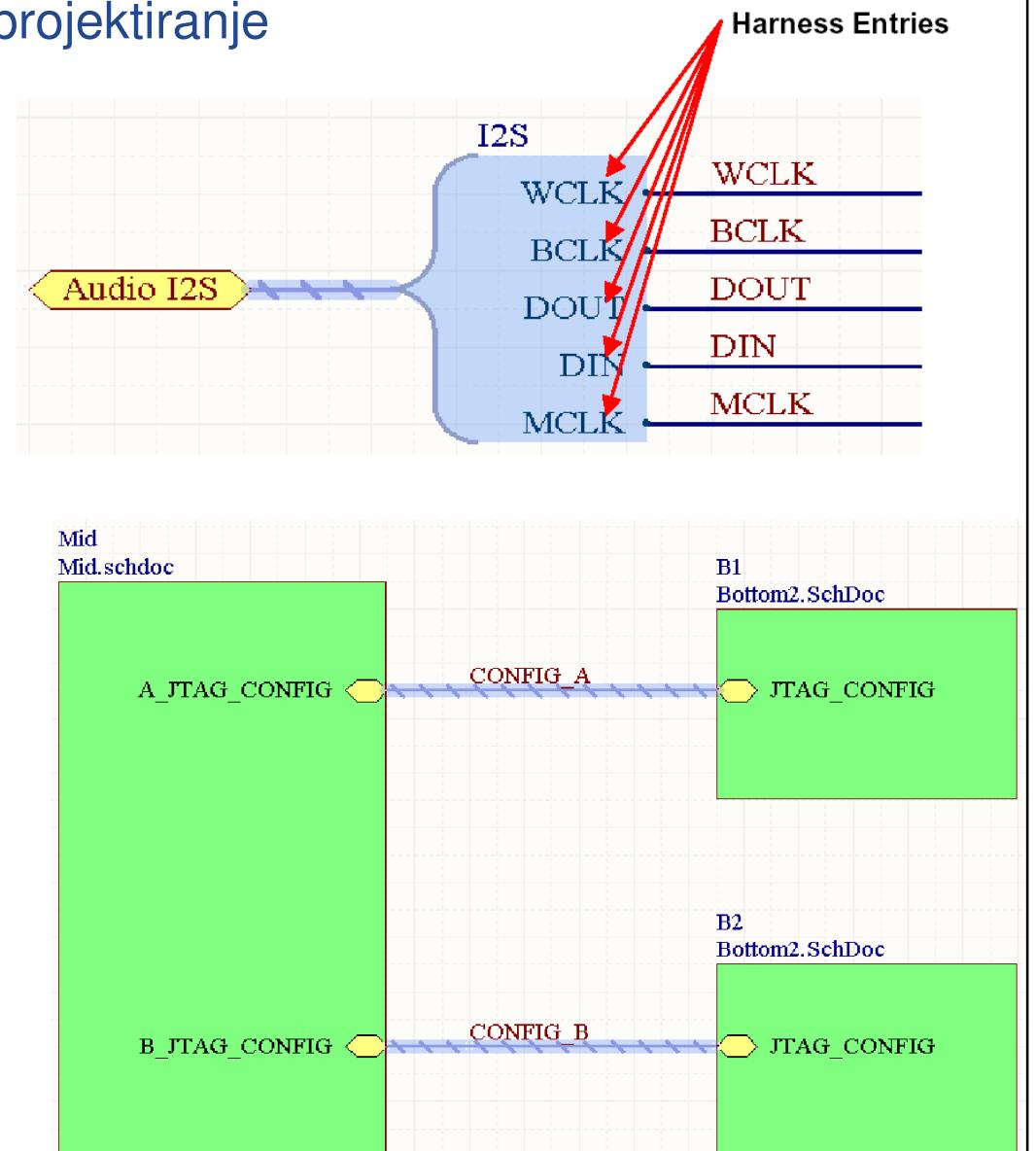
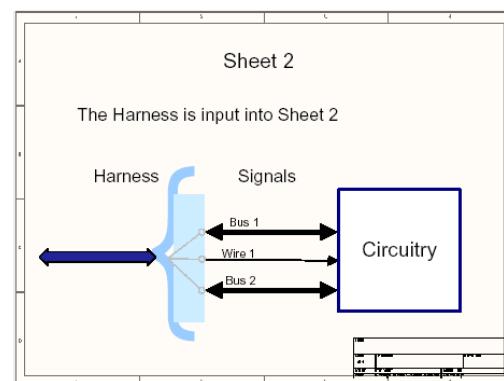
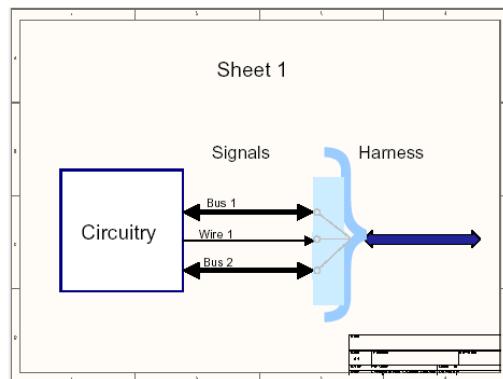
- Signal harnesses
- Device Sheets



# Sumirajte svoje ideje i istražite svoje opcije

## Pojednostavite strukturu i ubrzajte projektiranje

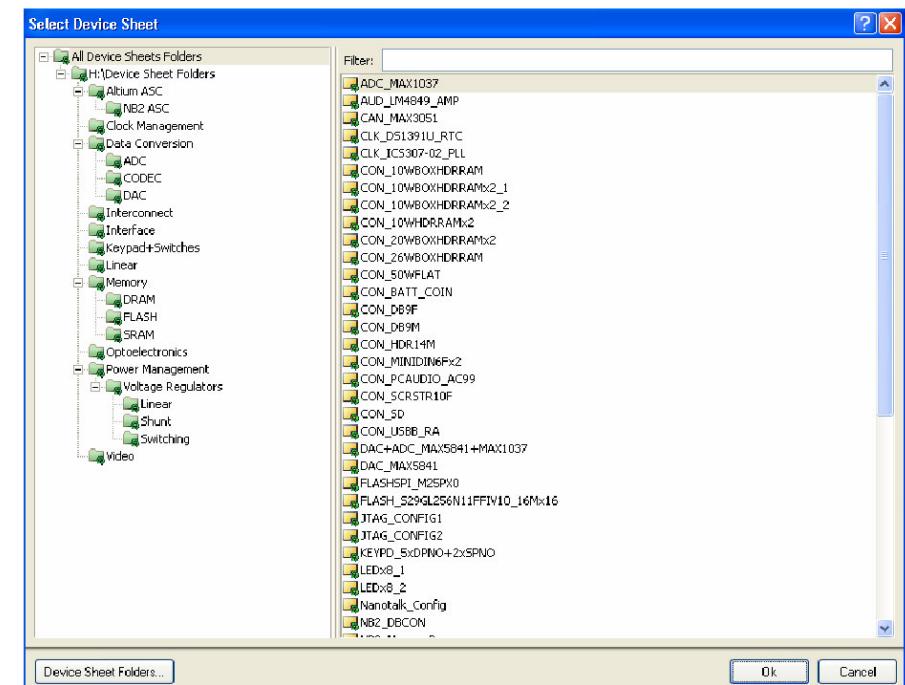
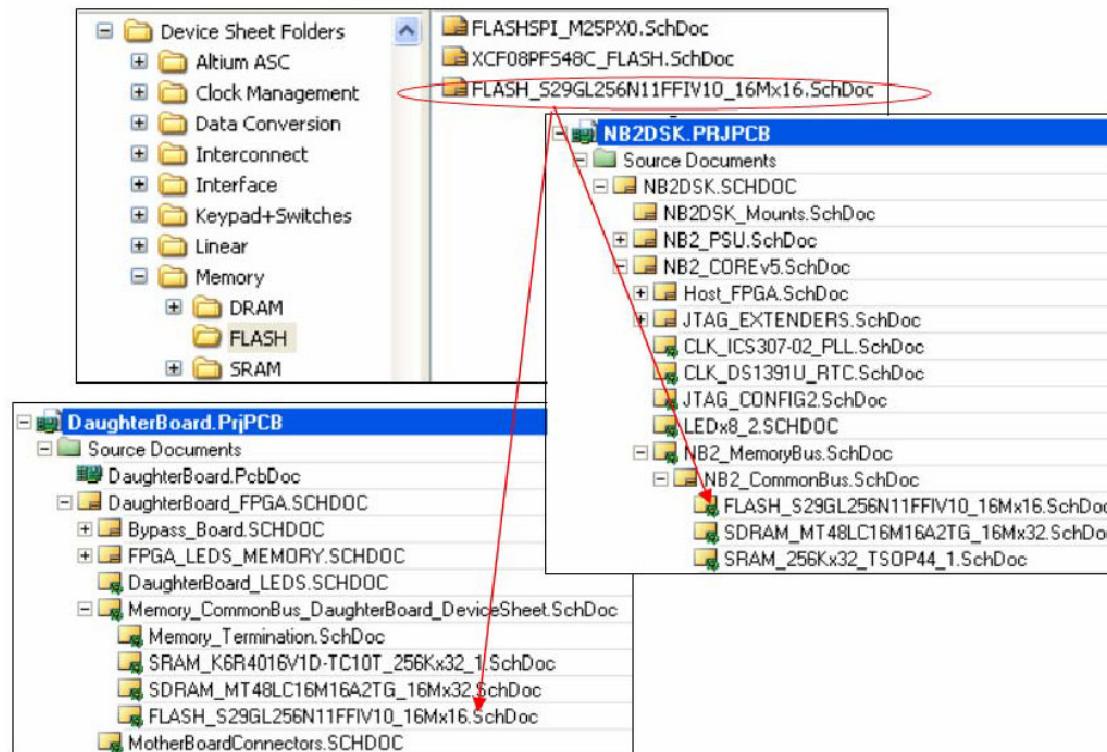
- Signal harnesses
- Device Sheets



# Sumirajte svoje ideje i istražite svoje opcije

## Pojednostavnite strukturu i ubrzajte projektiranje

- Signal harnesses
- Device Sheets



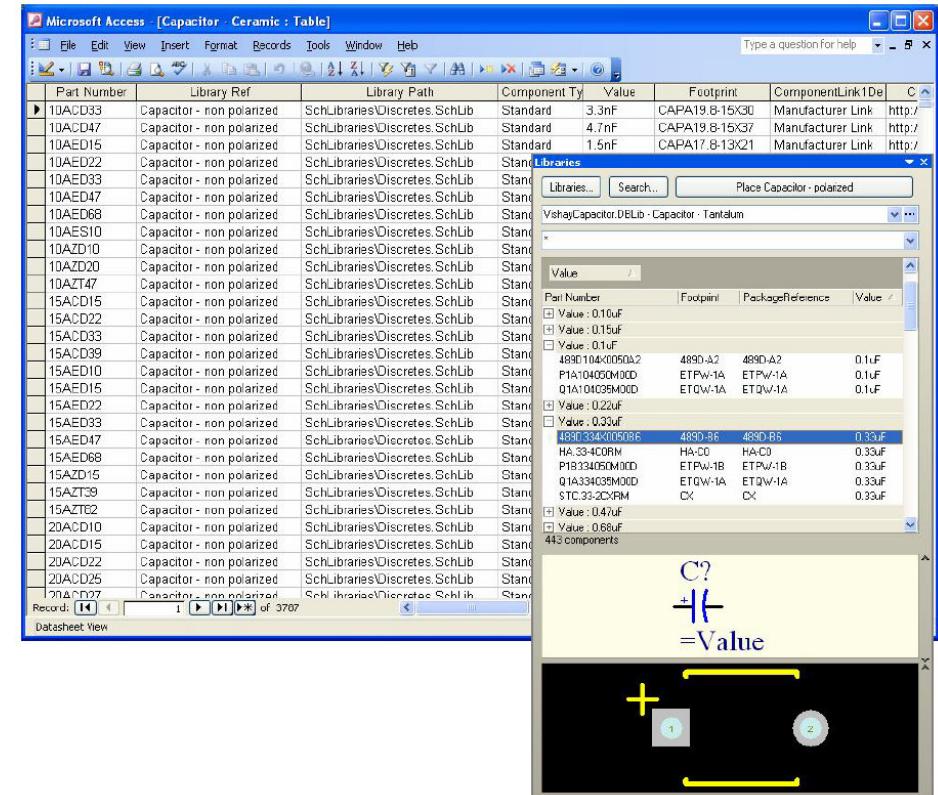
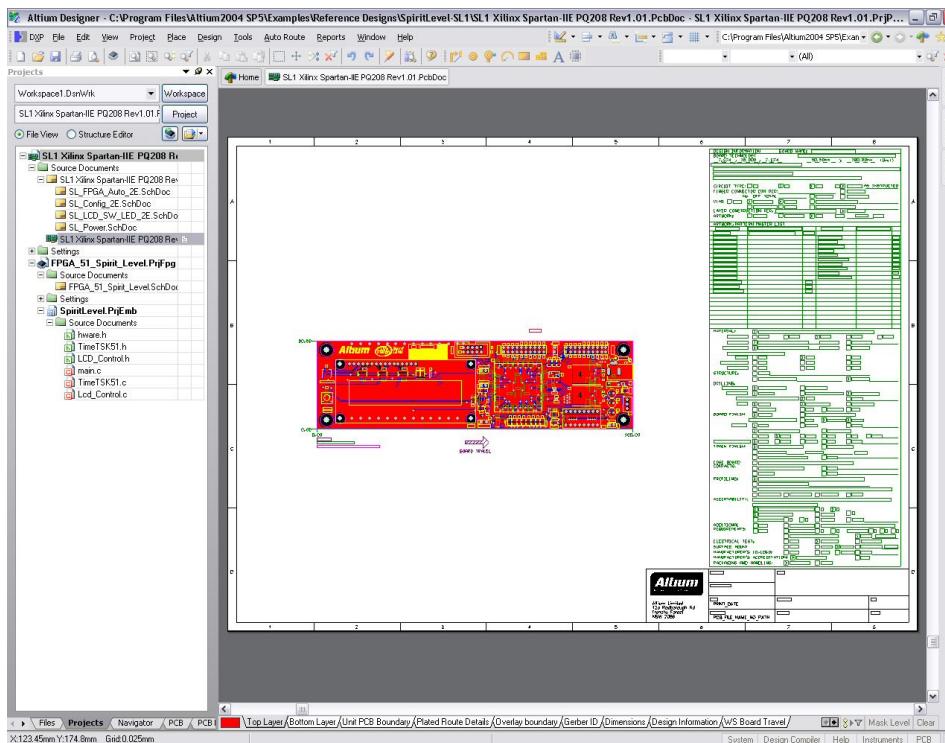
# Sumirajte svoje ideje i istražite svoje opcije

- NanoBoard – implementirajte i debugirajte vaš projekt
  - implementirajte i nastavite projektirati na NanoBoard-u
  - FPGA na “daughter board”-u
  - fleksibilne periferne pločice
  - debugirajte i mijenjajte u realnom vremenu
  - nastavite razvoj na produkcijskoj pločici



