Dragonchip

User Manual for ISP Programmer board ver1.3

Revision 1.2 July, 2008

Revision History

The following table shows the revision history for this document.

Date	Version	Revision
Sept, 2004	1.0	Preliminary for ISP Programmer board ver1.3
Feb, 2007	1.1	Add section 3.3.3.3 & 3.3.3.4
July, 2008	1.2	Update section 1 Add section 3.3.3.4 Remove schematic

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1 Introduction

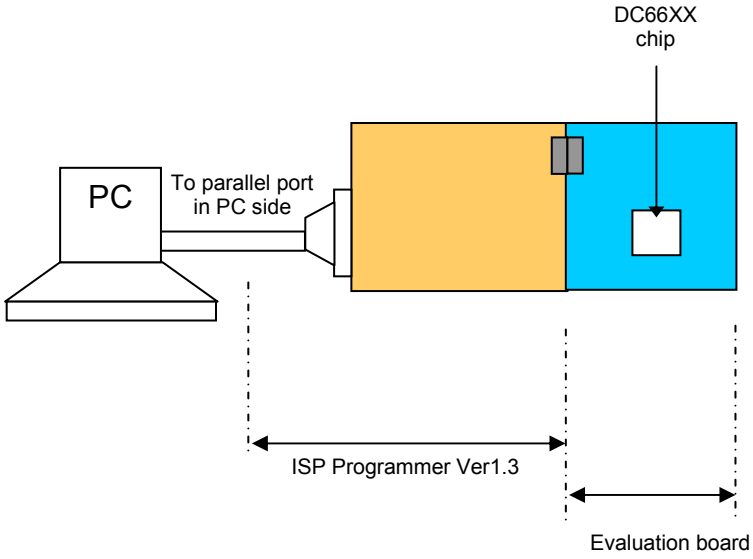
The Objective of this document is to provide the user a quick start to use ISP Programmer ver1.3 board to download code to device.

This board is applicable to:
1) DC6688FSA Series
2) DC6688FSX Series
3) DC6688FL Series
4) DC6088F5

The whole hardware setup involves two parts. One is PC to ISP Programmer ver1.3 board while the other is ISP Programmer ver1.3 board to Evaluation board.

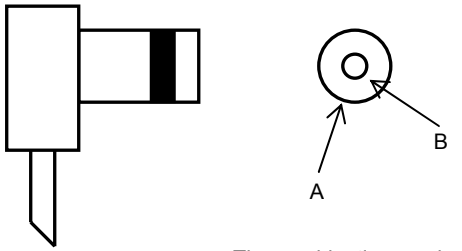
The software setup needs 'Dragonchip ISP Programmer' with version 4.1.0 or higher. Details refer to document "Dragonchip In-system programmer Manual". All you need to do is to setup the hardware, plug the chip into the Burn-in socket on the evaluation board and use the software to download the code.

This document focuses on the hardware setup.



2 Powering up the demo-board

Attach a fixed power supply to the power-connector at J2. An +9V up to +12V/800mA power source can be used to supply the power of the board. The polarity of the power plug is shown below.

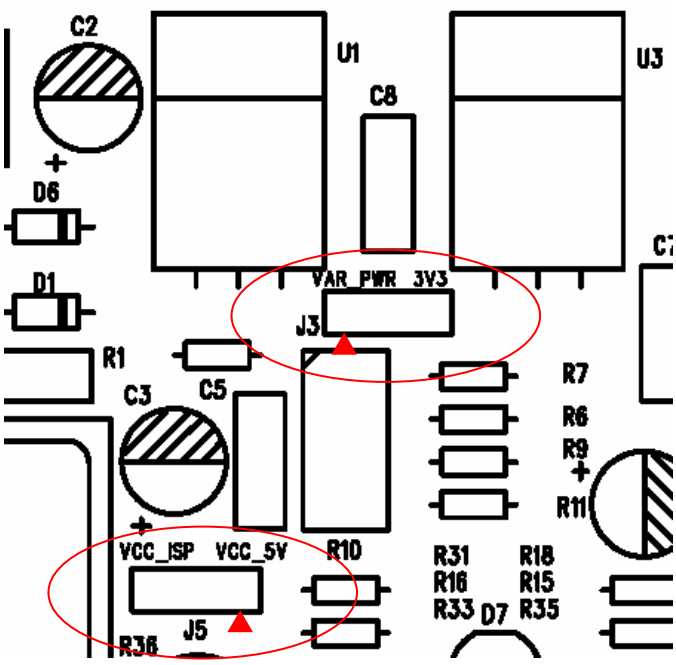


The combination can be
1) A: -ve
   B: +ve
2) A: +ve
   B: -ve

3 Component Description

3.1 Jumper Settings

'J3' and 'J5' on the board as shown below apply to section 3. To change the settings, the board should remove the power first by using 'S1' switch.



