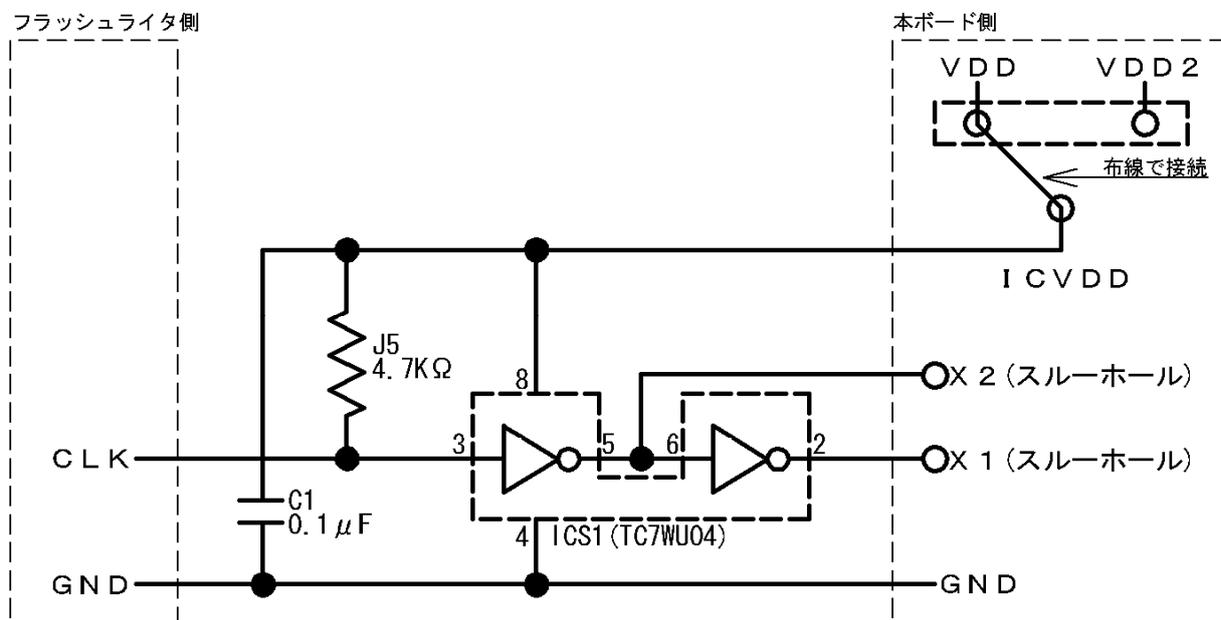


<注意事項>

- 注1. 本ボードには下記の様なクロック回路が実装されています。反転する X1, X2 信号が必要な場合、この X1, X2 端子から配線してください。（74HCU04 同等品：TC7WU04 を使用。）
IC (TC7WU04) の電源 (ICVDD) は、VDD に布線されていますが、必要に応じて変更してください。