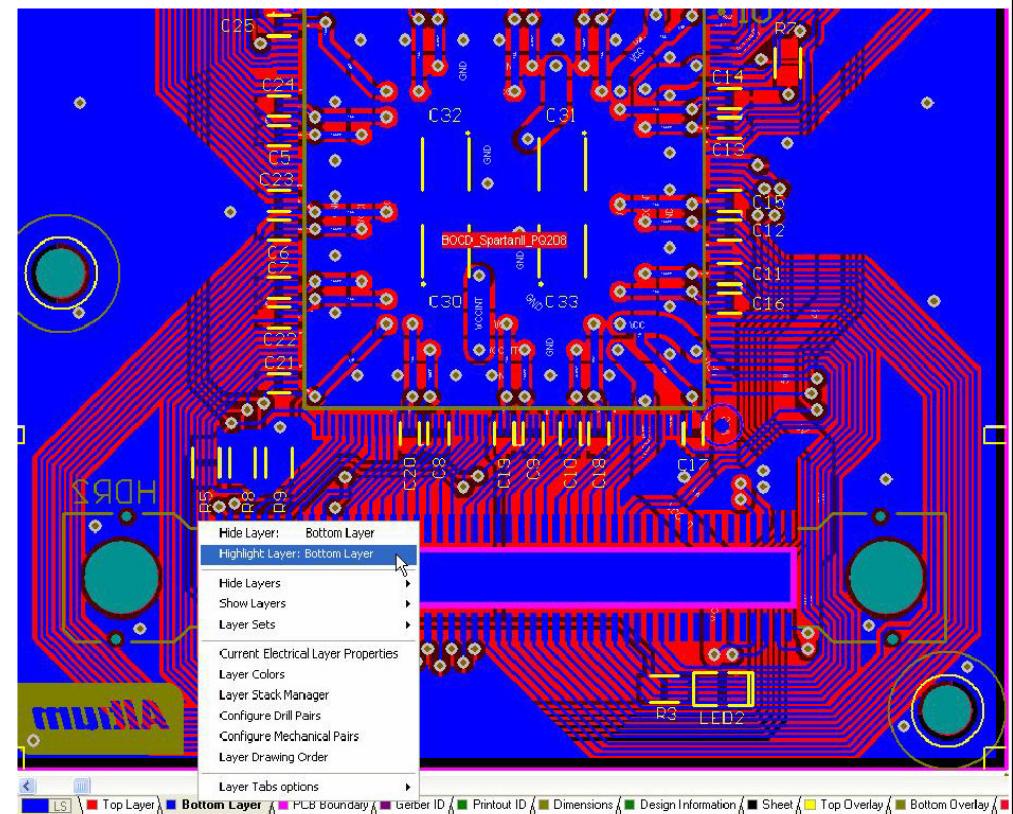
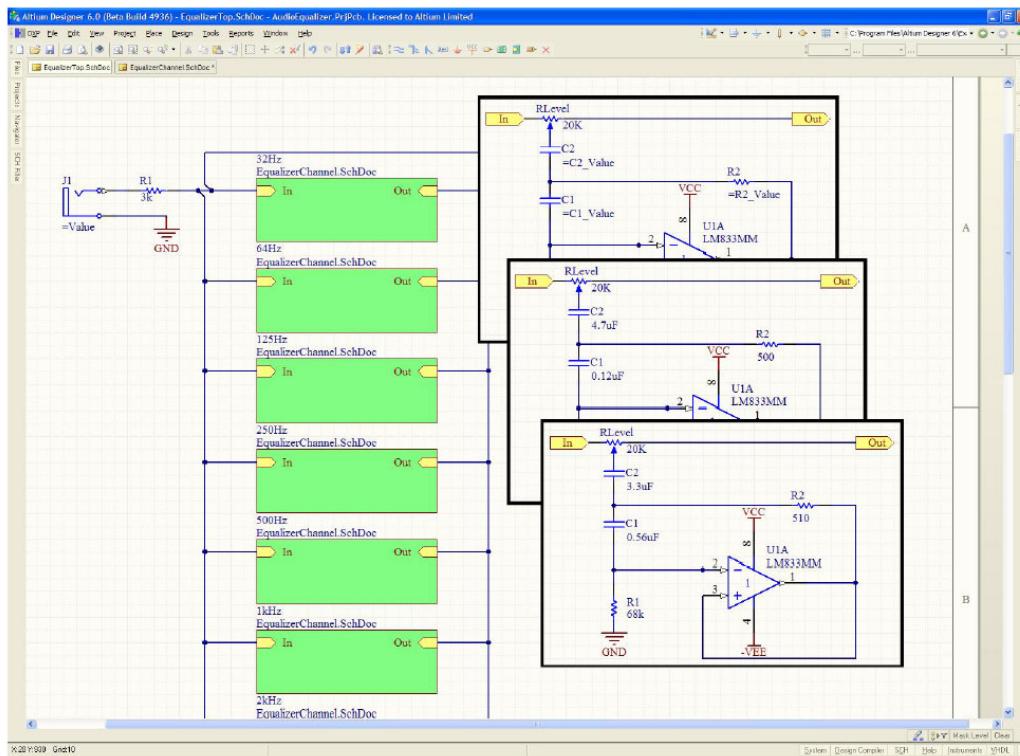
# Temelji unificiranog projektiranja

- Jedinstveno, cjelovito, unificirano okruženje za projektiranje
  - zaokruženo sistemsko projektiranje – tiskane pločice, FPGA i embedded software
  - uključuje sve editore, generatore, compiler-e, sintetizatore i debugere
  - direktno povezivanje sa sustavima za kontrolu verzija
  - povezivanje knjižnica komponenata sa bazama podataka



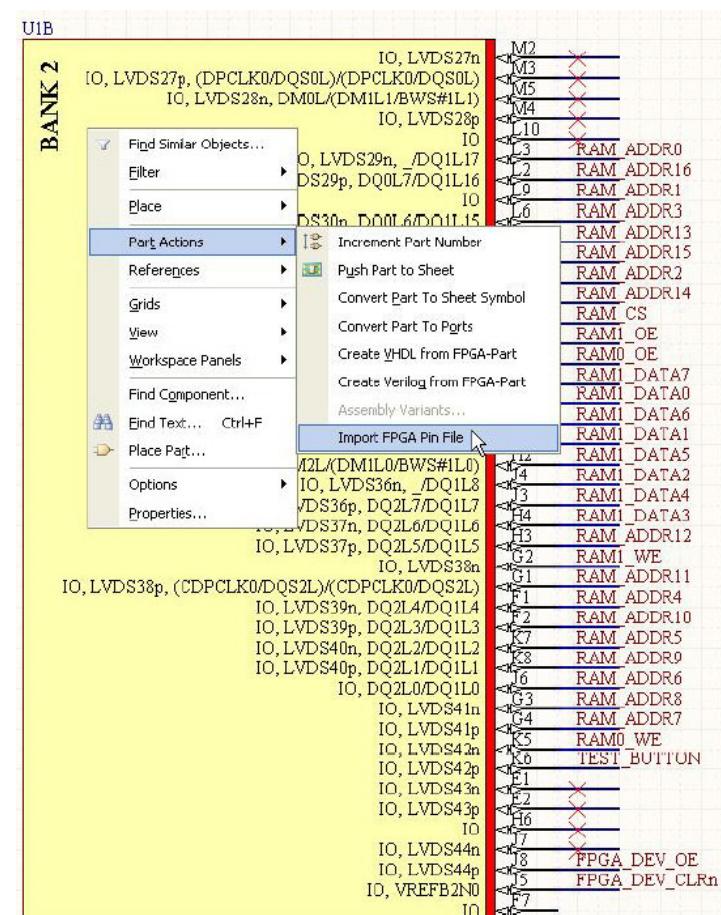
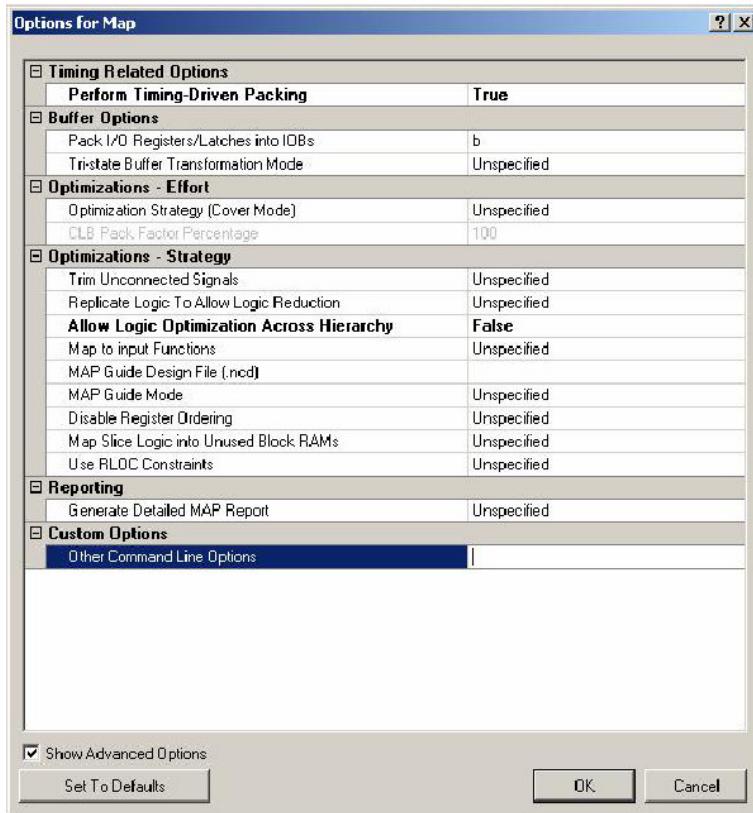
# Temelji unificiranog projektiranja

- Projektiranje tiskanih pločica
  - podrška za više kanalno projektiranje koja je propagirana i na postavljanje komponenata, te tiskanih vodova
  - intuitivno okruženje za projektiranje tiskanih pločica sa podrškom za sve nove tehnike projektiranja
  - cijeloviti niz generatora izlaznih datoteka



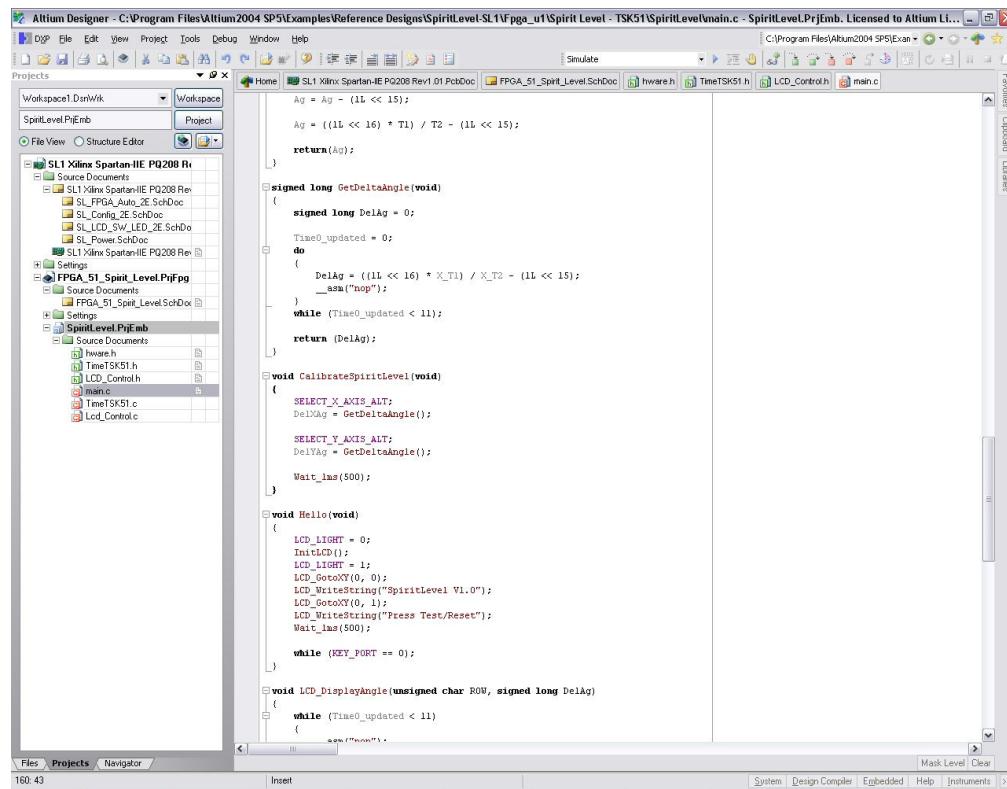
# Temelji unificiranog projektiranja

- FPGA projektiranje
  - FPGA projektiranje neovisno o proizvođaču FPGA komponenata, sa višestrukim modovima unosa
  - LiveDesign – od prototipa na NanoBoard-u do produkcijske pločice



# Temelji unificiranog projektiranja

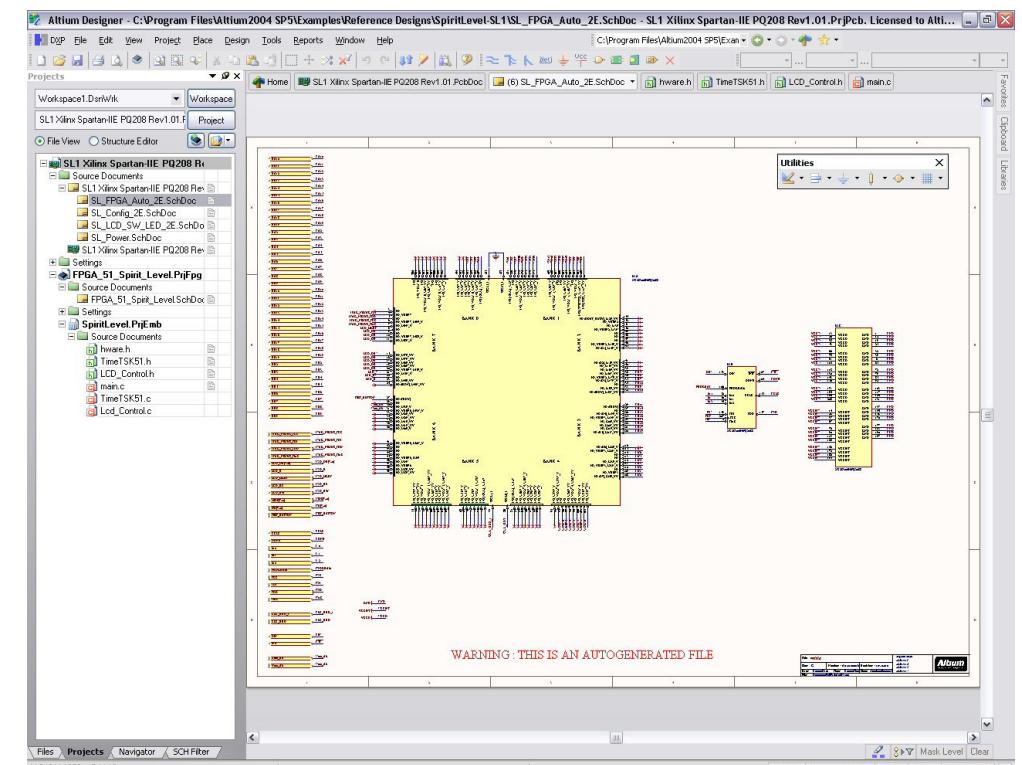
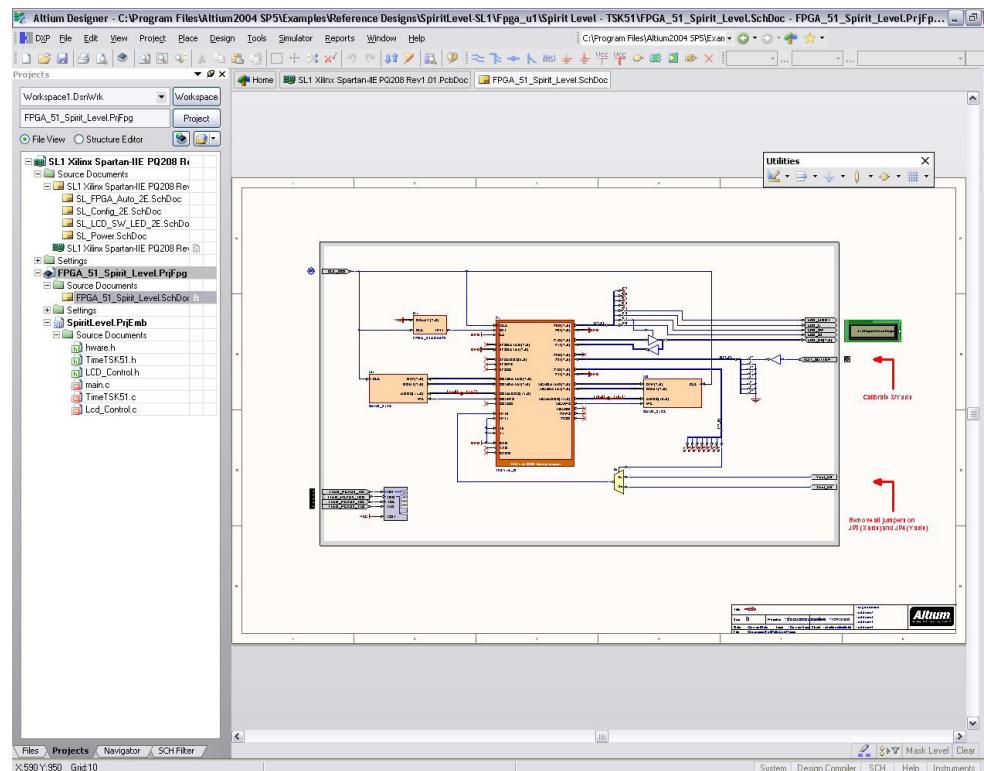
- Kvalitetno “embedded” kodiranje, kompajliranje i debugiranje
  - visoko optimizirani kod
  - portabilni kod
  - debugiranje na razini izvornog koda
  - profesionalno okruženje za kodiranje



```
82     LCD_IR_Write(0x0E);
83     while (~LCD_BUSY)
84     ;
85
86     LCD_IR_Write(0x06);
87     while (~LCD_BUSY)
88     ;
89
90 #endif
91 }
92 void LCD_WriteNibble(unsigned char X)
93 {
94 #ifndef LCD_DISABLE
95     if (X > 0xF)
96         return;
97
98     if (X >= 10)
99         LCD_PutCh('A' - 10 + X);
100    else
101        LCD_PutCh('0' + X);
102#endif
103}
104void LCD_WriteString(const char * str)
105{
106#ifndef LCD_DISABLE
107    while (*str)
108    {
109        LCD_PutCh(*str++);
110    }
111#endif
112}
113
114void LCD_WriteChar(unsigned char c)
115{
116#ifndef LCD_DISABLE
117    while (LCD_BUSY);
118    LCD_PutCh(c);
119#endif
120}
121void LCD_Write32bit(unsigned long int X)
122{
123#ifndef LCD_DISABLE
124    LCD_Write16bit(X >> 16);
125    LCD_Write16bit(X & 0x0000FFFF);
126#endif
127}
128void LCD_GotoXY(unsigned char X, unsigned char Y)
129{
```

