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User's Manual

QB-78F8024-EA-01T

Exchange adapter

Target Devices
μPD78F8024

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第1章 概 説

QB-78F8024-EA-01Tは、 μ PD78F8024を用いたシステム開発において、QB-78K0KX2を組み合わせるハードウェアおよびソフトウェアを効率的にデバッグするエクスチェンジ・アダプタです。

また、本製品を使用する際はQB-78K0KX2 ユーザーズ・マニュアル (U17341J) も合わせてお読みください。

CHAPTER 1 GENERAL

The QB-78F8024-EA-01T is an exchange adapter that is used in combination with the QB-78K0KX2 to efficiently debug hardware and software in the development of systems using the μ PD78F8024.

When using this product, also read the QB-78K0KX2 User's Manual (document number: U17341E).

1. 1 システム構成

QB-78K0KX2とホスト・マシンとを接続して使用する場合のシステム構成を次に示します。

1.1 System Configuration

This section shows the system configuration when using the QB-78K0KX2 connected to a host machine.

図1 - 1 QB-78F8024-EA-01T製品外形図

Figure 1-1. QB-78F8024-EA-01T PACKAGE DRAWING

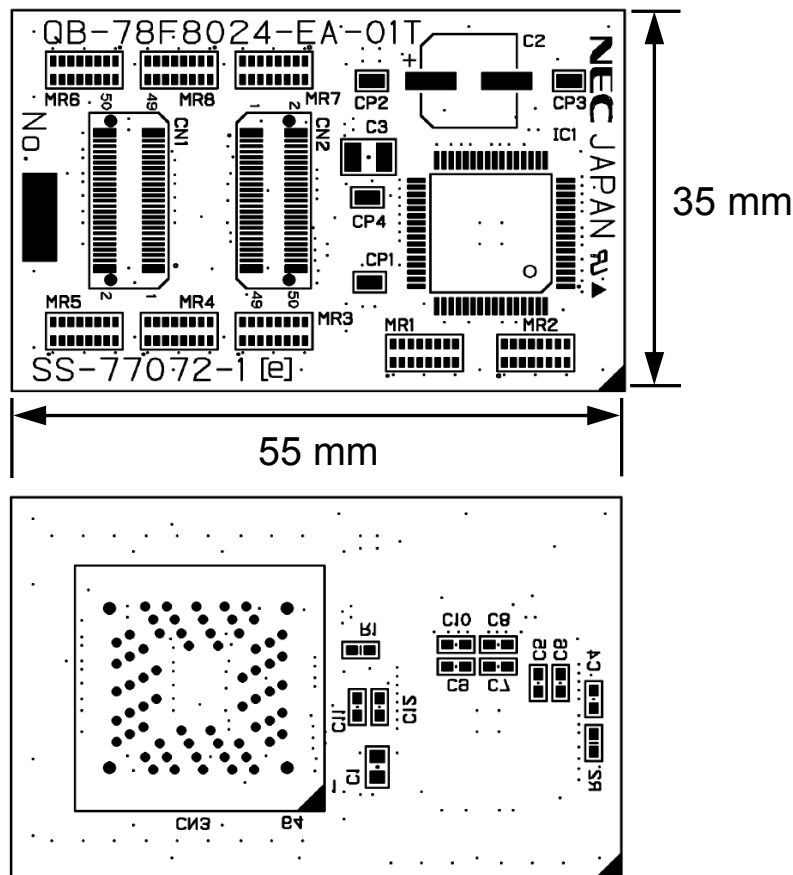


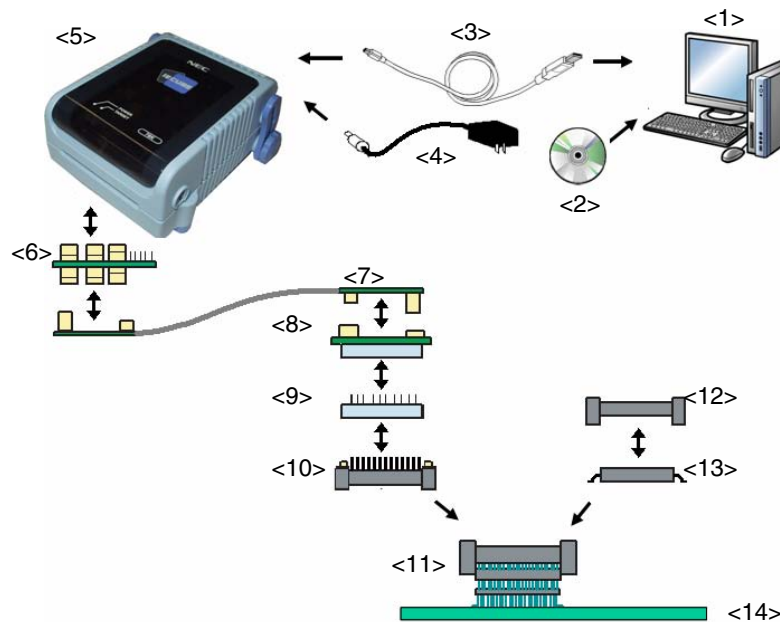
表1 - 1 本製品を使用した場合のエミュレーション対象デバイス一覧

Table 1-1. Target Devices for Emulation Using This Product

Package	Device Name
64pin GK	μ PD78F8024

図1 - 2 システム構成

Figure 1-2. System Configuration



- <1> Host machine: Windows PC (Windows2000 and WindowsXP), IBM PC/AT compatible can be used
- <2> ID78K0-QB Disk/Accessory Disk: Debugger, USB drivers, manual, etc.
Obtain latest software from the NEC Electronics website.
- <3> USB interface cable: Cable connecting QB-78K0KX2 to host machine
- <4> AC adapter: Can support 100 to 240 V by replacing AC plug
IECUBE for 78K0/Kx2
- <5> QB-78K0KX2:
- <6> Check pin adapter (optional) : Adapter used for monitoring waveforms with oscilloscope
- <7> Emulation probe: Probe connecting exchange adapter to QB-78K0KX2
- <8> Exchange adapter: This product
- <9> Space adapter (optional) : Adapter used for height adjustment
- <10> YQ connector: Connector that connects exchange adapter to target connector
- <11> Target connector: Connector soldered to target system
- <12> Mount adapter (optional) : Adapter used for mounting target device into socket
- <13> Device: Target device
- <14> Target system

Remark Obtain device files from the NEC Electronics website.

<http://www.necel.com/micro/ods/jpn/index.html> (Japanese site)

<http://www.necel.com/micro/ods/eng/index.html> (Global site)