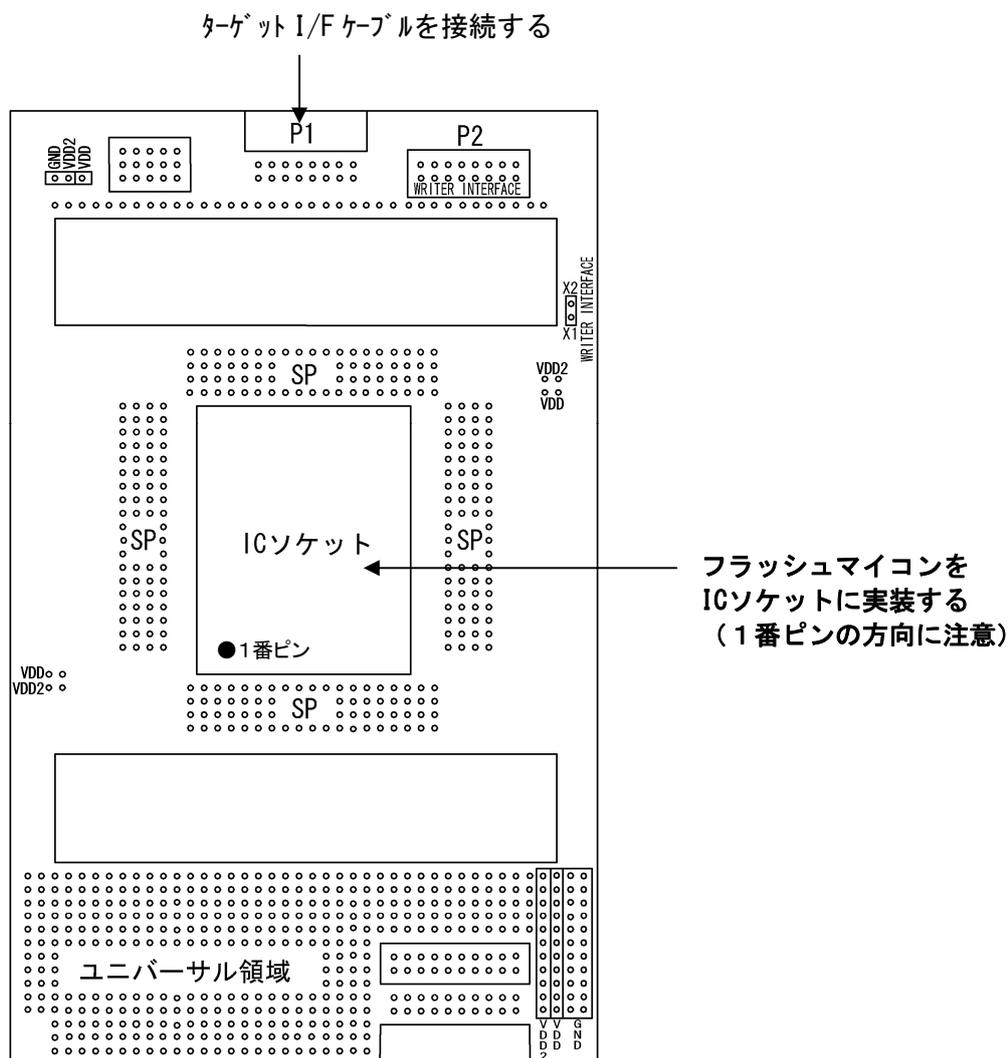
X1, X2 生成用 クロック回路



- 注2. マイコンの仕様として、発振子、コンデンサの実装や 74HCU04 以外のバッファ IC 使用を要求している場合は、ユニバーサル領域に回路を作成してください。
- 注3. I/F 信号のレベル変換が必要な場合はユニバーサル領域に回路を作成してください。
- 注4. 未用端子の処理はマイコンの仕様（ユーザズマニュアル等）に従って処理して下さい。

2. ライタを接続して書き込みを行って下さい。

- ・ P 1 コネクタにフラッシュライタのターゲット I/F ケーブルを接続して下さい。

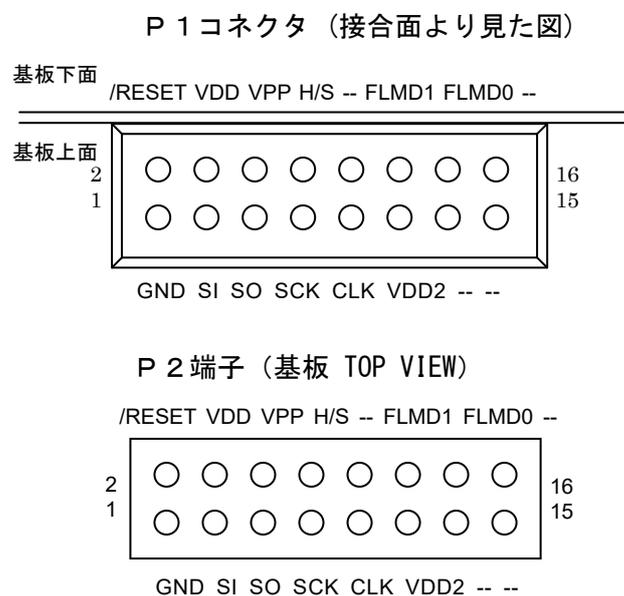


3. コネクタ信号表

・ P 1 コネクタ（ライター接続用）、P 2 端子（配線用）の信号名を以下に示します。

P 1 コネクタ	P 2 端子	信号名
1	1	GND
2	2	/RESET
3	3	SI
4	4	VDD
5	5	SO
6	6	VPP
7	7	SCK
8	8	H/S
9	9	CLK
10	10	*(VDE)
11	11	VDD2
12	12	FLMD1
13	13	*(RFU-1)
14	14	FLMD0
15	15	*(Not used)
16	16	*(Not used)

*はユーザ未使用端子。基本的にオープンにしてください。



本ボードに関する情報はASMI Sホームページ参照してください。
<http://www.ndk-m.co.jp/asmis/>

FA-B series User's manual

FA-B series are the programming adapters for Renesas Electronics Flash memory micro controllers. This line needs to be wired by customer. And support the following Flash programmers.