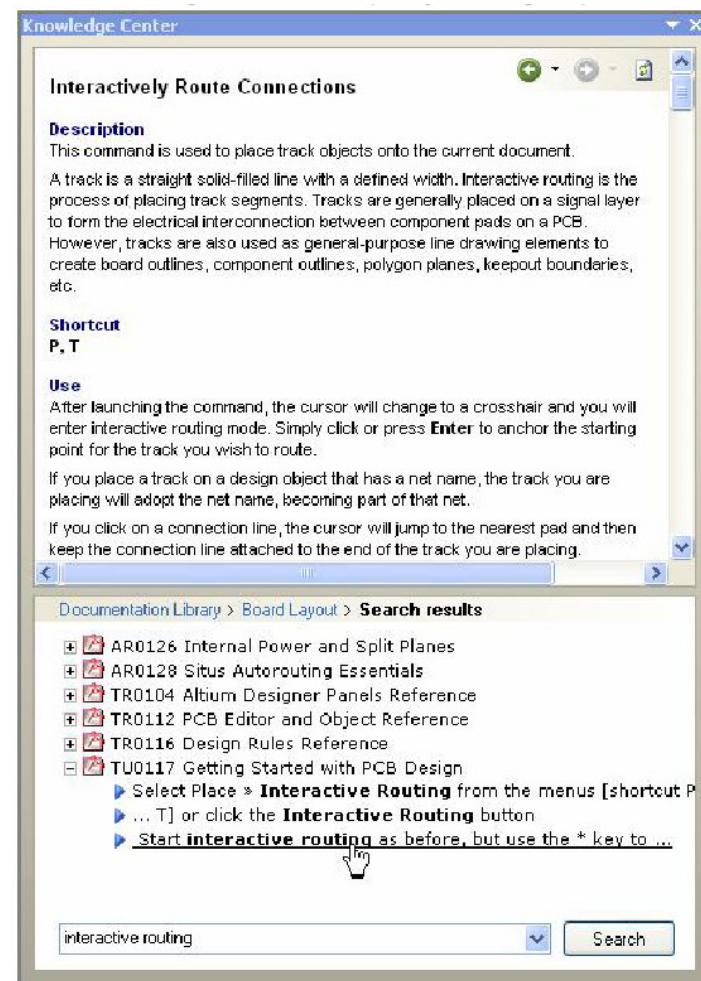
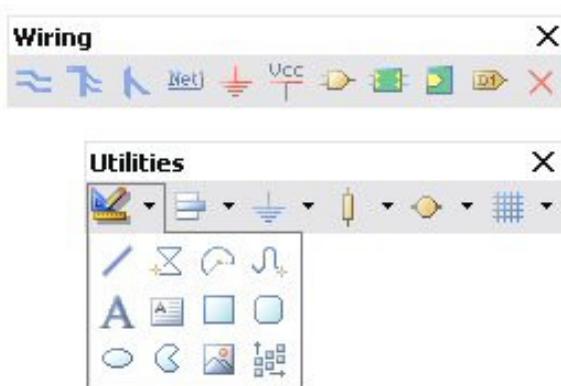
# Temelji unificiranog projektiranja

- Čvrsta integracija između modova implementacije projekta
  - prijenos dodjele pinova između tiskane pločice i FPGA komponente
  - mapiranje između "embedded" procesora i FPGA komponente
  - prijenos na ciljni hardware



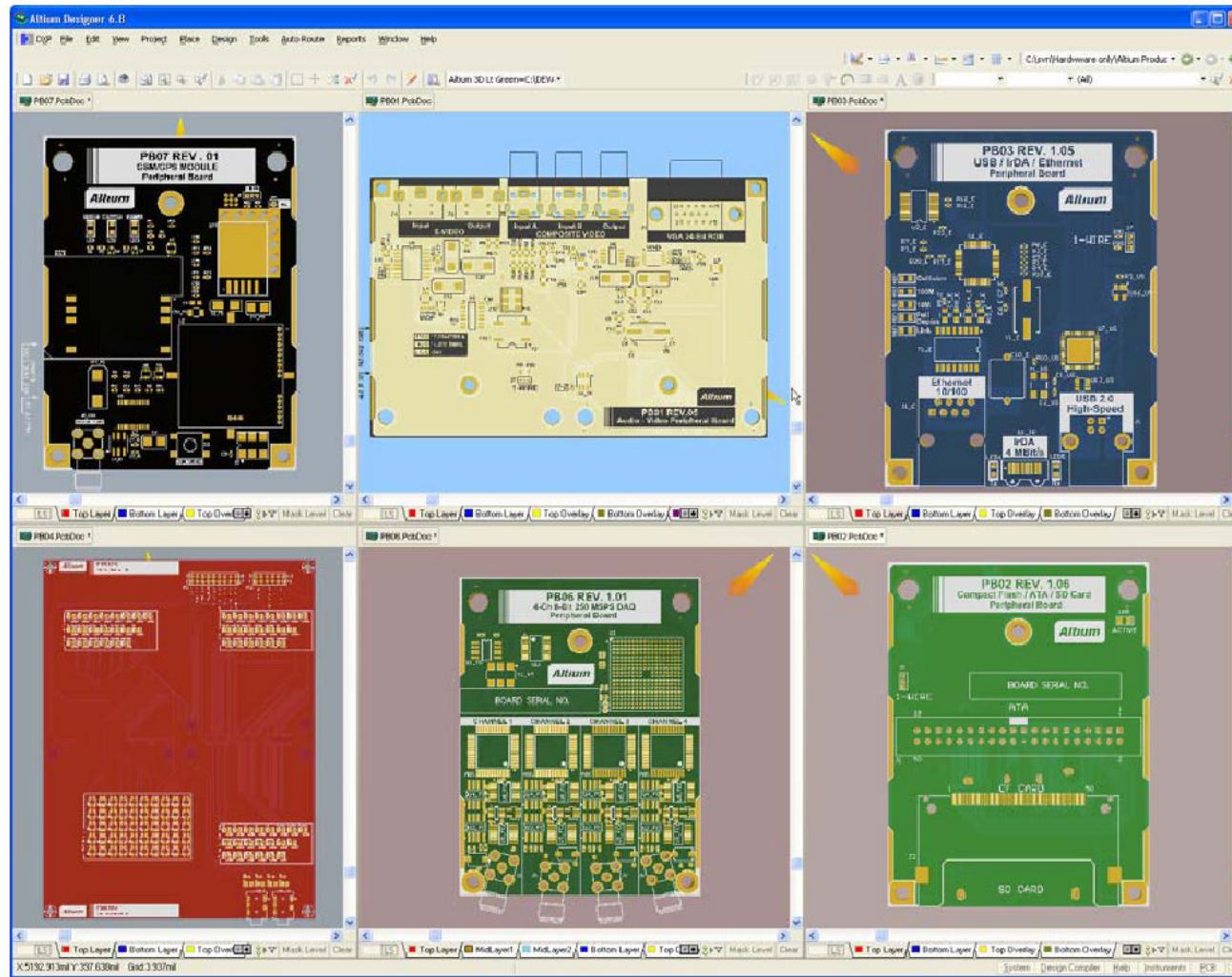
# Prelazak sa sigurnošću

- Poznato okruženje, jednostavno za upotrebu
  - okruženje kompatibilno sa Windows standardom
  - lagani pristup pomoćnim datotekama



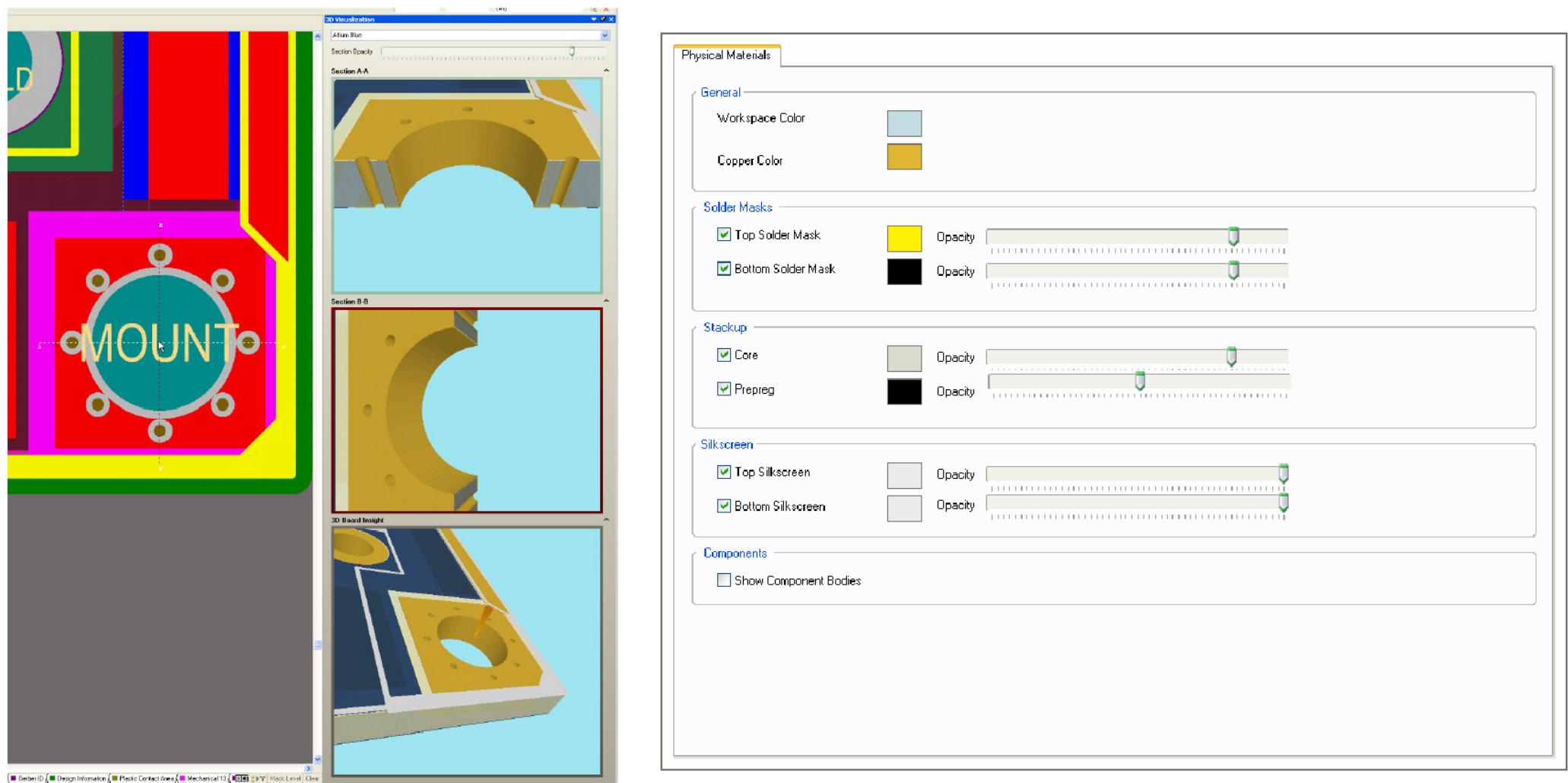
# Prelazak sa sigurnošću

- Vizualizirajte svoju tiskanu pločicu
  - 3D vizualizacija



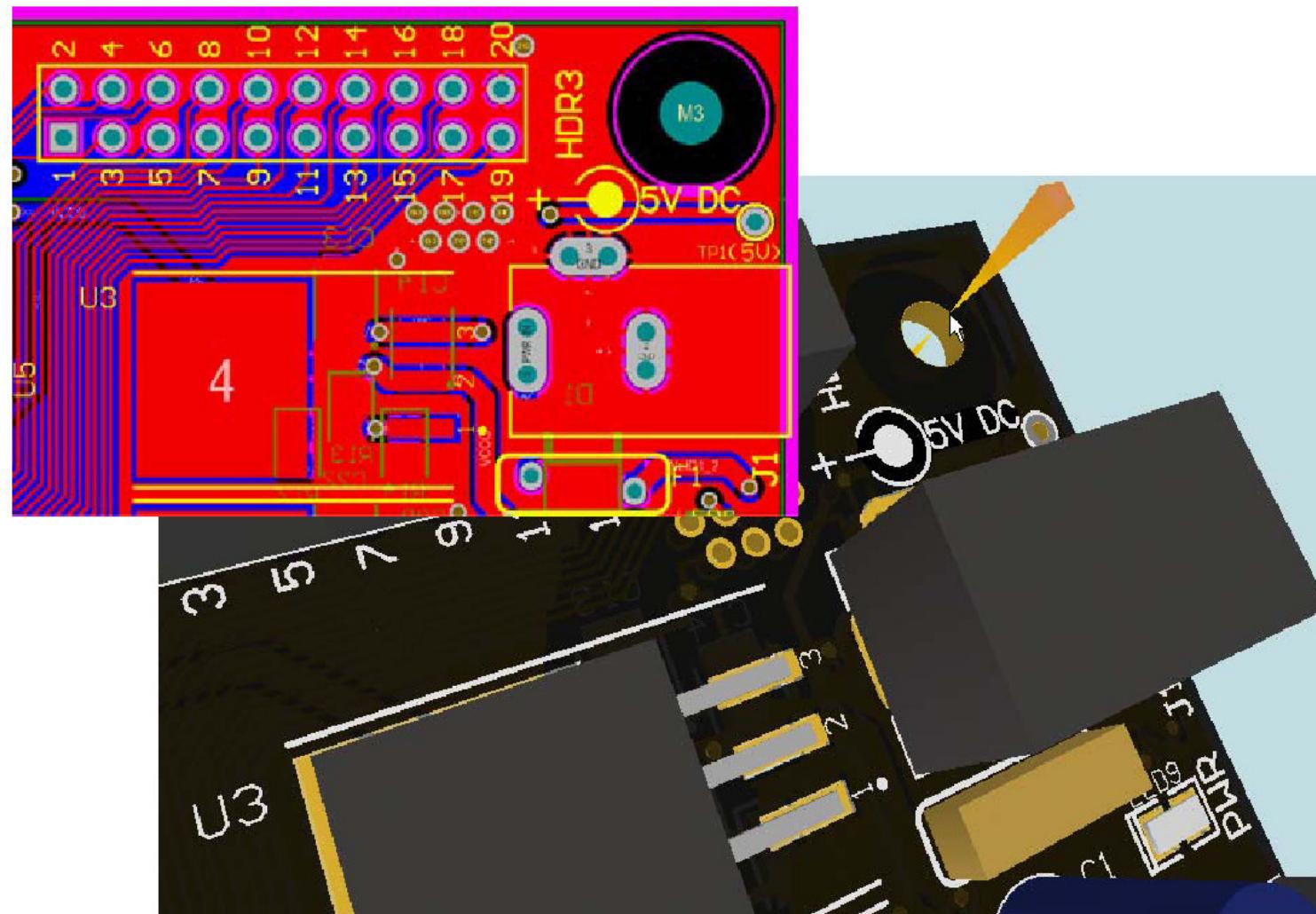
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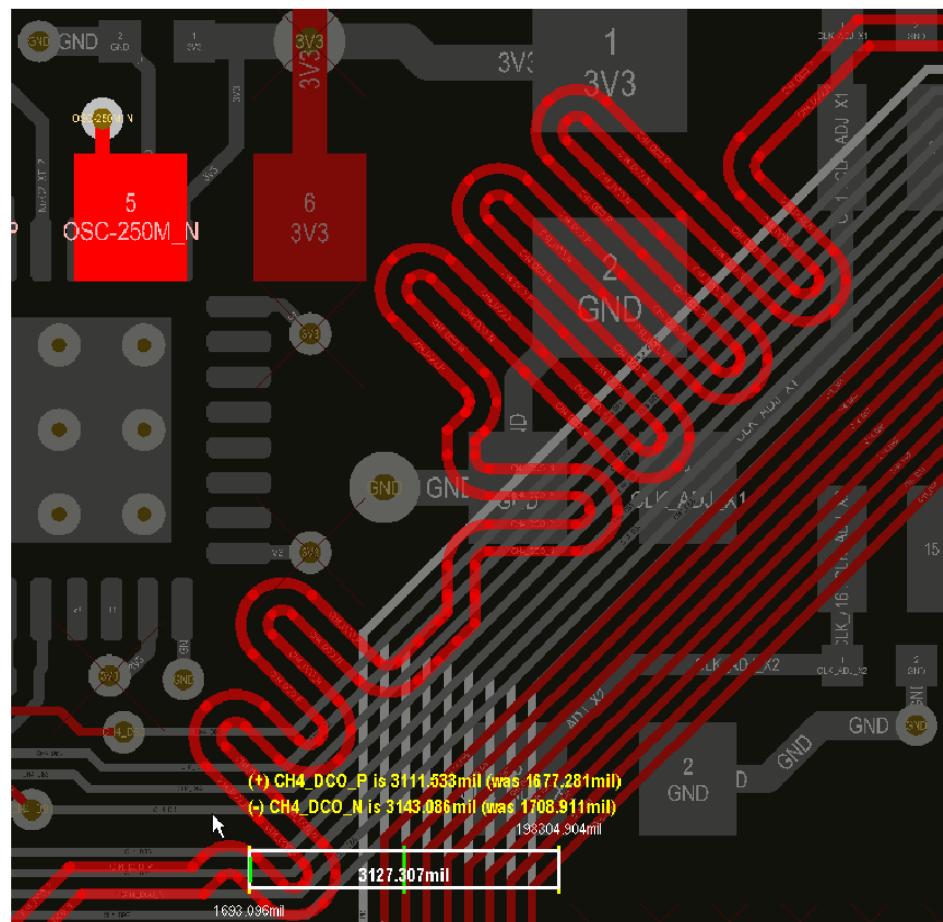
# Prelazak sa sigurnošću