1.2 エミュレーション構成

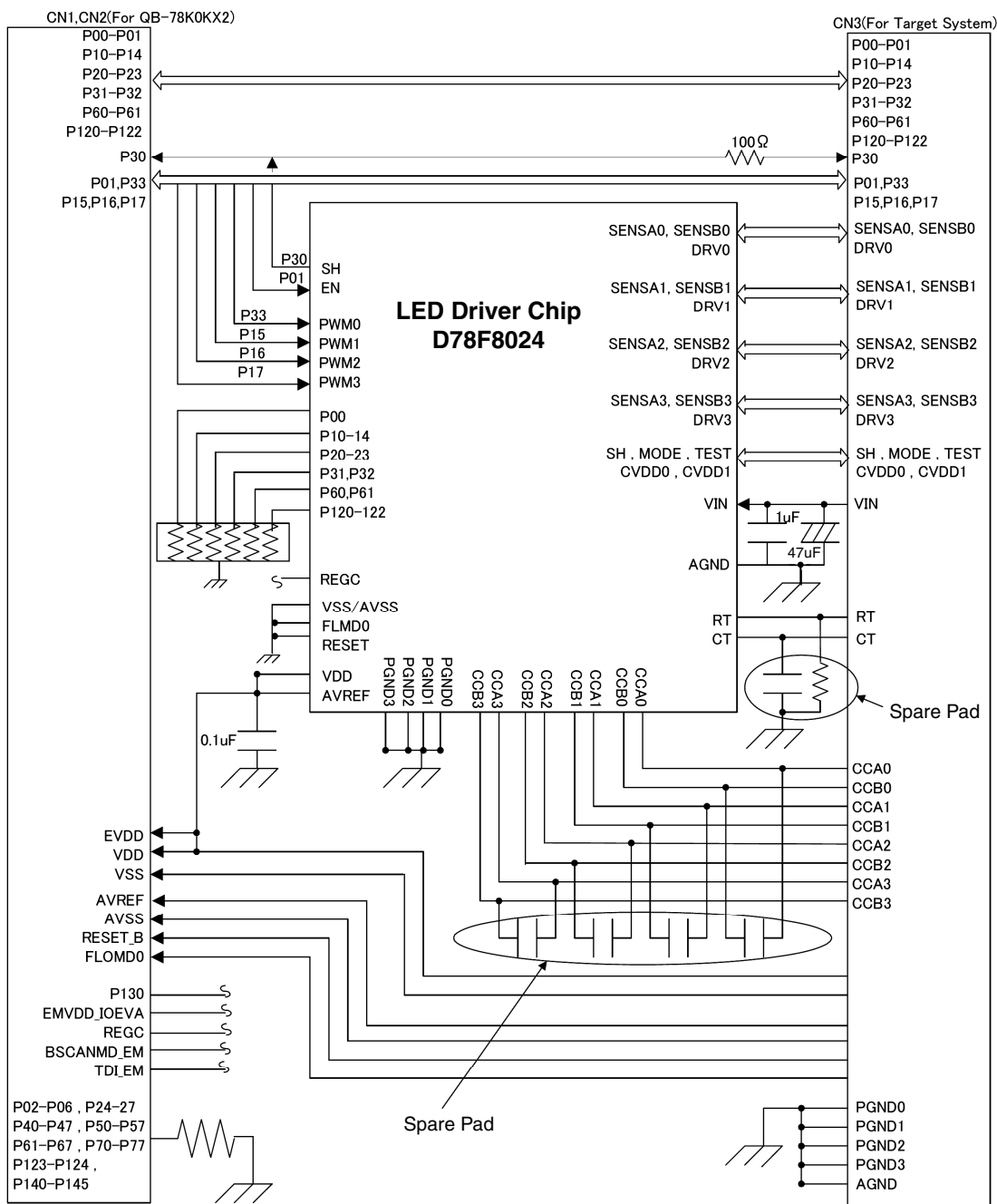
μ PD78F8024のエミュレーションは、既存製品であるQB-78K0KX2と μ PD78F8024（エミュレーションCPU）を搭載したエクステンジ・アダプタを組み合わせた構成となります。その構成図を次に示します。

1.2 Emulation Configuration

The emulation of the μ PD78F8024 is configured by the existing product QB-78K0KX2 and an exchange adapter mounted with the μ PD78F8024 (emulation CPU). The figure below shows the configuration.

圖1 - 3 QB-78F8024-EA-01T構成圖

Figure 1-3. QB-78F8024-EA-01T Configuration Diagram



第2章 セットアップの手順

クロックの設定

内部クロックを使用する場合、ハードウェア設定は不要です。

発振器の実装が必要な場合、QB-78K0KX2 ユーザーズ・マニュアル 2.2 アクリル板の取り外しおよびQB-78K0KX2 ユーザーズ・マニュアル 2.3 クロックの設定を参照してください。(本製品にサブクロックはありません。QB-78K0KX2 ユーザーズ・マニュアル 2.3.4 サブシステム・クロックは設定しないでください。)



ソフトウェアのセットアップ

QB-78K0KX2 ユーザーズ・マニュアル 2.4 ソフトウェアのセットアップを参照してください。



コネクタ類の実装，接続

QB-78K0KX2 ユーザーズ・マニュアル 2.5 コネクタ類の実装，接続および本書2.1 ターゲット・システムとQB-78K0KX2の接続を参照してください。