FL-PR6^{※1}, FL-PR5----- Products of ASMIS

PG-FP6^{※1}, PG-FP5, E1 emulator^{※2}, E20 emulator^{※3} ----- Products of Renesas Electronics

※1----In case of FL-PR6 or PG-FP6,FP5 Target Cable(16pin type) is need.

※2----In case of E1,pin change adapter(QB-F14T16-01:Renesas Electronics's product) is need.

※3----In case of E20, pin change adapter(R0E000200CKA00:Renesas Electronics's product and QB-F14T16-01:Renesas Electronics's product)is need.

Also, the following adapter product is available.

FA-RX series

Specialized adapter for the specific micro controllers (Wired already)

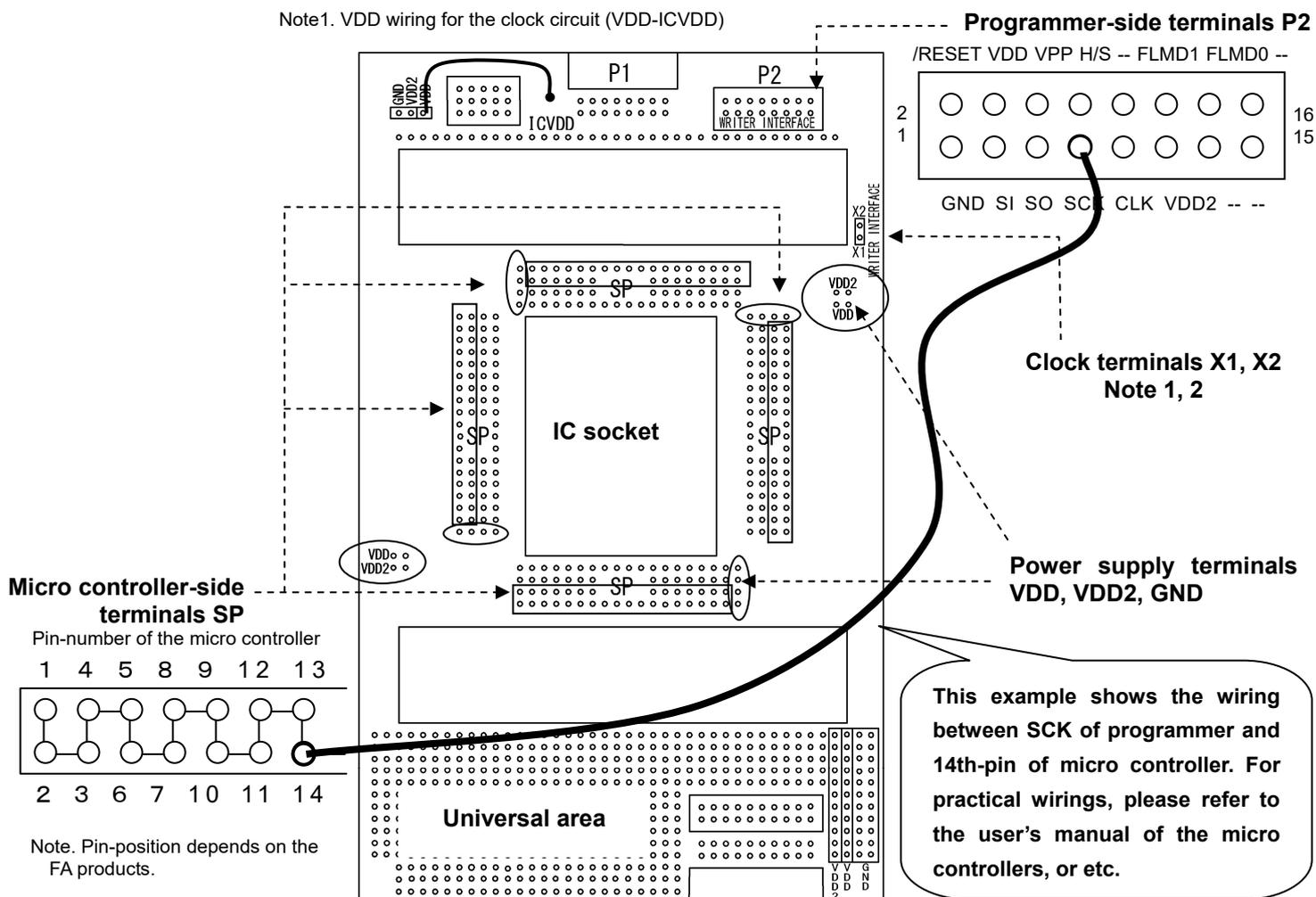
Procedure

1. For programming, please wire the required wiring at first.