- Vizualizirajte svoju tiskanu pločicu
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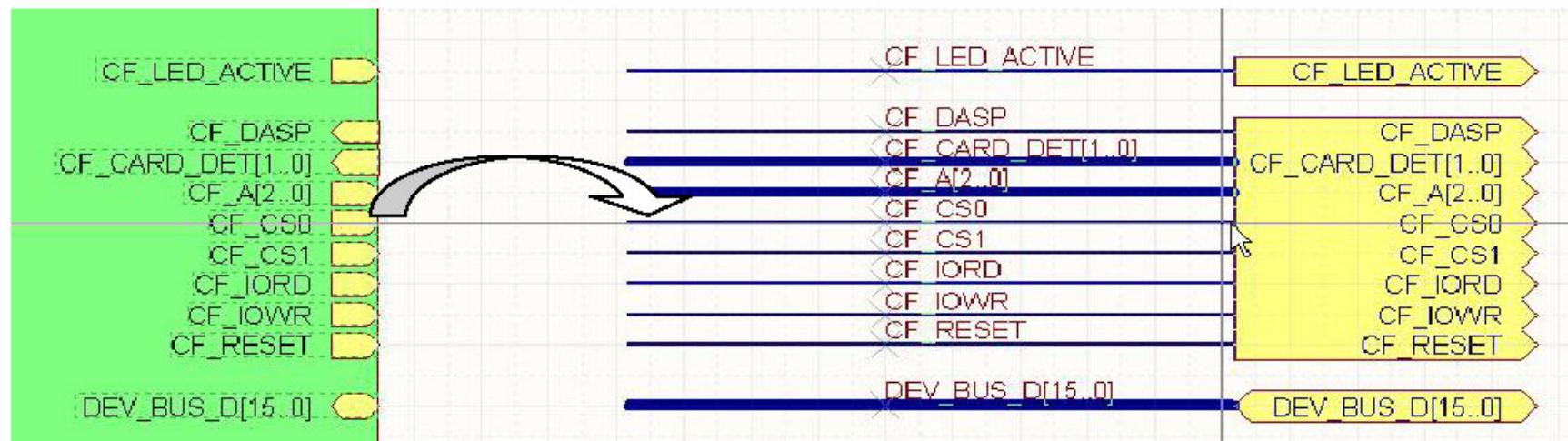
# Prelazak sa sigurnošću

- Odgovor na izazove postavljanja tiskanih vodova
  - postavljanje tiskanih vodova sa kontrolom impedancije
  - postavljanje tiskanih vodova diferencijalnog para
  - podešavanje dužine tiskanih vodova (jednostruki vodovi, kao i diferencijalni parovi)



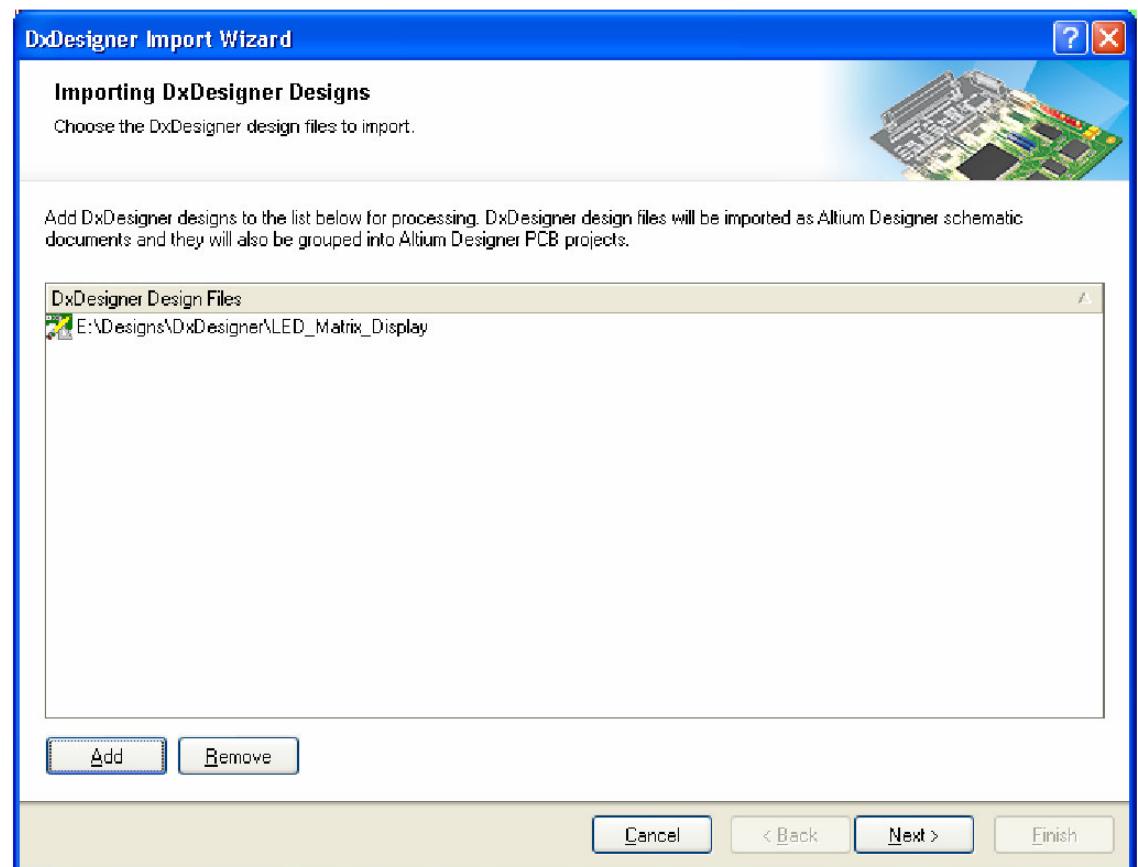
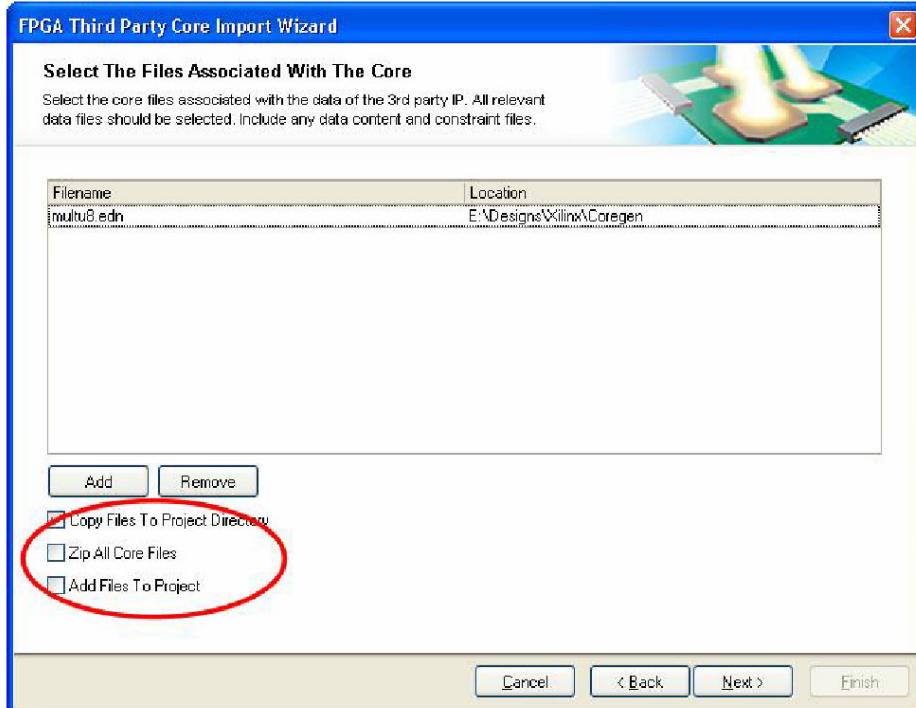
# Prelazak sa sigurnošću

- Sofisticirane funkcije za editiranje
  - globalno editiranje je postalo još bolje
  - transformacija sa “Smart Paste” funkcijom



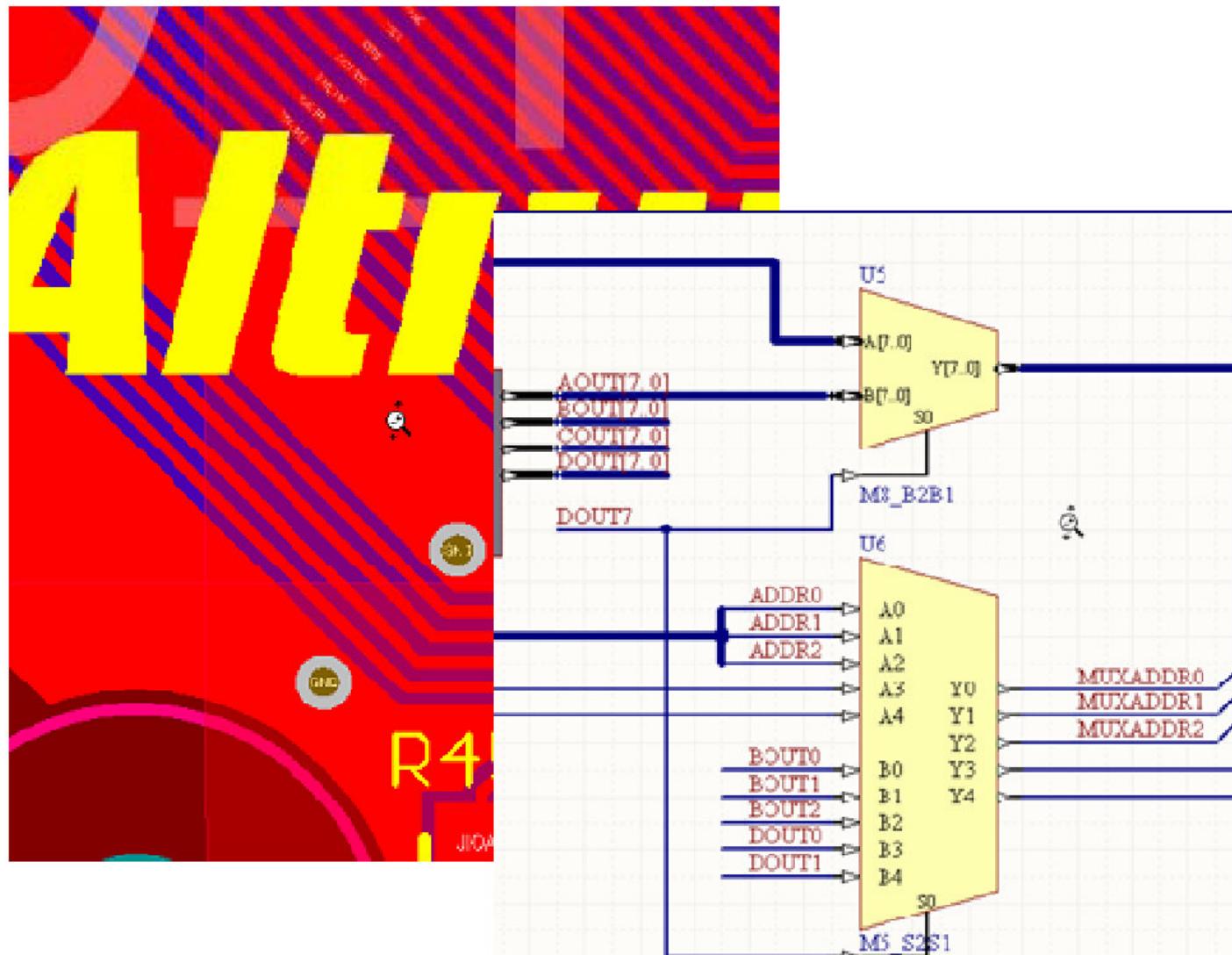
# Prelazak sa sigurnošću

- Široka paleta funkcija za importiranje
  - “IP core” proizvođača FPGA komponenata
  - DxDesigner®
  - PADS®
  - OrCAD®
  - P-CAD
  - ranije verzije Altium-ovih alata



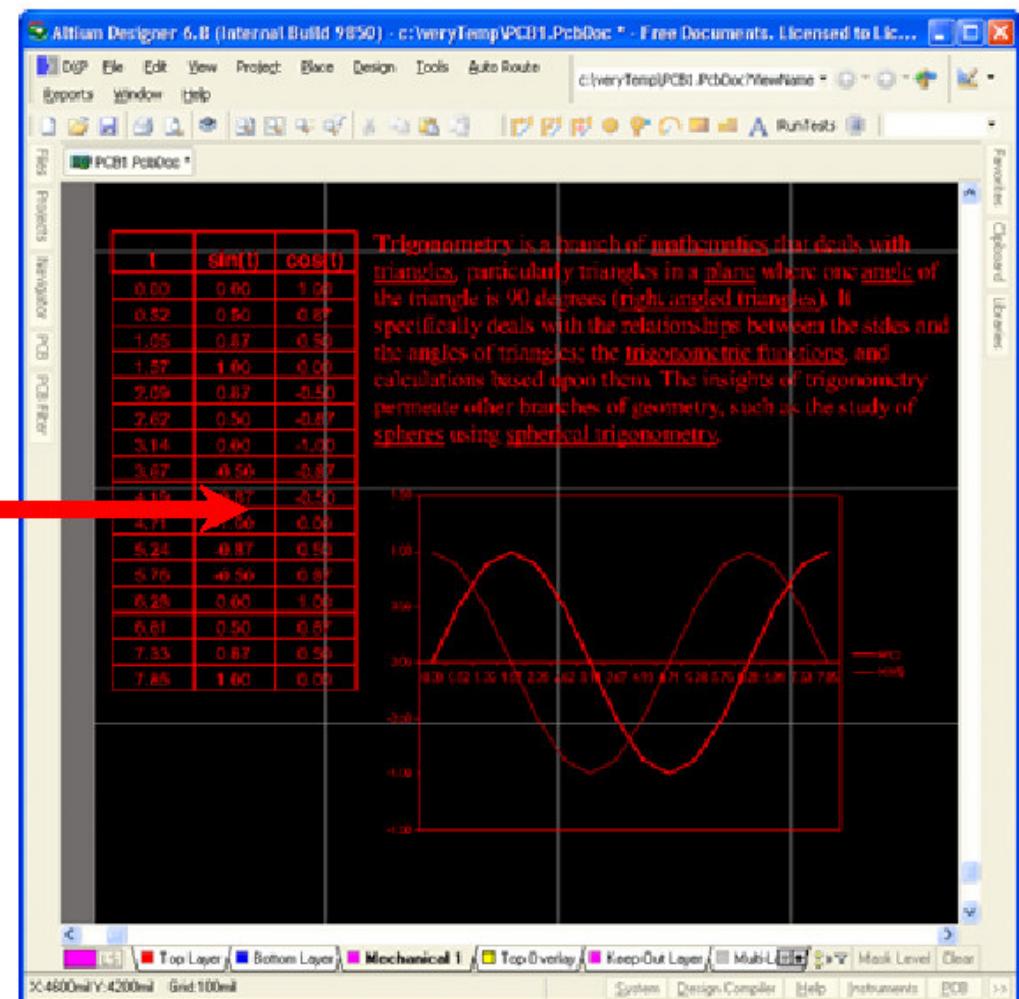
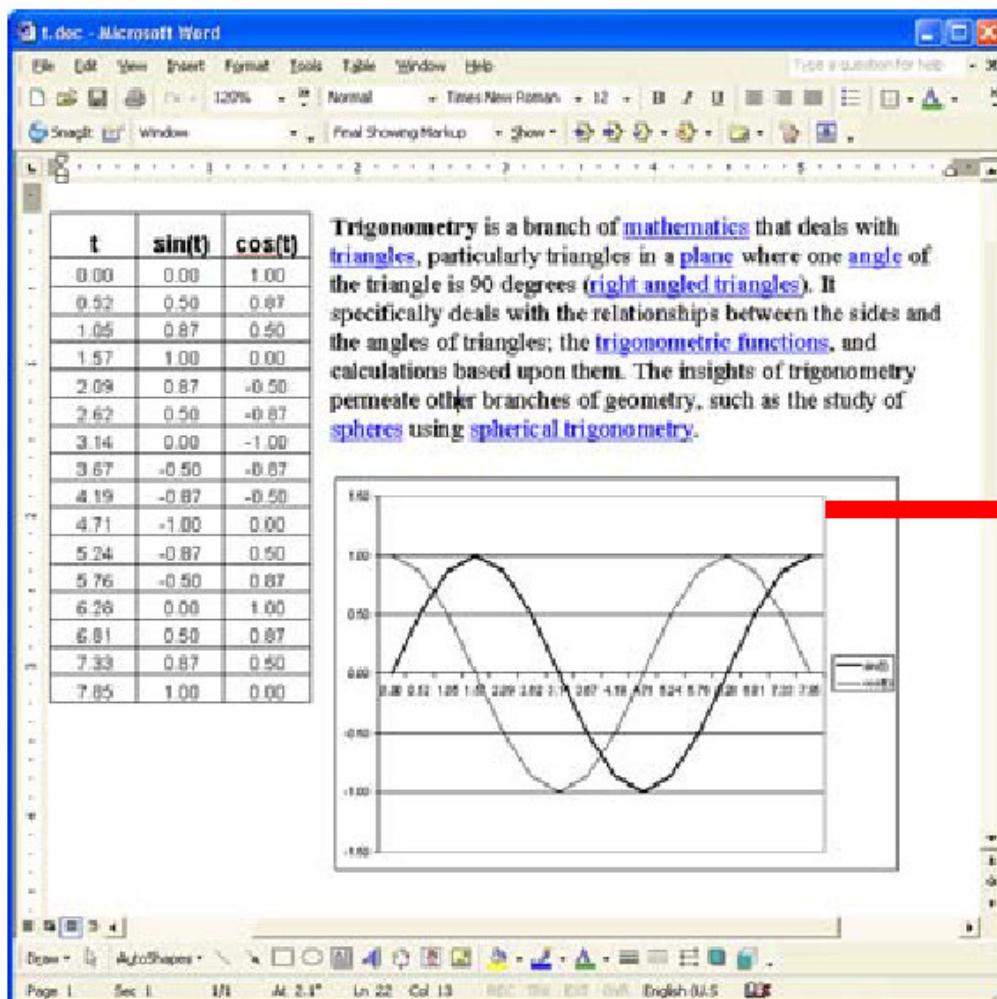
# Ostale nove funkcije u verziji 6.8