ターゲット・システムとQB-78K0KX2の接続

QB-78K0KX2 ユーザーズ・マニュアル 2.6 ターゲット・システムとQB-78K0KX2の接続および本書2.1 ターゲット・システムとQB-78K0KX2の接続を参照してください。



USBインタフェース・ケーブル，ACアダプタの接続

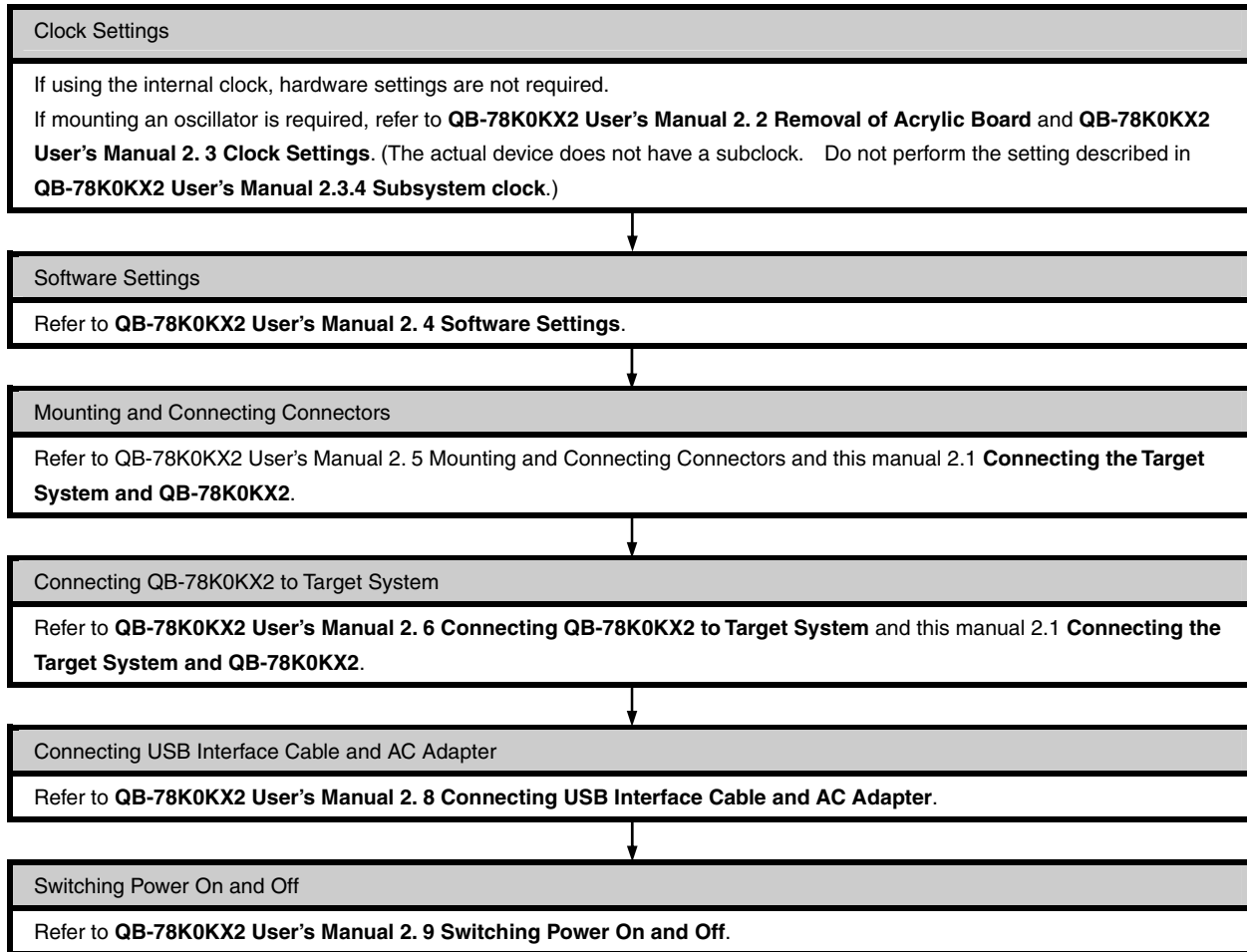
QB-78K0KX2 ユーザーズ・マニュアル 2.8 USBインタフェース・ケーブル，ACアダプタの接続を参照してください。