Wire the required signals of programmer-side terminals P2 (SI, SO, SCK, X1, X2, /RESET, VPP, H/S, FLMD0, FLMD1), clock terminals (X1, X2), power supply terminals (VDD, VDD2, GND) and micro-controller-side terminals SP (the periphery of the IC socket). Please wire by using PVC wire by means of soldering.

For wiring, please follow the wiring specifications such as the user's manual of the micro controller, etc.

Note1. VDD wiring for the clock circuit (VDD-ICVDD)

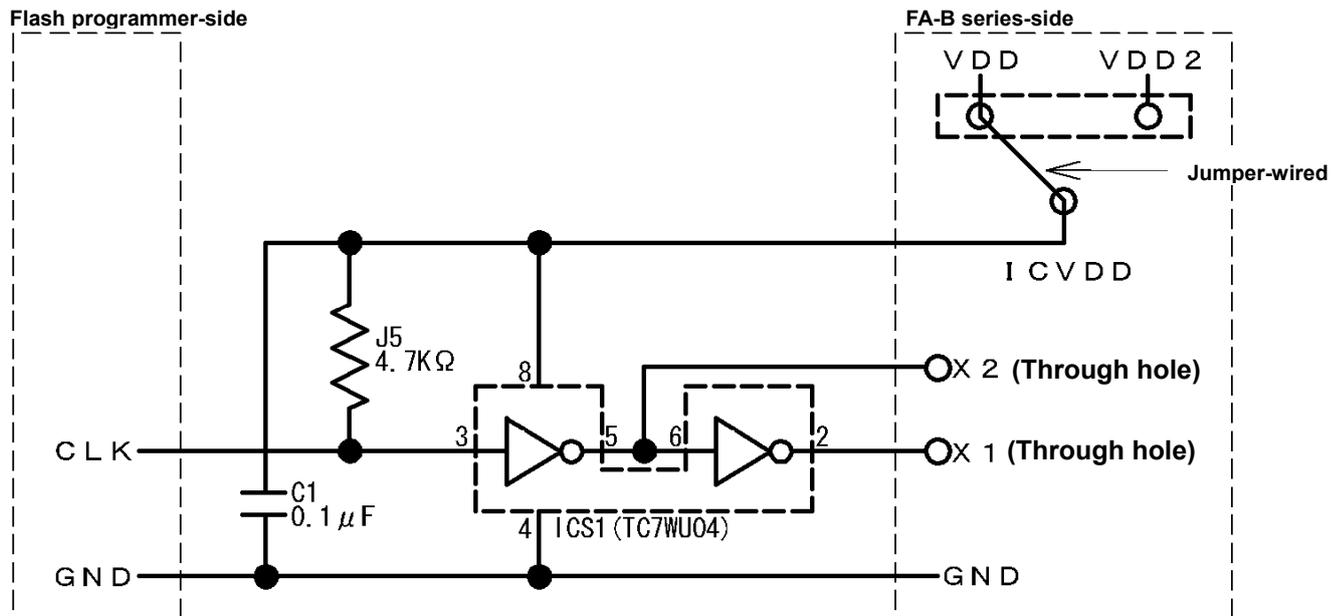


[Notes]

Note 1. For FA-B series board, the following clock circuit is mounted. If the reversed X1, X2 signals are required, these X1, X2 terminals should be wired. (TC7WU04 is put to use, which is equal in quality to 74HCU04.)

Power supply (ICVDD) of IC (TC7WU04) is jumper-wired to VDD. Please change this wiring in case of necessity.