- Brzo zumiranje pomoću miša



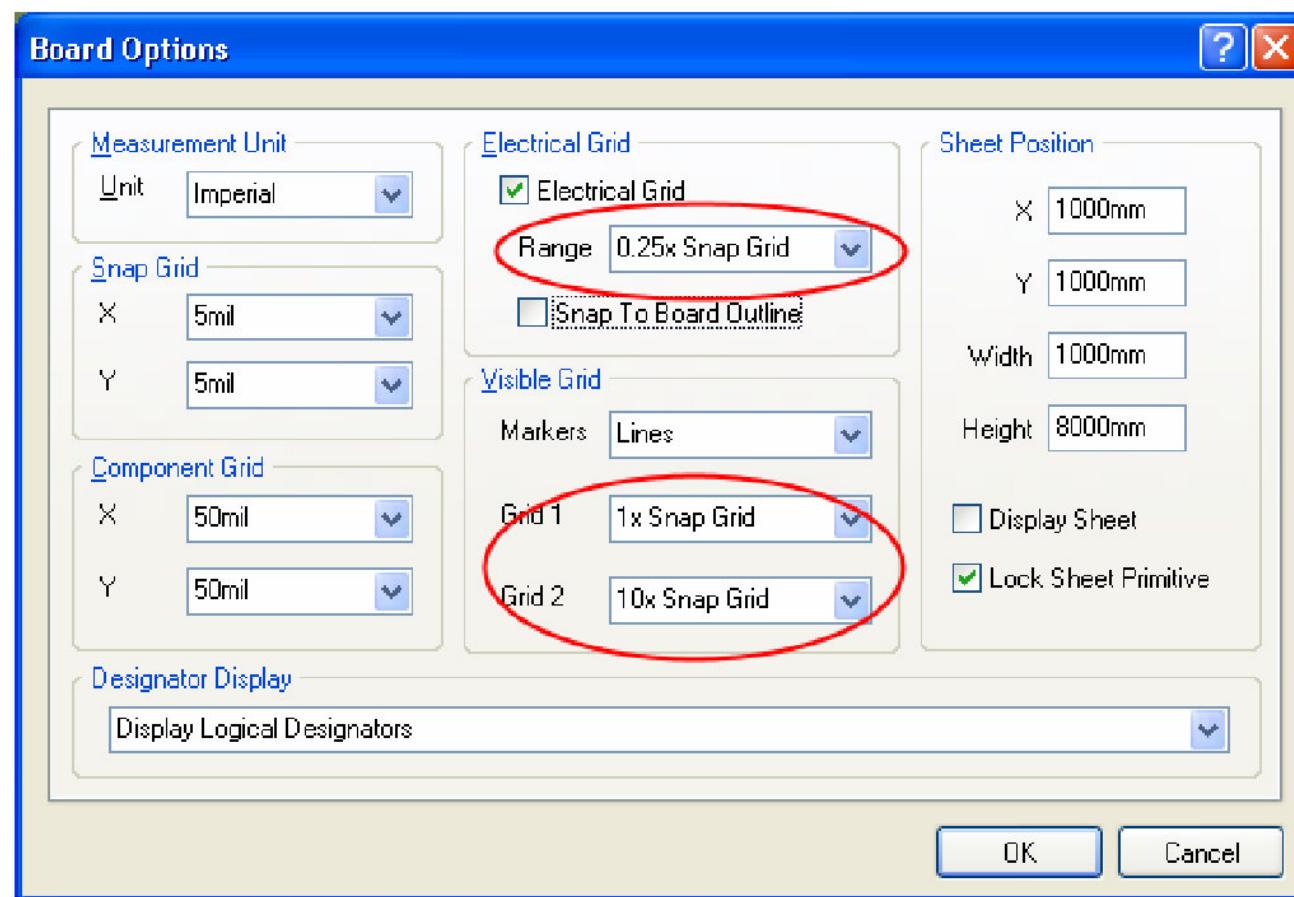
# Ostale nove funkcije u verziji 6.8

## ■ “Lijepljenje” meta podataka



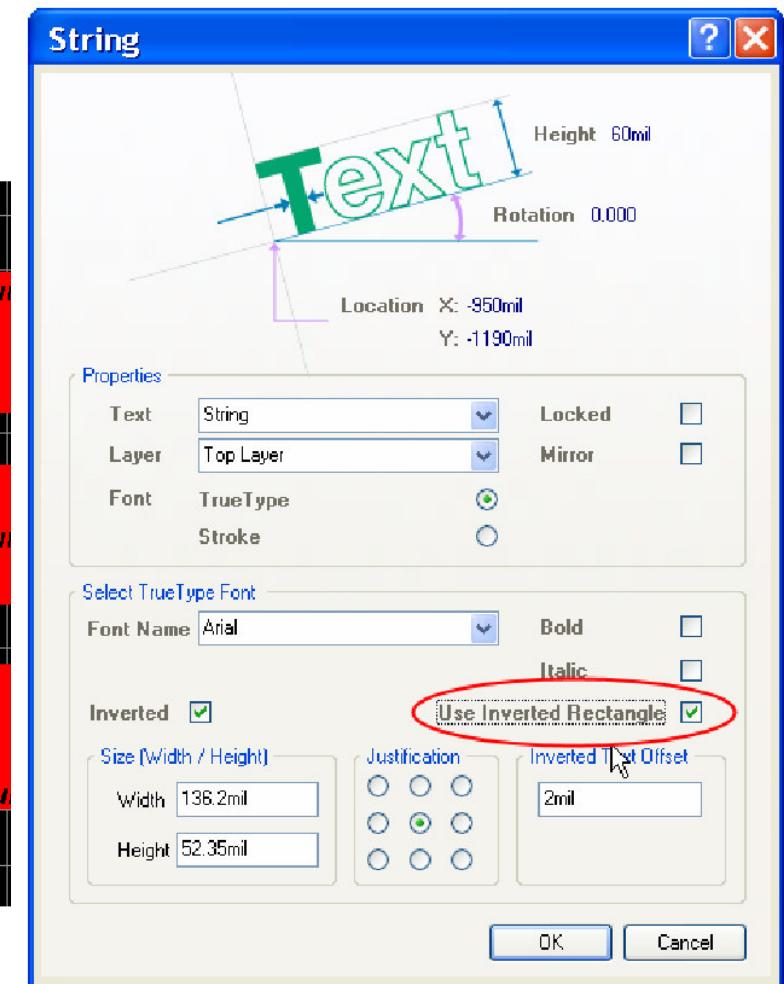
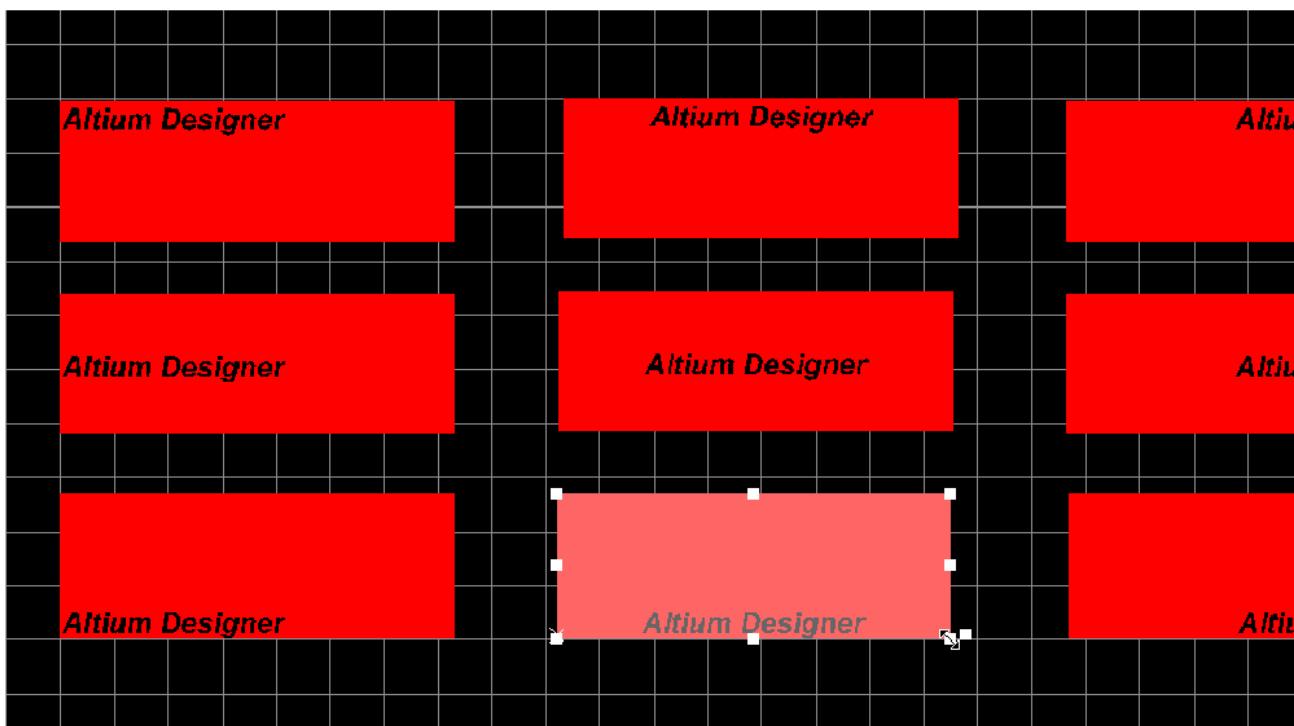
# Ostale nove funkcije u verziji 6.8