電源投入と切断

QB-78K0KX2 ユーザーズ・マニュアル 2.9 電源投入と切断を参照してください。

CHAPTER 2 SETUP PROCEDURE



2.1 ターゲット・システムとQB-78K0KX2の接続

次に示す手順 ~ でターゲット・システムとQB-78K0KX2の接続を行ってください。詳細は、QB-78K0KX2 ユーザーズ・マニュアル (U17341J) を参照してください。

なお、QB-78K0KX2 ユーザーズ・マニュアルに記載されているエクスチェンジ・アダプタは、本製品 (QB-78F8024) と読み替えてください。

ターゲット・コネクタ (QB-64GK-NQ-01T) をターゲット・システムに実装する。

YQコネクタ (QB-64GK-YQ-01T) を、付属品のYQGUIDEを使用してターゲット・コネクタ (QB-64GK-NQ-01T) と接続する。

エクスチェンジ・アダプタ (QB-78F8024-EA-01T) とYQコネクタ (QB-64GK-YQ-01T) を接続する。

QB-78K0KX2のTCN1とTCN2にエミュレーション・プローブを接続する。

エクスチェンジ・アダプタ (QB-78F8024-EA-01T) のCN1とCN2にエミュレーション・プローブを接続する。

注意 エクスチェンジ・アダプタ (QB-78F8024-EA-01T) のピン穴に、YQコネクタ (QB-64GK-YQ-01T) に接続したYQGUIDEを合わせ、1ピン位置 (切り欠きが一致) が合うように接続してください。

エクスチェンジ・アダプタとターゲット・コネクタを抜き差しする場合は、エクスチェンジ・アダプタに実装されている部品に触れないように注意してください。破損や接触不良の原因となります。

2.1 Connecting the Target System and QB-78K0KX2

Connect the target system and QB-78K0KX2 according to the following procedures <1> to <5>. For details, see the QB-78K0KX2 User's Manual (U17341E).

Translate the exchange adapter described in the QB-78K0KX2 User's Manual into this product (QB-78F8024).

<1> Mount the target connector (QB-64GK-NQ-01T) onto the target system.

<2> Connect the YQ connector (QB-64GK-YQ-01T) to the target connector (QB-64GK-NQ-01T) by using the included YQGUIDE.

<3> Connect the exchange adapter (QB-78F8024-EA-01T) and the YQ connector (QB-64GK-YQ-01T).

<4> Connect the emulation probe to TCN1 and TCN2 of the QB-78K0KX2.