Remarks:
1) The red triangle indicates pin 1 of the component

Before programming, jumper settings should be made to select the target device.

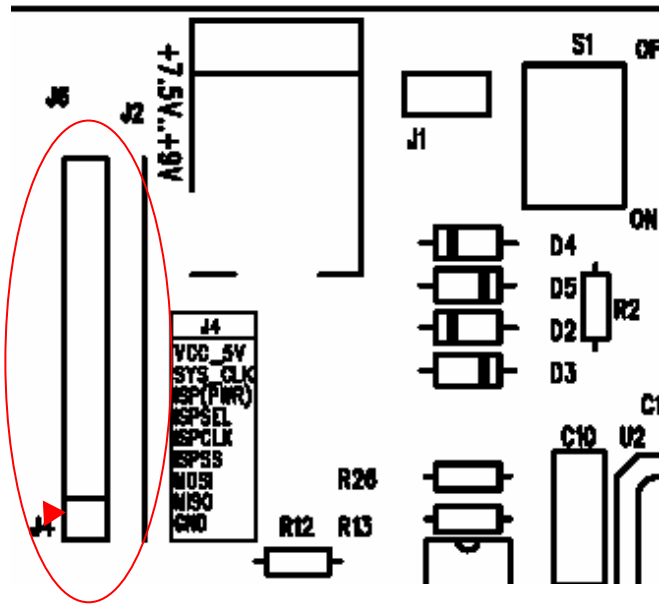
J3	J5	Device
2-3	2-3	DC6688FSA /DC6688FSX /DC6688FL
2-3	1-2	DC6088F5
1-2	2-3	Prohibited
1-2	1-2	Prohibited

3.2 LED
LED ‘D7’ turns on while in the progress of programming the target device.

Note: The LED may turn on even not programming the target device when connected to PC and switching on the power. It is because 1)the parallel port was ever used by other software before, or 2)initial state of the port set on PC startup.

3.3 Connector
3.3.1 ‘CON2’
‘CON2’ is a parallel port, which is used to connect to PC

3.3.2 ’J4’
‘J4’ provides an alternate way of interface to connect to target device. This connector provides all necessary pins for programming. The location of ‘J4’ is shown below:



Remarks:
1) The red triangle indicates pin 1 of the component

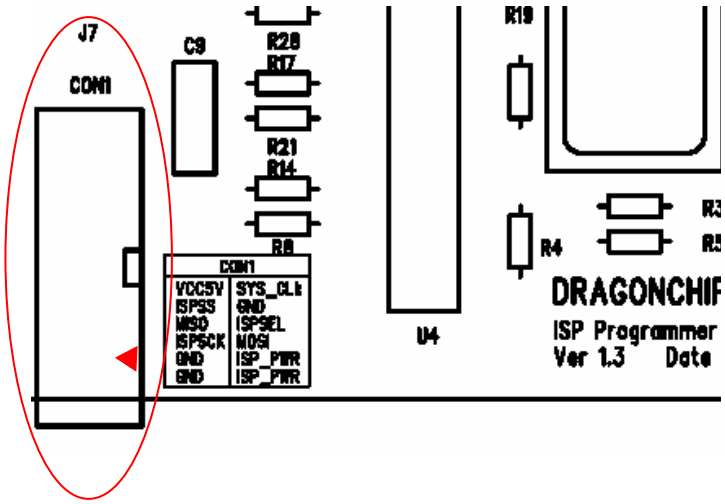
Symbol	Pin number	Pin Description
ISPSEL	6	Signals for ISP by SPI
ISPCLK	5	
ISPSS	4	
MOSI	3	
MISO	2	
VCC_5V	9	5V@800mA power
ISP(PWR)	7	Power[1]
GND	1	GND
SYS_CLK	8	Internal use only

Remarks:
[1] If J3: 2-3 short/J5:1-2 short, then ISP(PWR) = 5V@100mA.
If J3: 2-3 short/J5:2-3 short, then ISP(PWR) = 3V@100mA.

All Dragonchip's devices use pin 1-6 for ISP by SPI unless specified. Pin 7, 9 can be used depending on the application. Pin 8 is not intended for use in any application.