## ■ Unaprijeđene rešetke (grid)



# Ostale nove funkcije u verziji 6.8

## Invertirani tekst



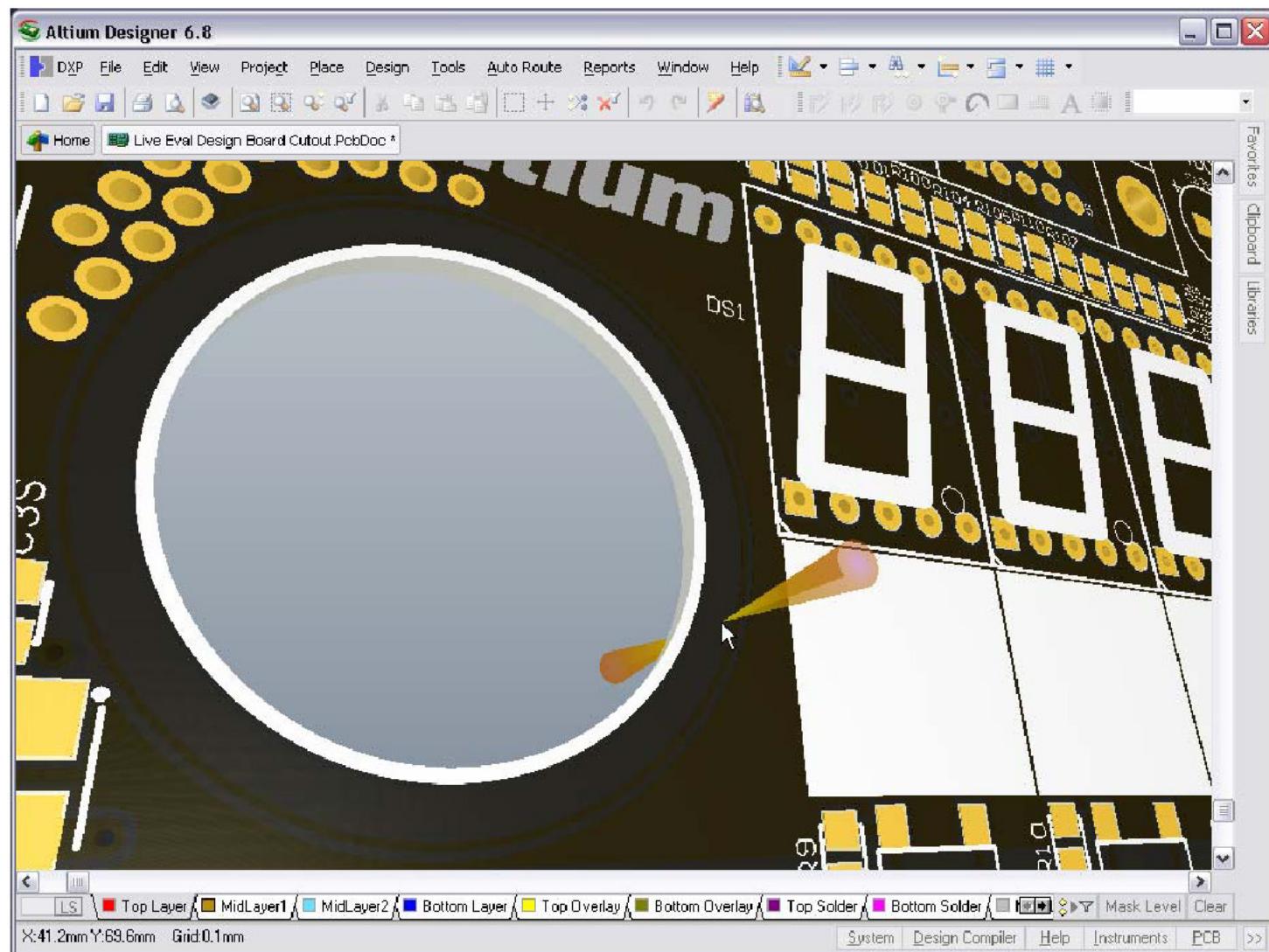
# Ostale nove funkcije u verziji 6.8

- Barkod tekst



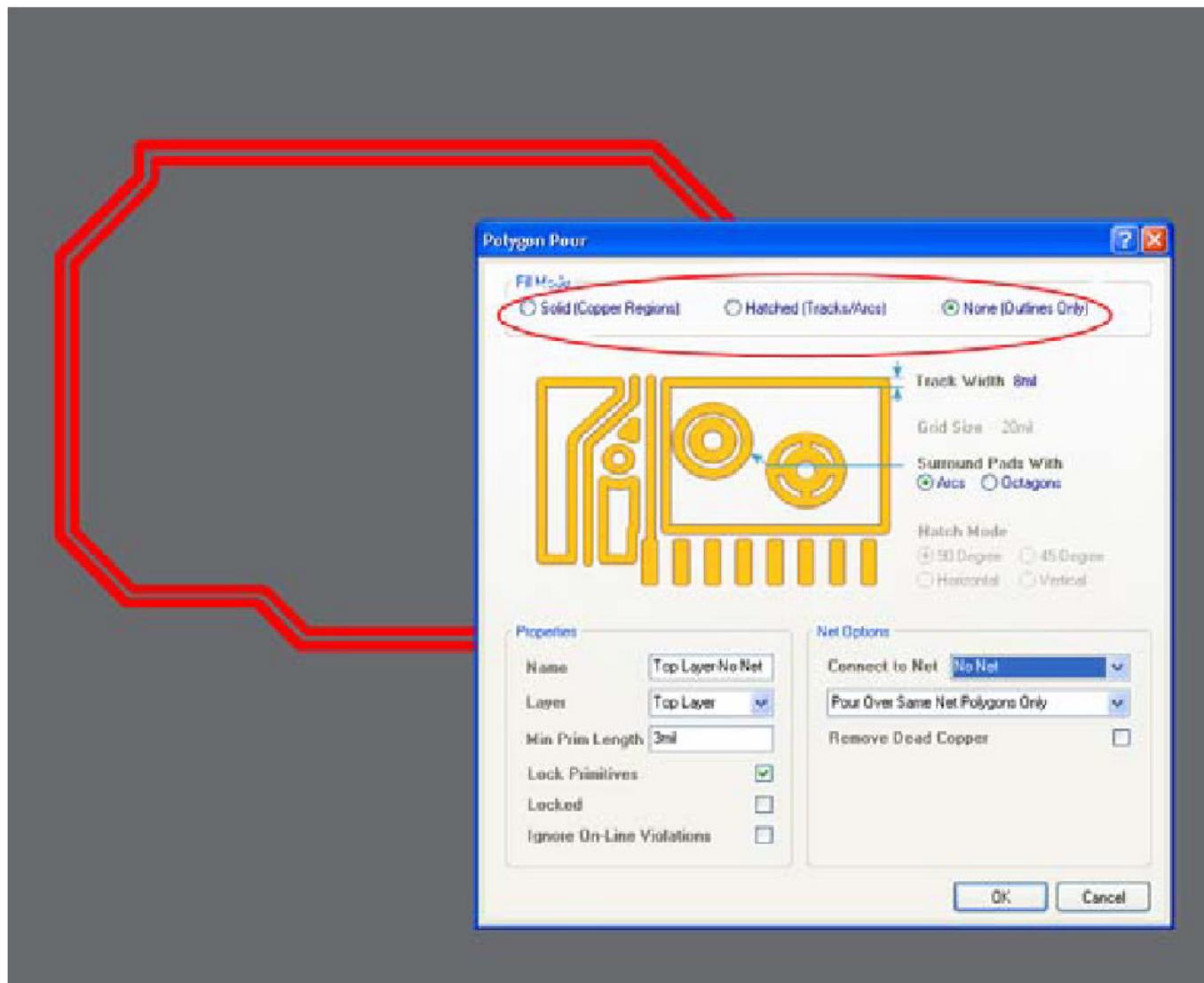
# Ostale nove funkcije u verziji 6.8

## ■ Board Cutout



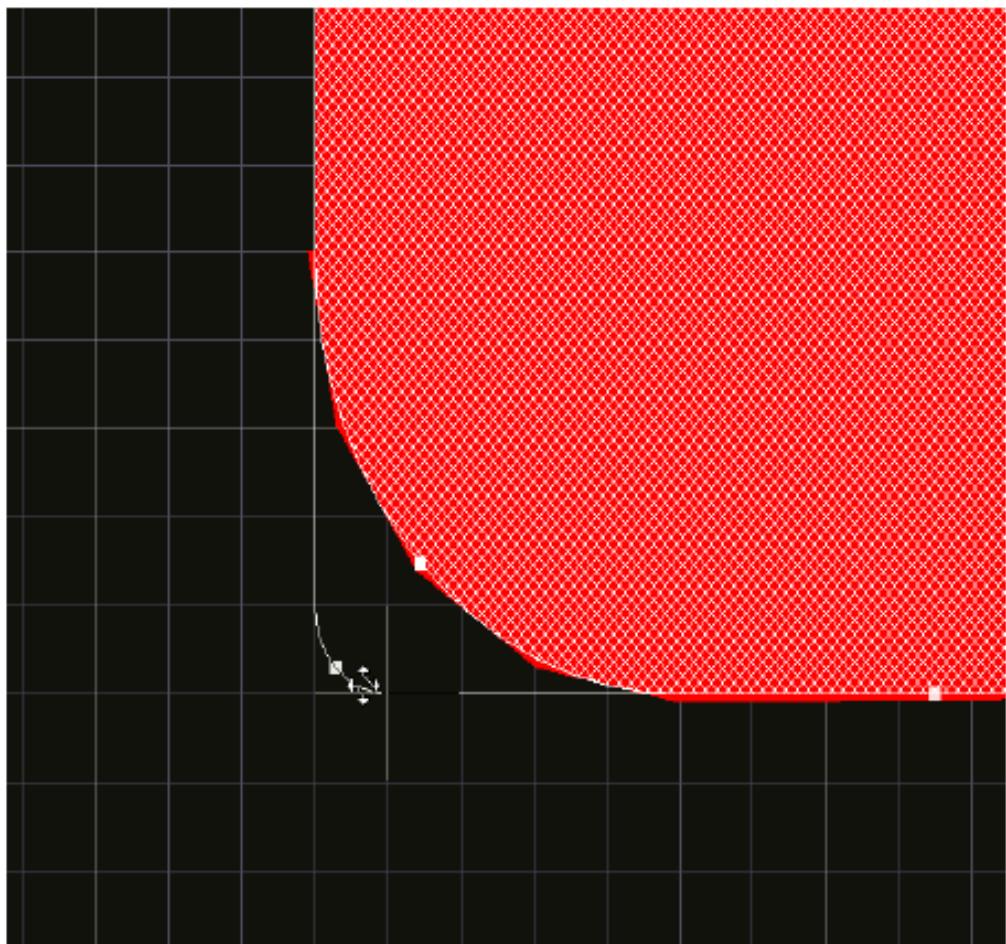
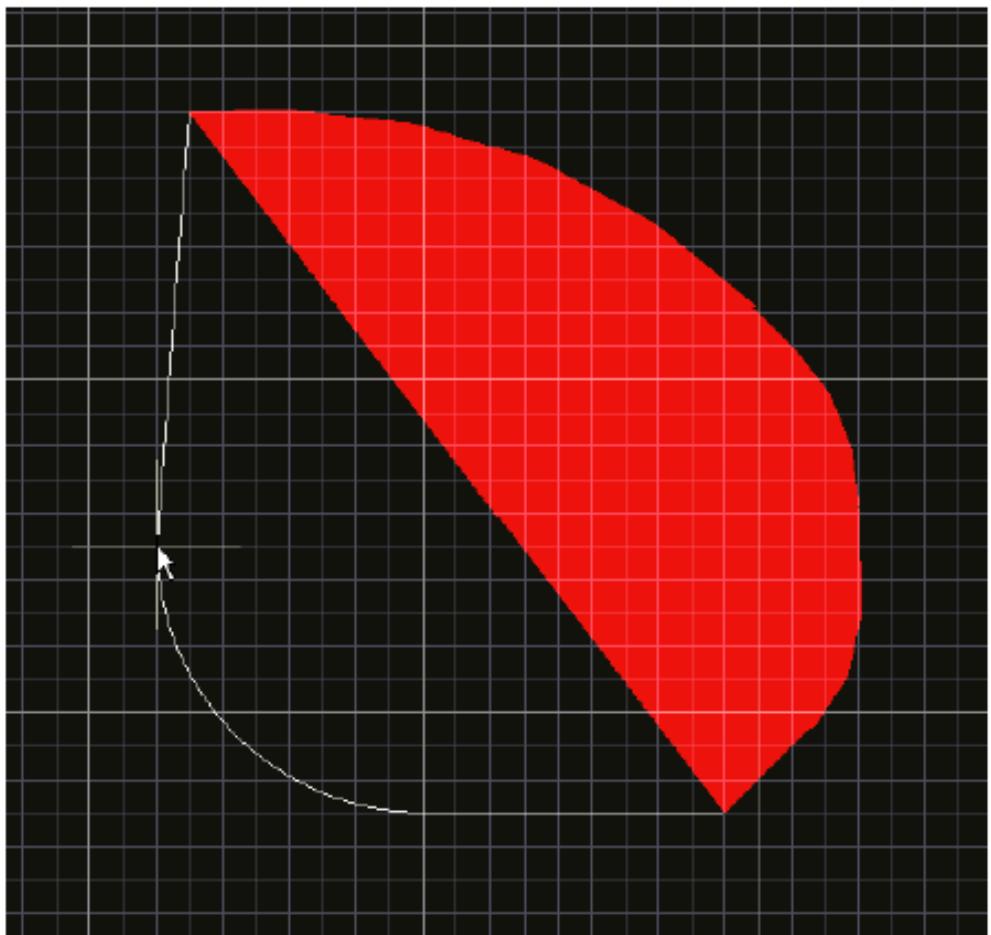
# Ostale nove funkcije u verziji 6.8

- Definiranje oblika poligona iz odabralih objekata



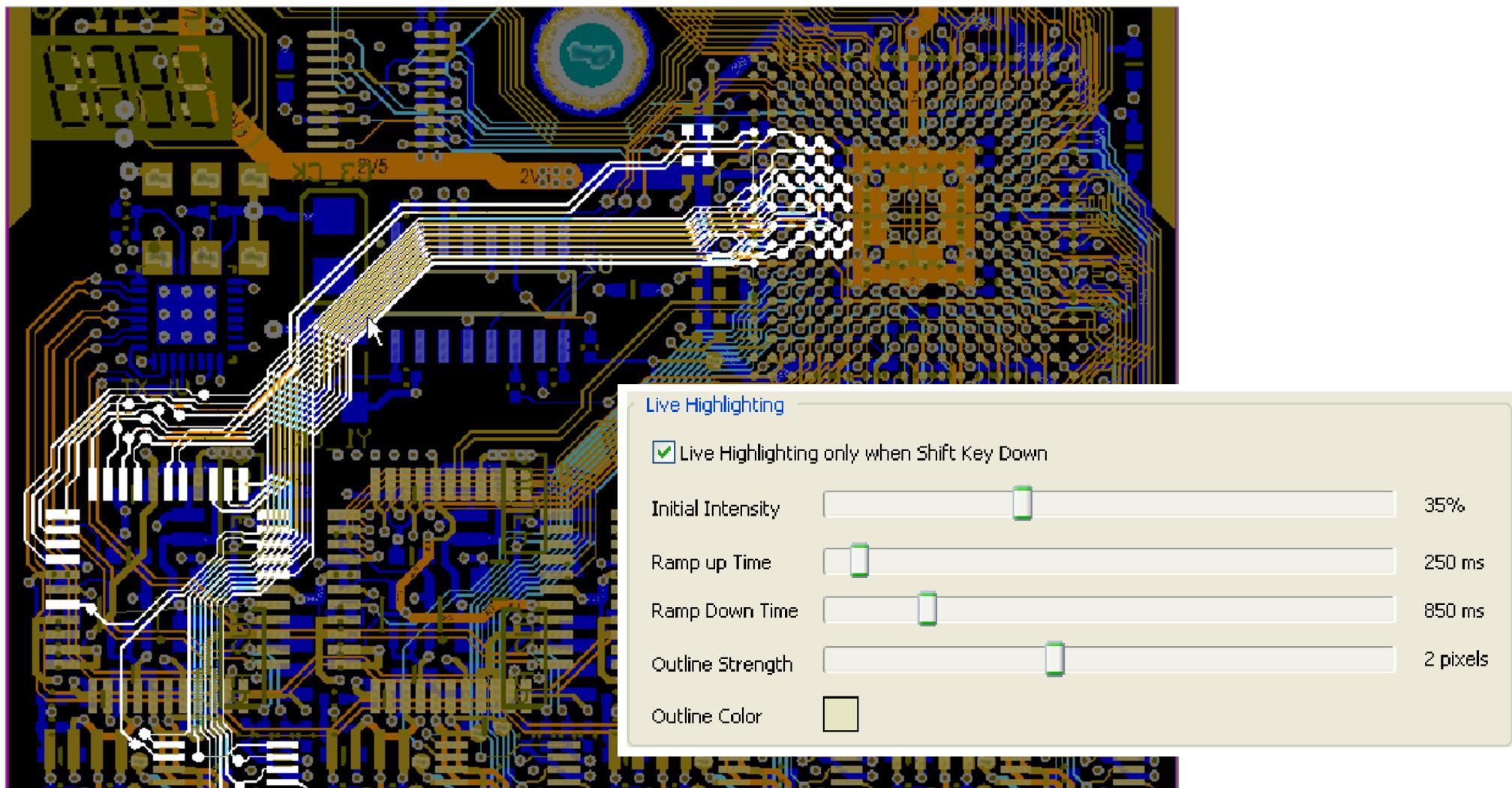
# Ostale nove funkcije u verziji 6.8

- Editiranje poligona



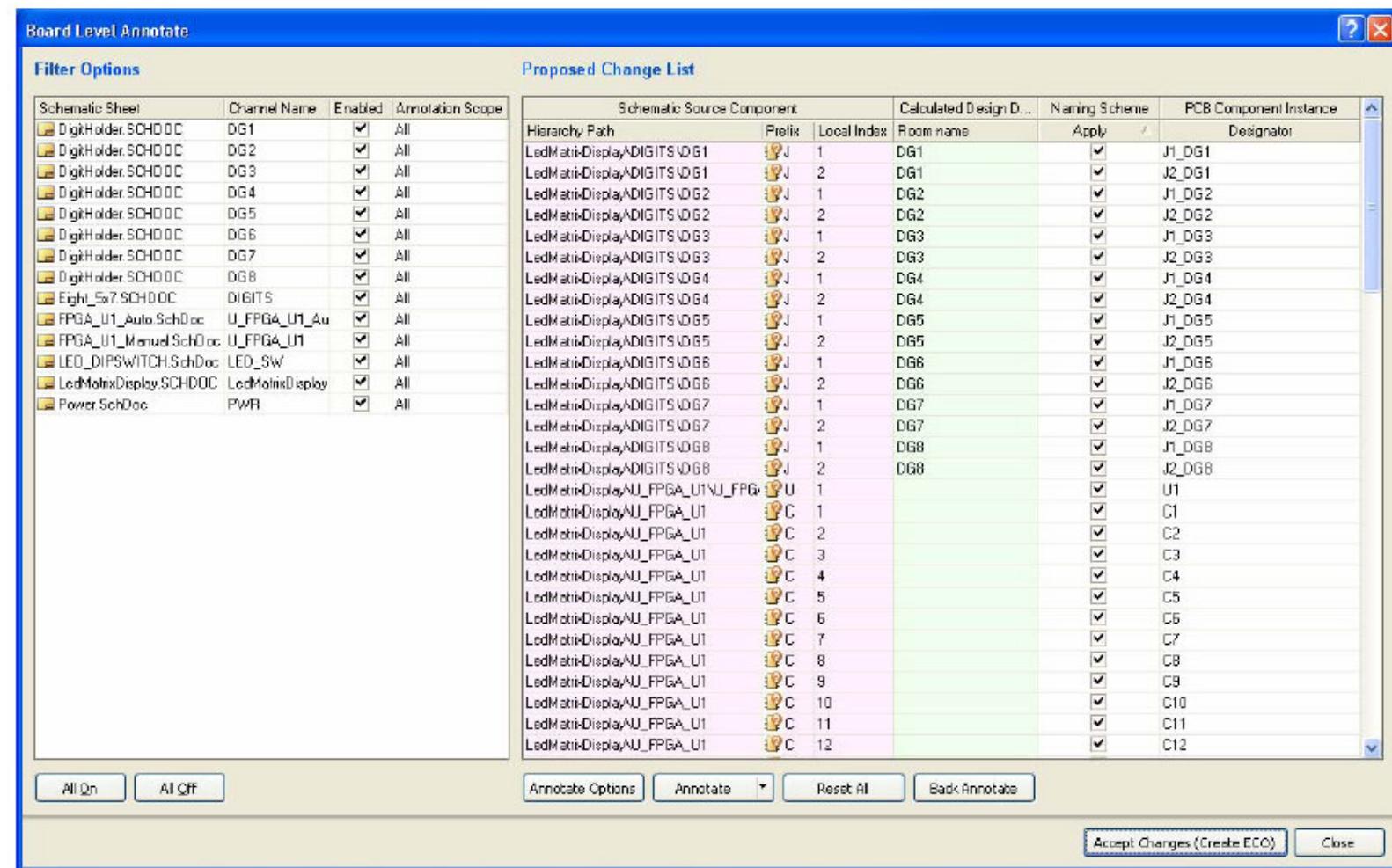
# Ostale nove funkcije u verziji 6.8

- “Live highlight”