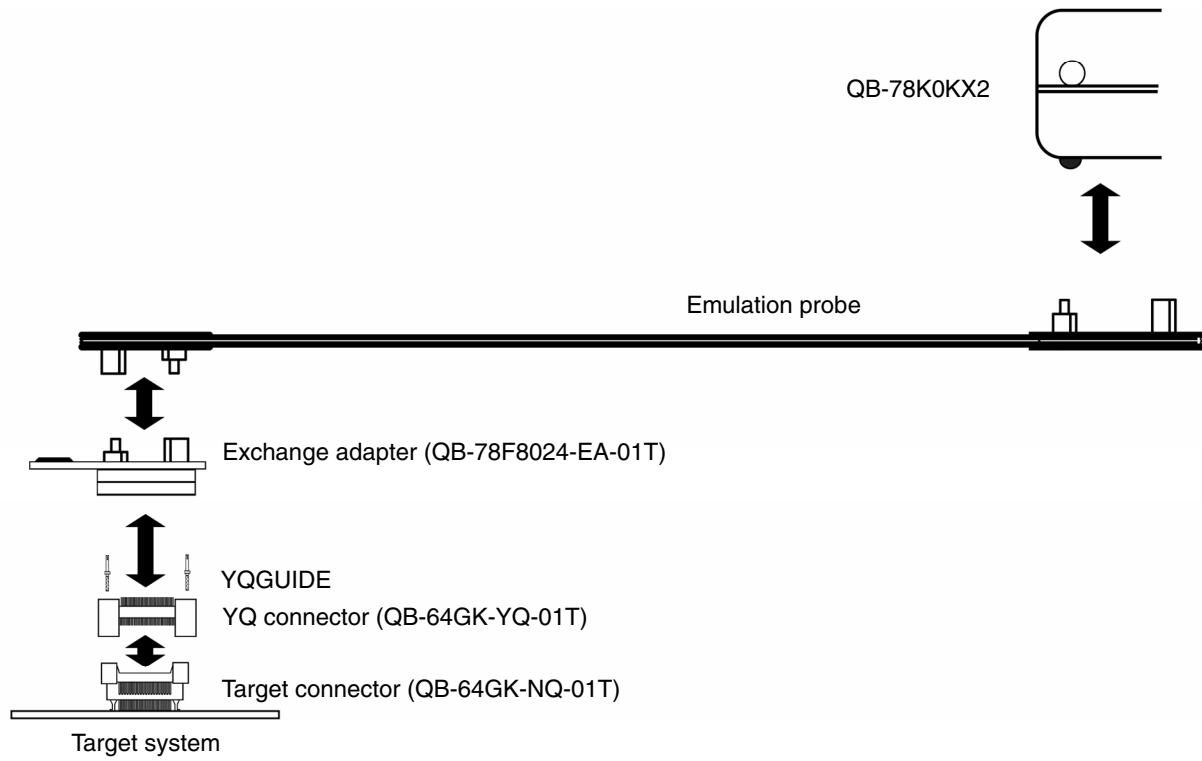
<5> Connect the emulation probe to CN1 and CN2 of the exchange adapter (QB-78F8024-EA-01T).

Caution Fit the YQGUIDE that is connected to the YQ connector (QB-64GK-YQ-01T) into the pin hole of the exchange adapter (QB-78F8024-EA-01T), and connect them so that the pin 1 positions (notches) match.

When plugging/unplugging the exchange adapter into/from the target connector, be careful not to touch any components mounted on the exchange adapter. It may cause damage and contact failure.

図2 - 1 ターゲット・システムからQB-78K0KX2までの接続

Figure 2-1. Connecting the Target System and QB-78K0KX2



第3章 注意事項

注意事項を次に示します。

なお、この章はQB-78K0KX2ユーザーズ・マニュアル (U17341J) に記載している内容を含みません。QB-78K0KX2ユーザーズ・マニュアルもあわせてお読みください。

QB-78K0KX2は管理記号F以降のものを使用してください。

それ以前のものを使用した場合、正しいエミュレーションはできません。

ターゲット・システムからVIN, CVDD0, CVDD1, VDDに電圧が印加されていない状態でエミュレーションを行うと、QB-78K0KX2およびQB-78F8024-EA-01Tが破壊される恐れがあります。必ずターゲット・システムから電圧を印加している状態でデバッグしてください。

CHAPTER 3 CAUTIONS

The following are cautions.

This chapter does not include the content described in the QB-78K0KX2 User's Manual (U17341E). Read also the QB-78K0KX2 User's Manual.

- Use the QB-78K0KX2 with control code F or later.

Correct emulation cannot be executed if an earlier version is used.

- The QB-78K0KX2 and QB-78F8024-EA-01T may be damaged if emulation is executed without voltage being applied to VIN, CVDD0, CVDD1, and VDD from the target system. Be sure to apply voltage from the target system when executing a debug operation.

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