3.3.3 'CON1'

'CON1' provides another way of interface to connect to target device. This connector provides all necessary pins for programming.



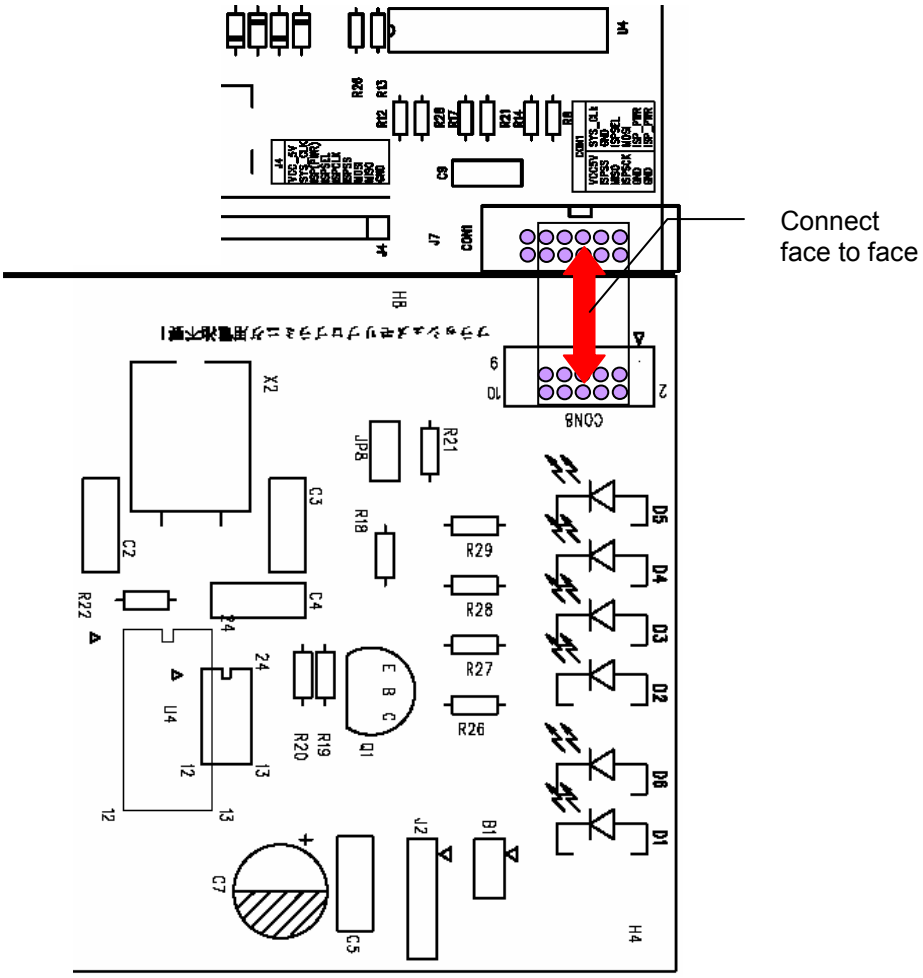
Remarks:
1) The red triangle indicates pin 1 of the component

Symbol	Pin number	Pin Description
ISPSEL	7	Signals for ISP by SPI
ISPCLK	6	
ISPSS	10	
MOSI	5	
MISO	8	
VCC_5V	12	5V@800mA power
ISP(PWR)	1, 3	Power[1]
GND	2, 4	GND
SYS_CLK	11	Internal use only