# Ostale nove funkcije u verziji 6.8

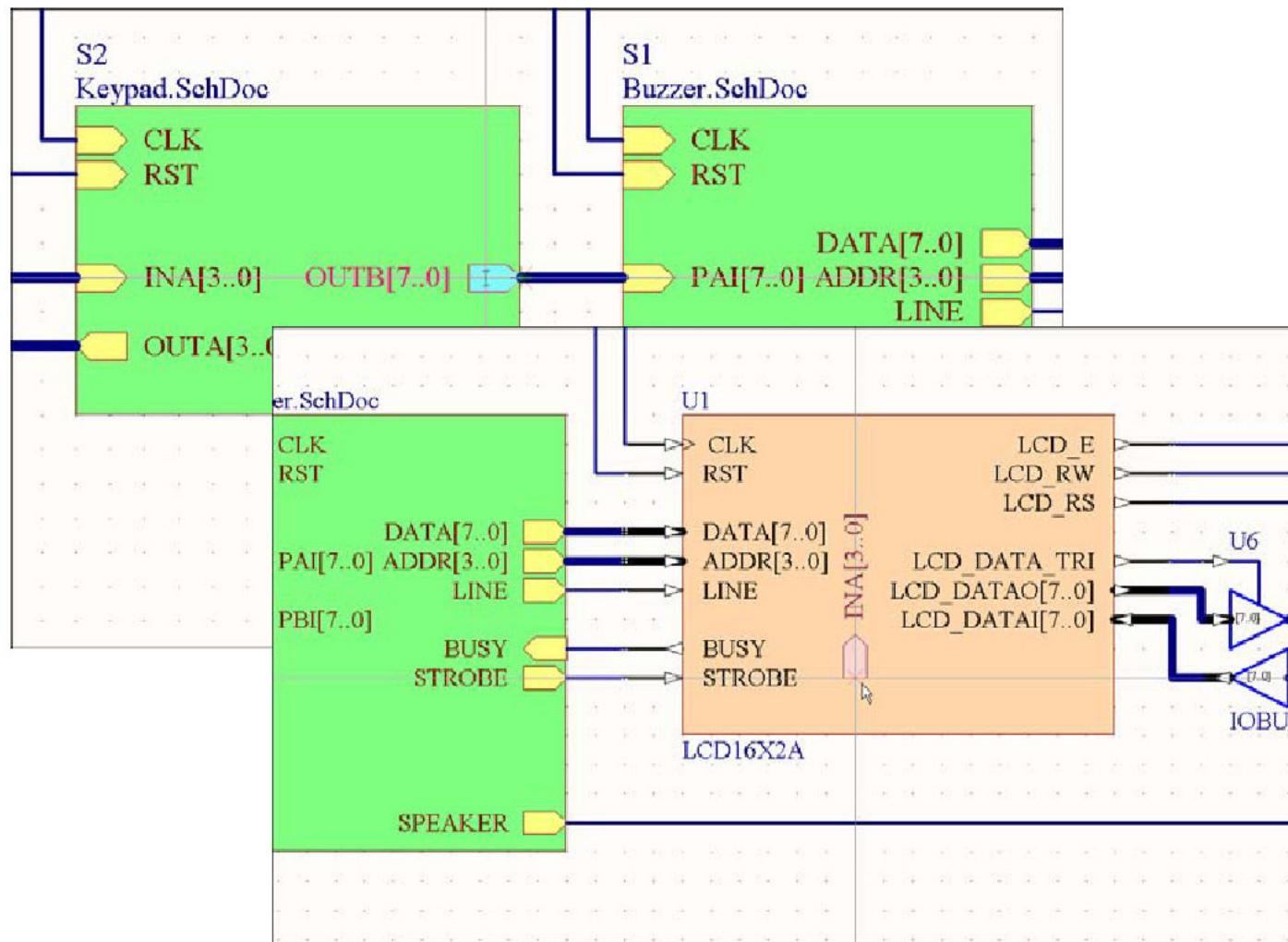
## Anotacija na razini tiskane pločice



Editor Channel 1 Channel 2 Channel 3

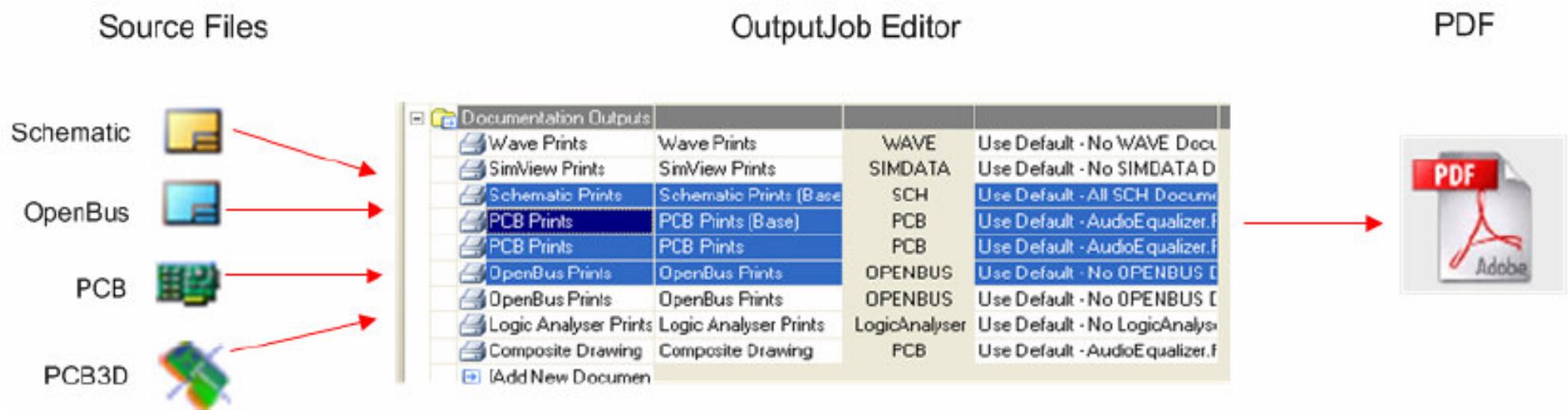
# Ostale nove funkcije u verziji 6.8

- Editiranje "Sheet Entry"-ja



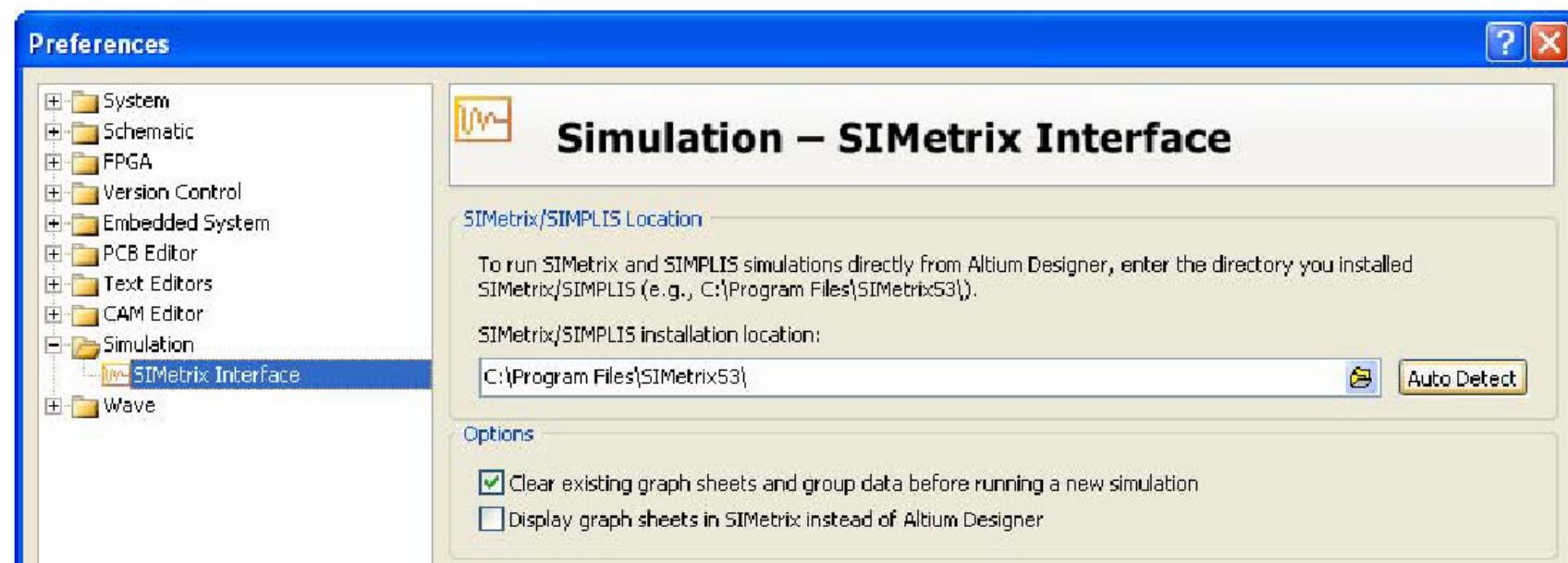
# Ostale nove funkcije u verziji 6.8

## ■ Publiciranje u PDF



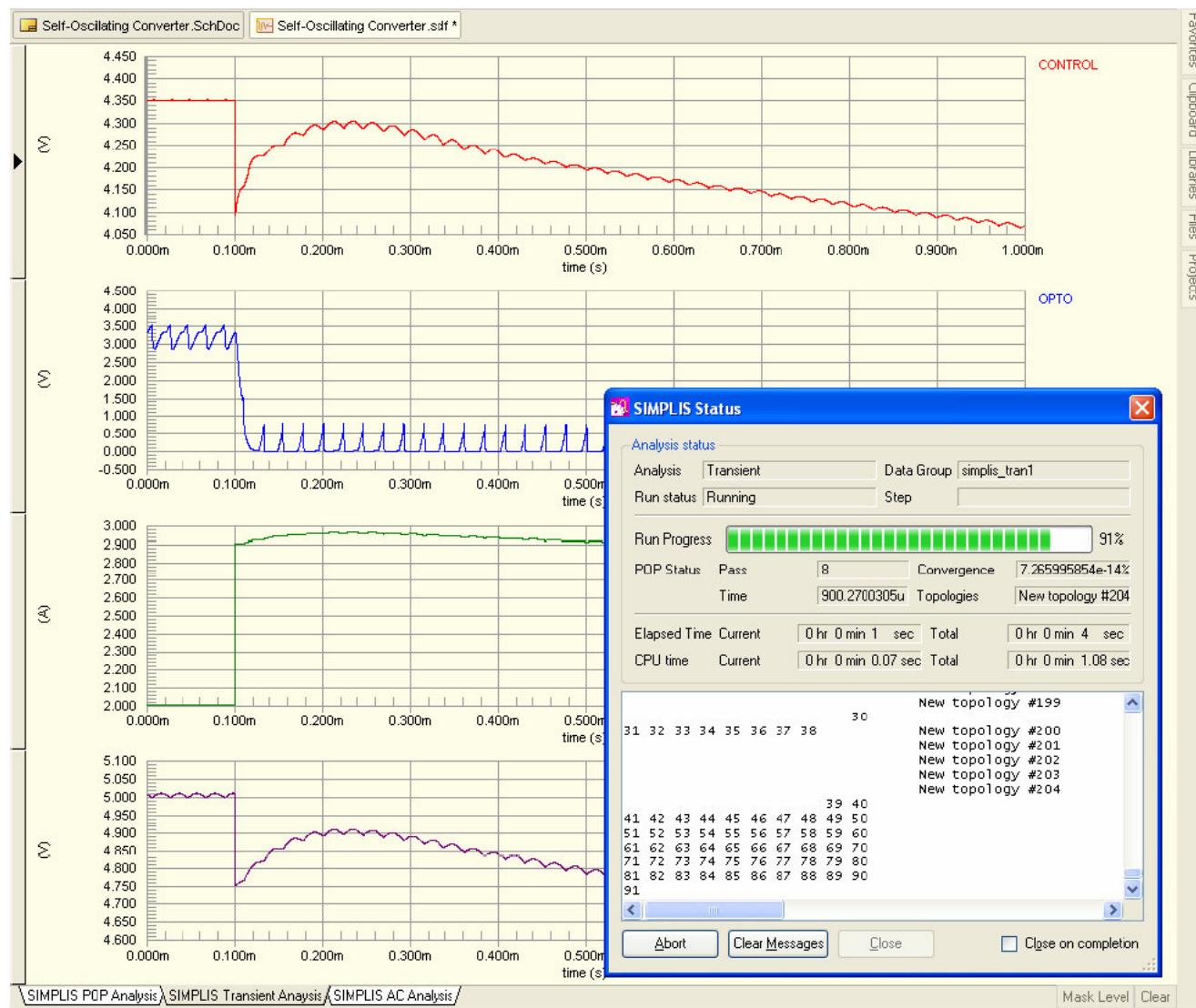
# Ostale nove funkcije u verziji 6.8

- Podrška za Catena SIMetrix/SIMPLIS®
  - direktna simulacija iz Altium Designer-a u SIMetrix/SIMPLIS
  - importiranje modela iz SIMetrix/SIMPLIS knjižnice modela
  - eksportiranje sheme koja sadrži modele za simulaciju u SIMetrix/SIMPLIS format