Clock circuit for X1, X2 generation



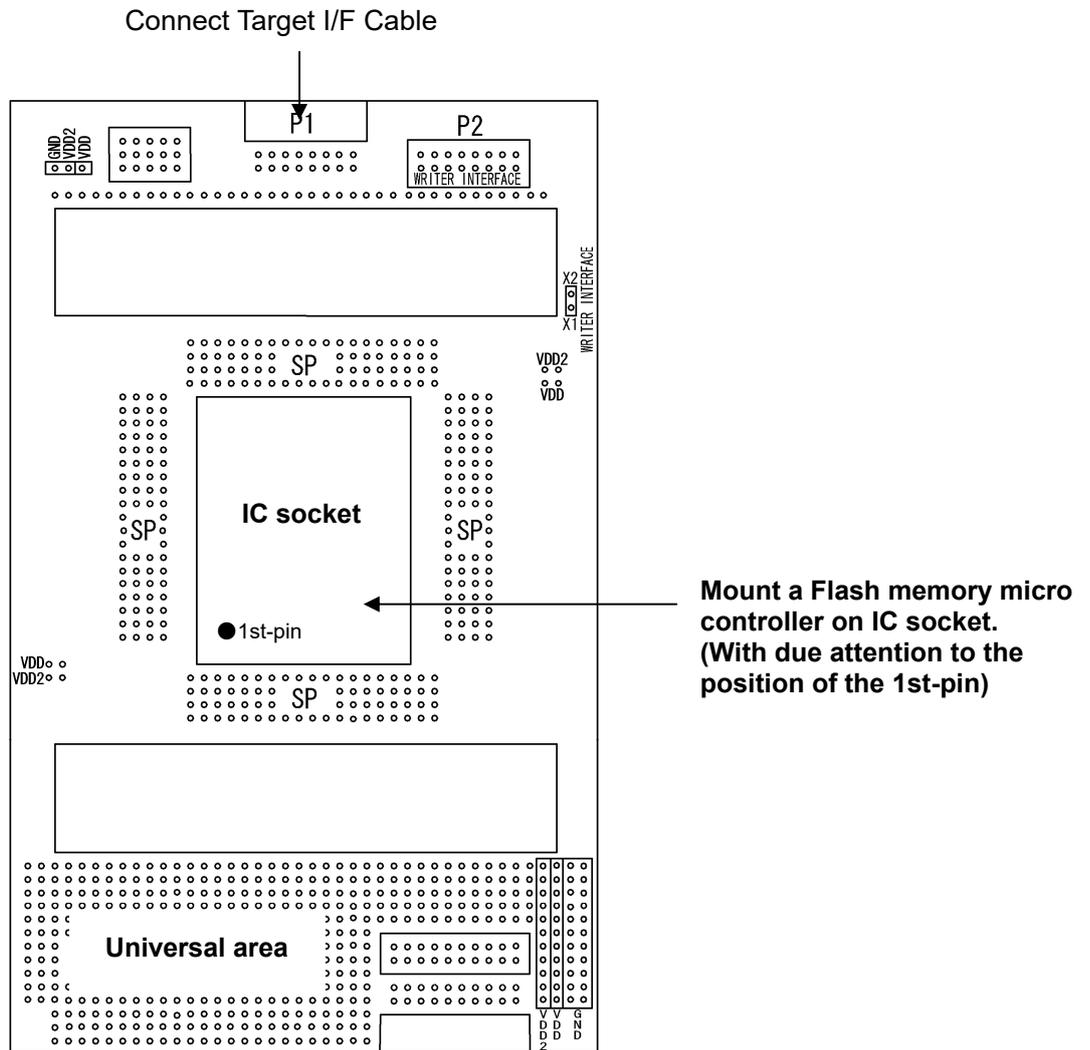
Note 2. If the specification of the micro controller requires the mounting of the oscillator or capacitor and the use of the buffer IC other than 74HCU04, create the required circuit on the universal area.

Note 3. If I/F signal level conversion is required, create the required circuit on the universal area.

Note 4. For termination of the unassigned terminals, please follow the specification of the micro controller (such as the user's manual, etc.).

2. Connect and run the programmer.

- Connect Target I/F Cable of the Flash programmer to P1 connector.



3. Connector Signal Table

The following table shows the signal names of P1 connector (for the programmer connecting) and P2 terminal (for wiring).

P1 connector	P2 terminal	Signal name
1	1	GND
2	2	/RESET
3	3	SI
4	4	VDD
5	5	SO
6	6	VPP
7	7	SCK
8	8	H/S
9	9	CLK
10	10	*(VDE)
11	11	VDD2
12	12	FLMD1
13	13	*(RFU-1)
14	14	FLMD0
15	15	*(Not used)
16	16	*(Not used)

Columns marked with * are defined as the unassigned terminal for user.

They should be basically opened.

For further information about FA-B series adapter board, Please refer to ASMIS Homepage.

<http://www.ndk-m.co.jp/asmis/>