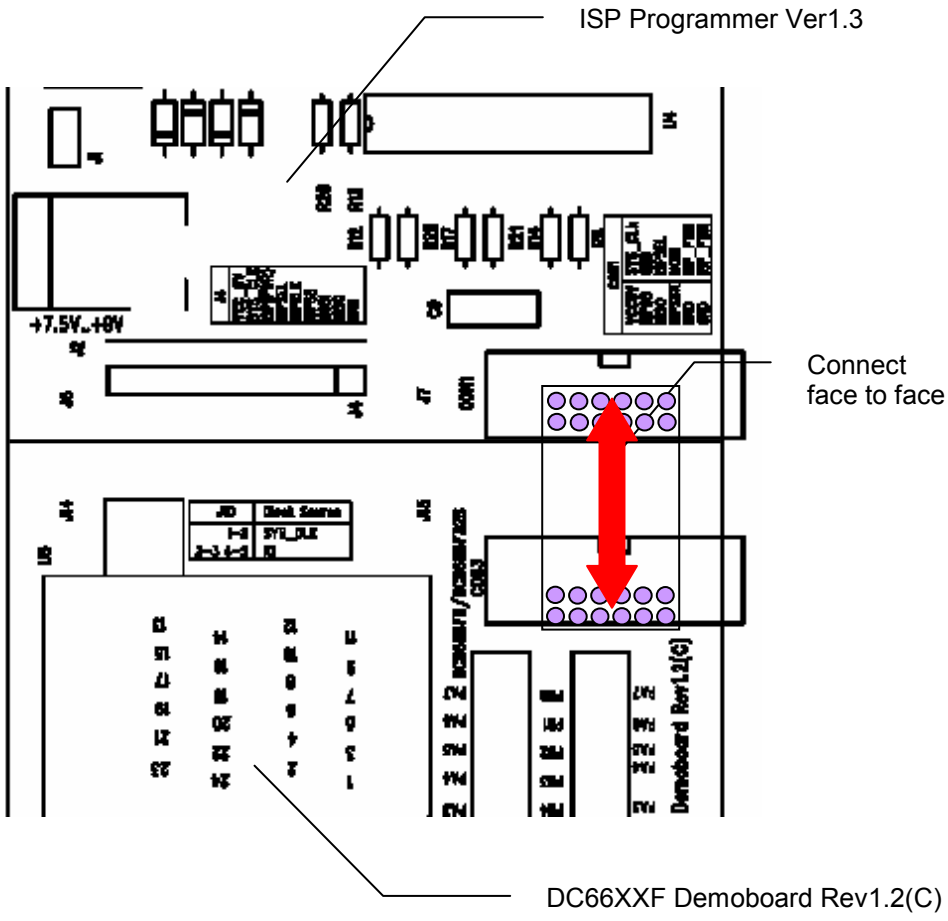
Remarks:
[1] If J3: 2-3 short/J5:1-2 short, then ISP(PWR) = 5V@100mA.
If J3: 2-3 short/J5:2-3 short, then ISP(PWR) = 3V@100mA.

All Dragonchip's devices use pin 2, 4, 5, 6, 7, 8, 10 for ISP by SPI unless specified. Pin 1, 3, 12 can be used depending on the application. Pin 11 is not intended for use in any application.

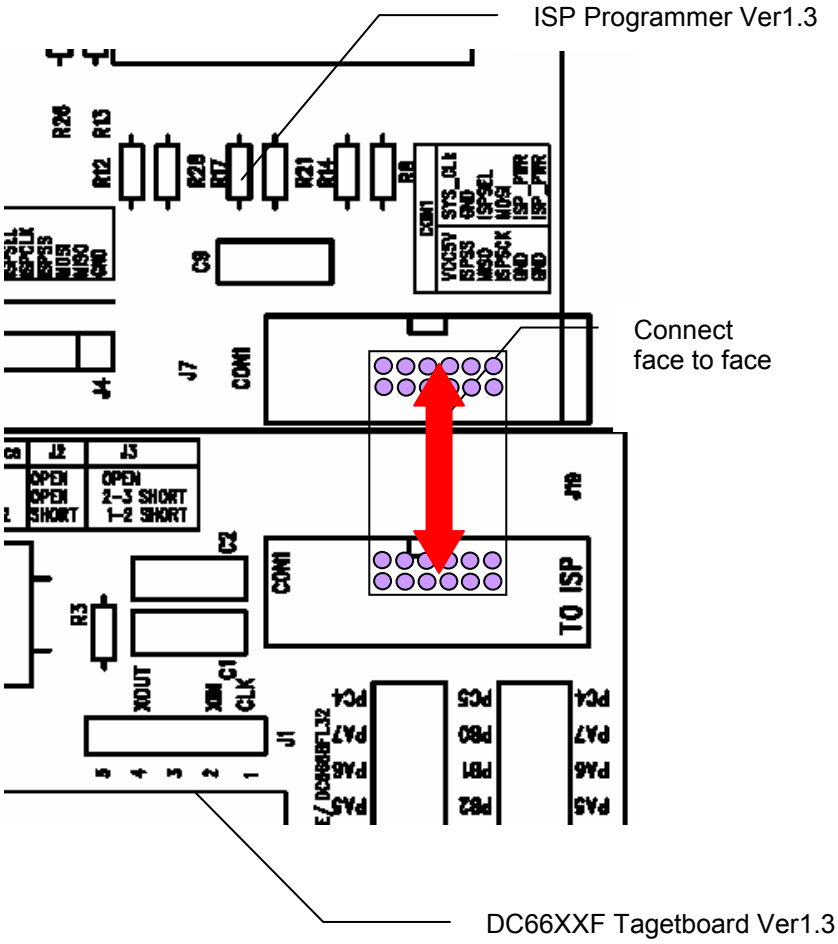
3.3.3.1 ISP Programmer Ver1.3 to Demoboard Rev1.2(B) connection