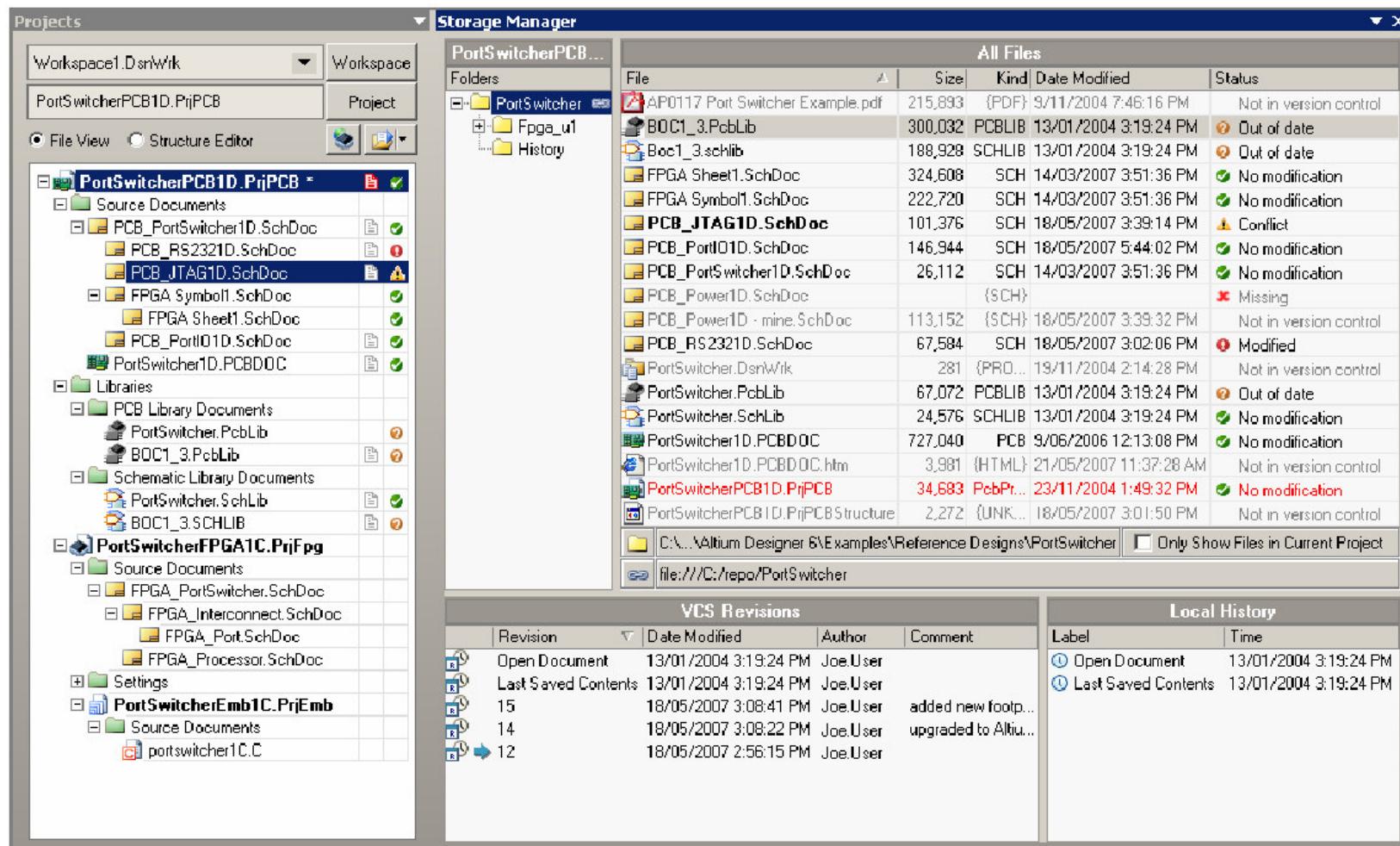
# Ostale nove funkcije u verziji 6.8

## ■ Podrška za Catena SI Metrix/SIMPLIS®



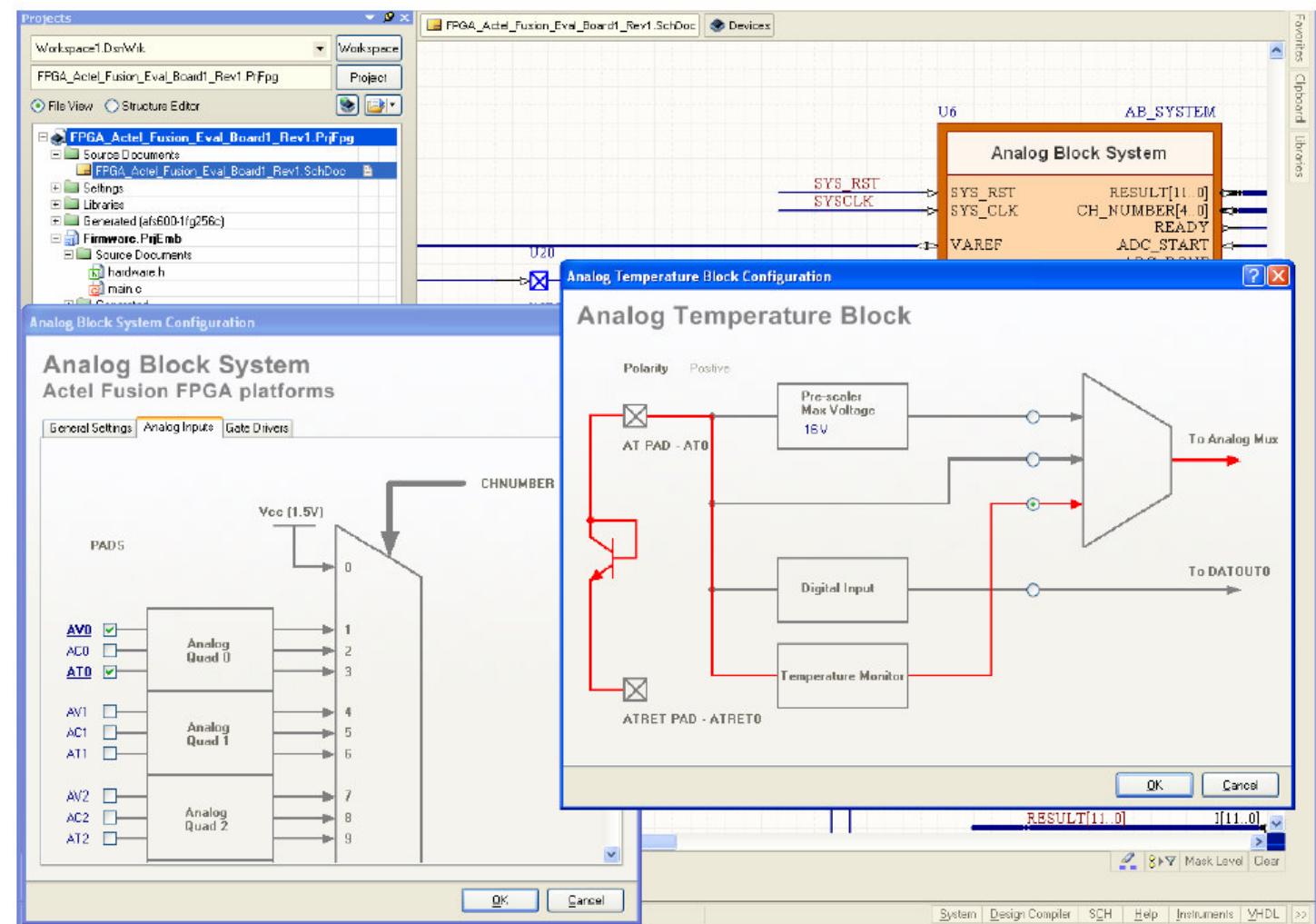
# Ostale nove funkcije u verziji 6.8

## ■ Unaprijeđena podrška za kontrolu verzija



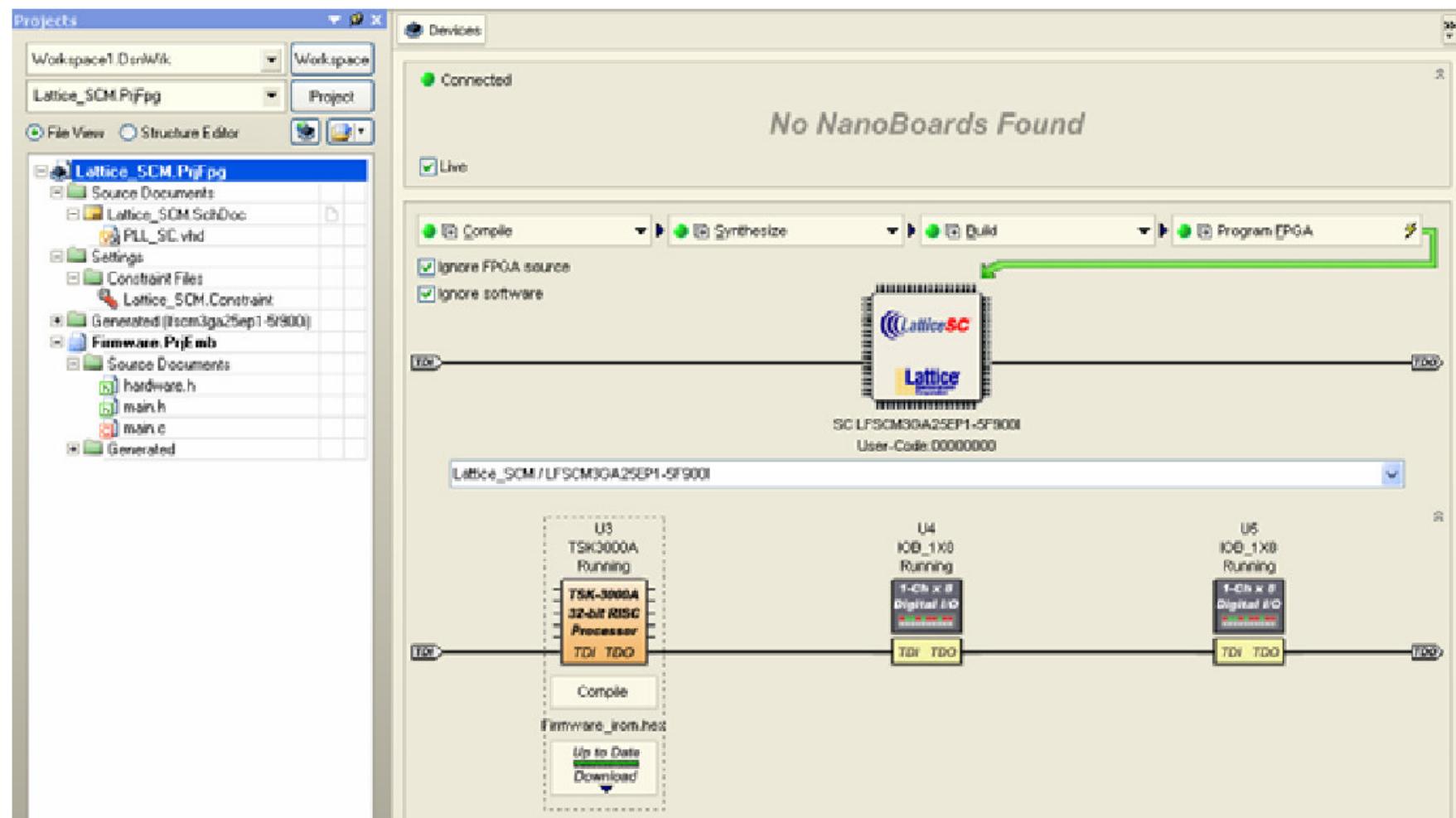
# Ostale nove funkcije u verziji 6.8

## ■ Podrška za Actel® Fusion



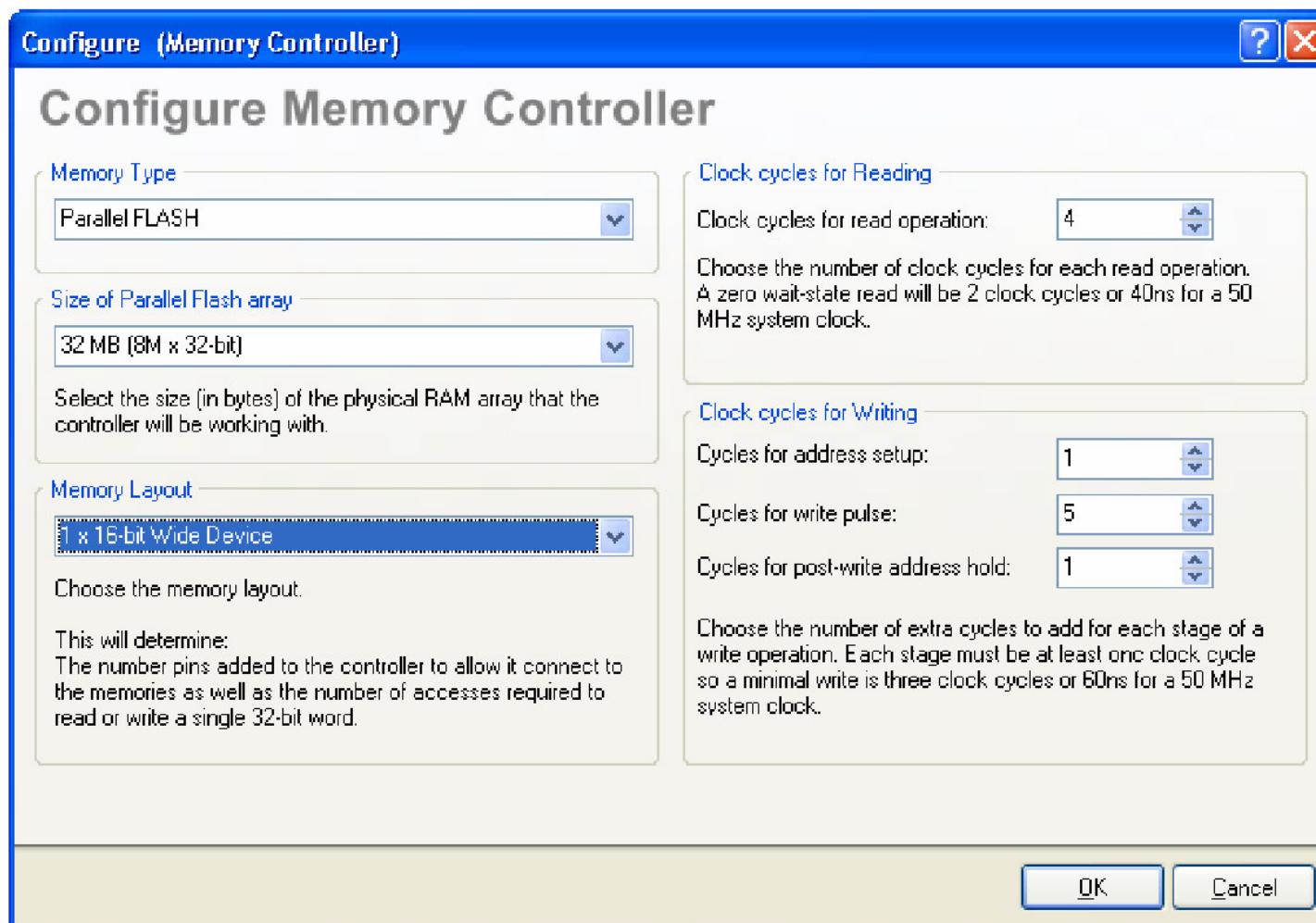
# Ostale nove funkcije u verziji 6.8

## ■ Podrška za Lattice SC/SCM®



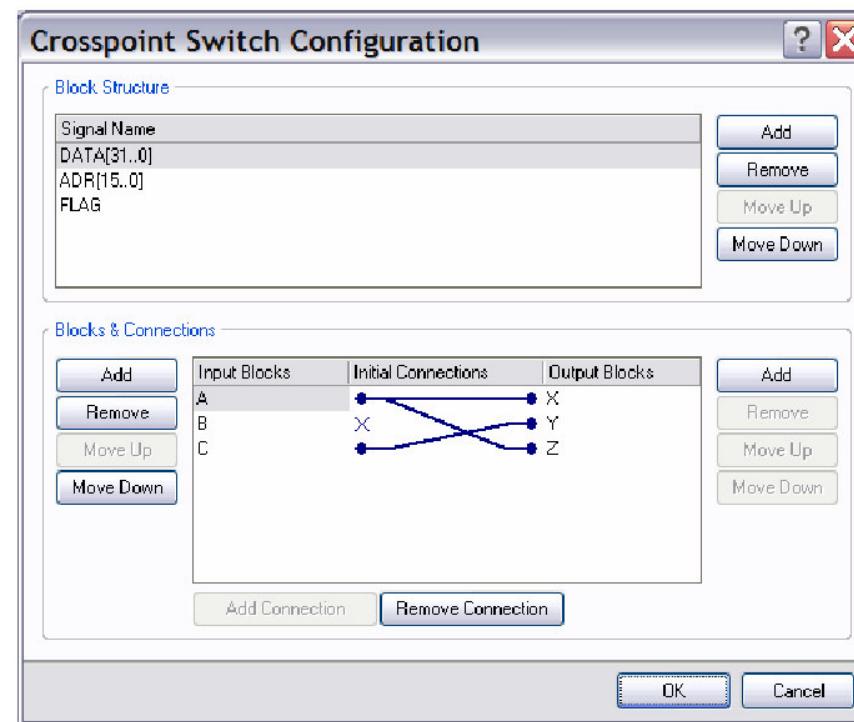
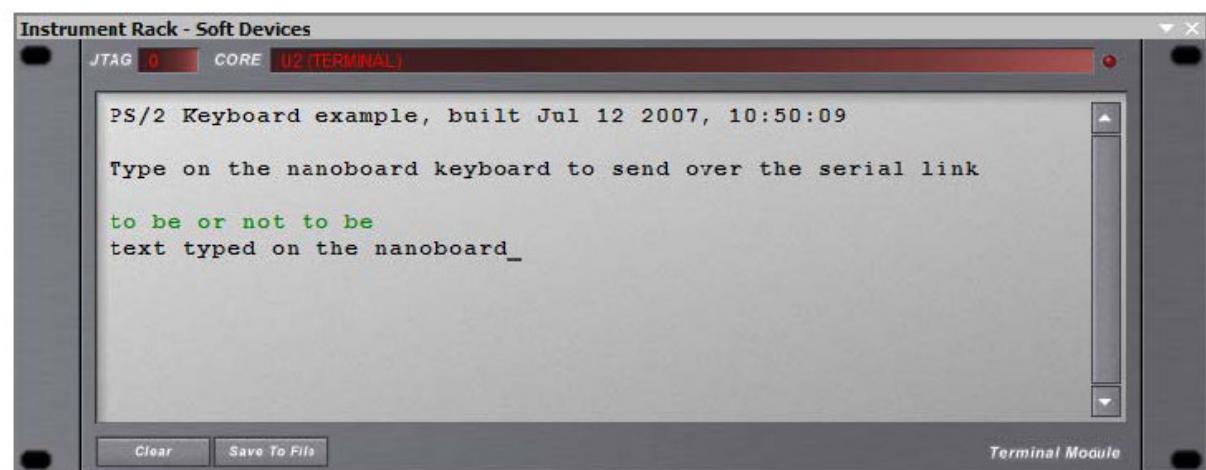
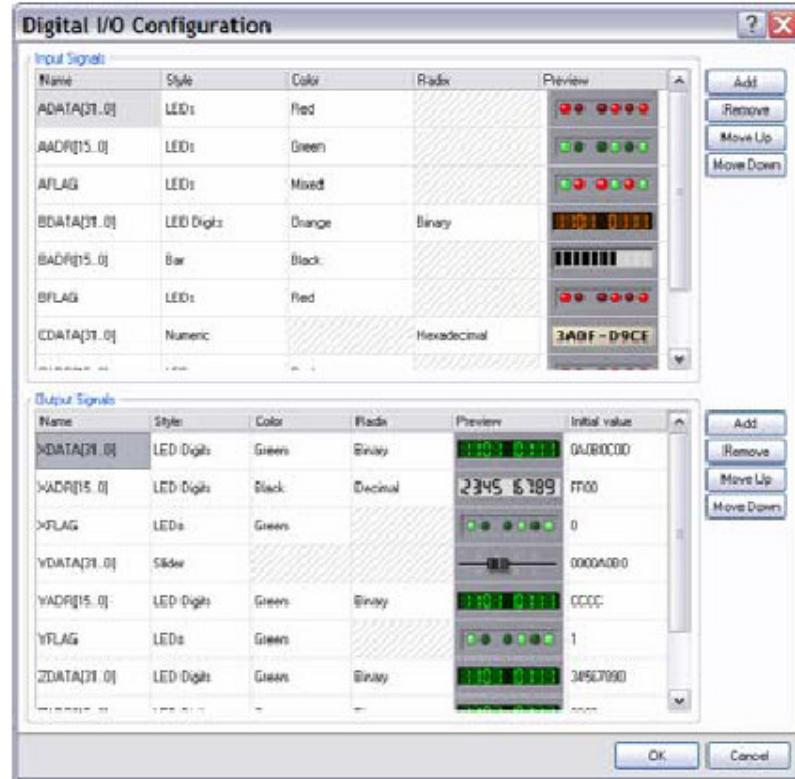
# Ostale nove funkcije u verziji 6.8

- Unaprijeđena podrška za flash memorije



# Ostale nove funkcije u verziji 6.8

## ■ Live Design instrumenti



# Ostale nove funkcije u verziji 6.8

- Opcija za uključivanje referentne točke za komponente