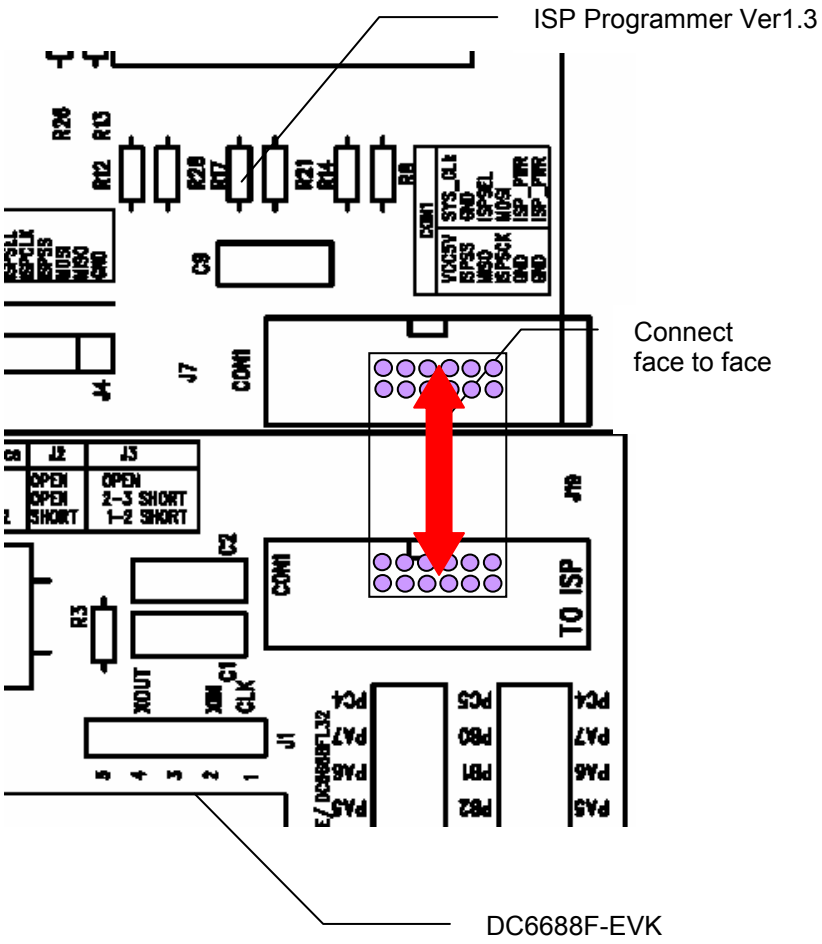
3.3.3.2 ISP Programmer Ver1.3 to Demoboard Rev1.2(C) connection



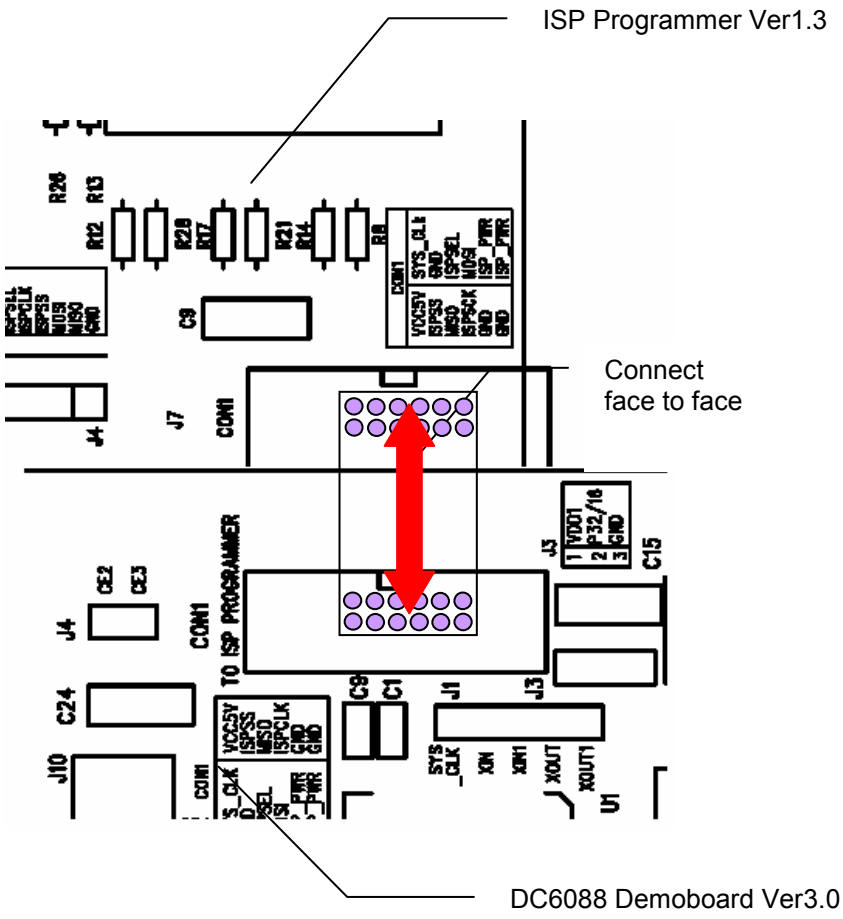
3.3.3.3 ISP Programmer Ver1.3 to Tagetboard Ver1.3



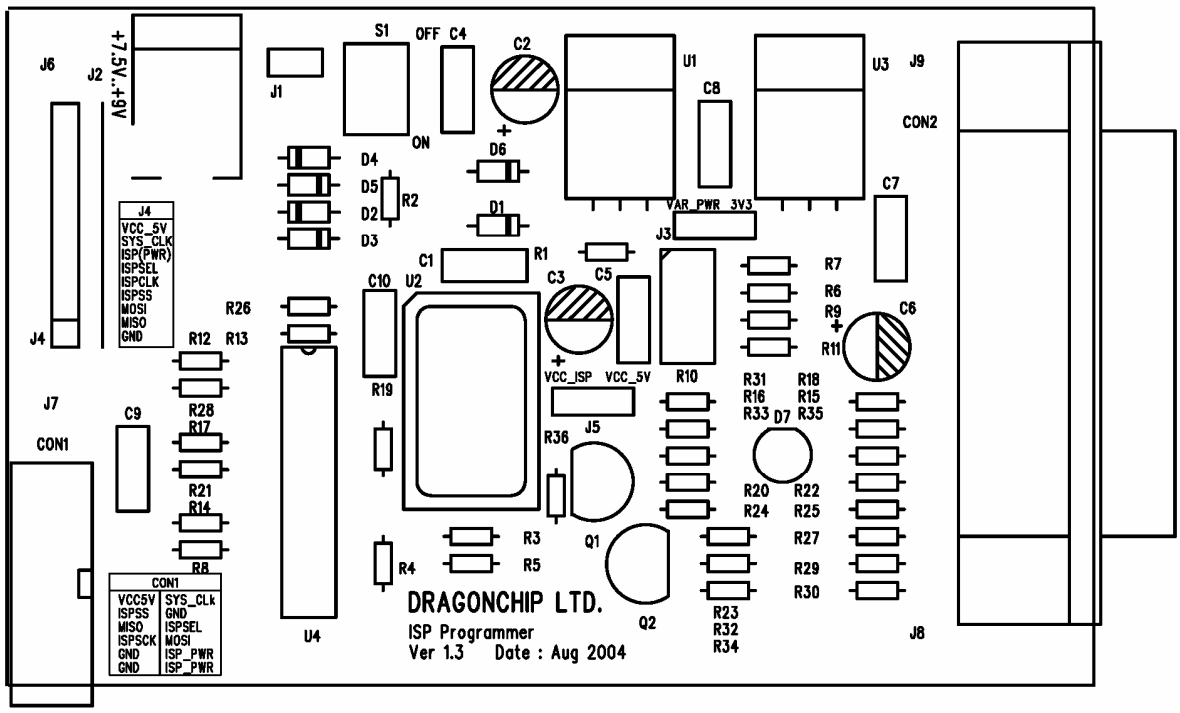
3.3.3.4 ISP Programmer Ver1.3 to DC6688F-EVK



3.3.3.5 ISP Programmer Ver1.3 to DC6088 Demoboard Ver3.0



4 Top view of the component diagram



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