

Emulator to Target Adapters and Accessories

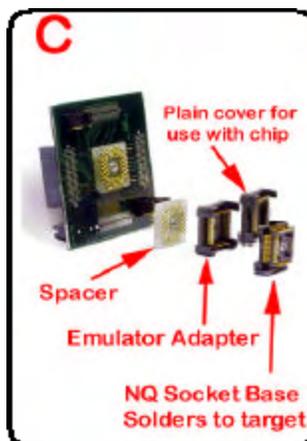
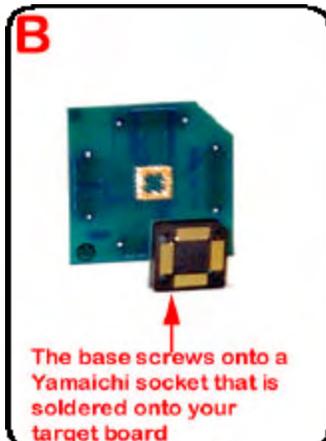
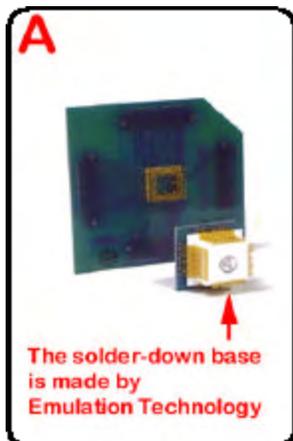
Adapter Summary - Use this chart to select the correct adapter

The capital letters in the chart below correspond to the pictures below the chart. The photos below may not be exactly as illustrated.

Note: Flex cables are available. Please see the "Extender Flex Cable Assemblies" section in this price list. You can use the flex cables with all the adapters.

If you purchase an emulator and you have (or purchase) a Phytex board, the adapters for the kitCON 16x are free.

MCU	C161	C163/C165	C164	C167
Adapters for kitCON 16X	EMUL166-PC/ADP-EVAL-161 O/V/K See photo D.	A solder-down adapter has to be used.	EMUL166-PC/EVAL-164CI See photo D.	EMUL166-PC/ADP-EVAL-167CR See photo D.
Solder-Down Adapter	ET/AS-C161-QF14S-NOH 80 Pin Package. See photo A. Square ES/180-5690-50 100 Pin Package. See photo C. ES/180-5680-10 100 Pin Package. See photo C. Square ES/180-5785-10 128 Pin Package. See photo C. Square	ET/R163/C165-QF49S-NOH 100 Pin Package. See photo A. ET/C165-QF06S-NOH 100 Pin Package. Photo A.	ES/180-5550-20 80 Pin Package. See photo C.	ET/AS-C167-QF10S-NOH 144 Pin Package. See photo A.
Yamaichi Adapter	ET/AS-C161-QF14YAM-NOH 80 Pin Package. See photo B. Square	ET/R163/C165-QF49YAM-NOH 100 Pin Package. See photo B.	ES-180-5550-30 80 Pin Package. See photo B.	ET/AS-C167-QF10YAM-NOH 144 Pin Package. See photo B.
Replacement Socket	ET/EPP-080-QF14A-SM 80 Pin Package. See photo A. ES/180-000-2233 100 Pin Package. Photo C. Rectangle ES/180-000-2225 100 Pin base. See photo C ES/180-000-2226 100 Pin IC cover. See photo C. ES/180-000-2227 100 Pin adapter cover. See photo C. ES/180-000-3706 Spacer. See photo C.	ET/EPP-100-QF49-SM 100 Pin Package. See photo A. ET/EPP-100-QF06-SM 100 Pin Package. See photo A.	ES-000-2177-00 80 Pin Package. See photo C.	ET/EPP-144-QF10-SM 144 Pin Package. See photo A.



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For detailed adapter information, please refer to page 4 of this price list.

The Yamaichi solder down adapter is available from Adapters.com, 3424 Scott Blvd. Santa Clara, CA 94025 Phone: (408) 855-8527
Web:www.adapters.com.

Tokyo Eletech NQ Adapter Section

The Tokyo Eletech NQ adapter is made up of three parts. The bottom part solders to the target board in place of the target CPU. The next part connects the emulator to this solder down adapter. The third part allows a real C16x chip to be used in the target instead of the emulator for final testing. There is also an optional sacrificial spacer that is used to protect the solder-down adapter male pins and to provide about 1/8" (3.75mm) of clearance. Replacement solder down parts can be purchased separately. Tokyo Eletech makes a TQ adapter without the third part that is not used in the C166 family at this time.

C161

C161 O/V/K Phytec kitCON Adapter This adapter fits between the pod bottom connectors and the target. It is used by C161 O/V/K target boards and Phytec kitCON C161 board. See picture D on page 13.

C161 eval board adapter This adapter connects the Nohau emulator to a user defined C161 target board. The specs are available from Nohau technical support in the USA.

80-pin adapter for the C161 (square) An 80-pin MQFP adapter for the square C161. The bottom portion solders to the user board. An additional solder-down base is available: part number ET/EPP-080-QF14A-SM. See picture A on page 13.

Replacement solder-down adapter A replacement 80-pin MQFP solder-down adapter for the ET/AS-C161-QF14S-NOH, listed above.

80-pin adapter for the C161 V/K/O An 80-pin MQFP adapter for the square C161 V/K/O. The bottom portion of this adapter screws down to the top of the Yamaichi 80-pin socket (solder-down adapter IC149-080-017-B5 is not included, it can be purchased through Adapters.com). The top board connects to the bottom of the pod. See picture B on page 13.

100-pin adapter for the C161 RI (rectangular) A 100-pin MQFP adapter for the rectangular C161 RI package. It is a Tokyo Eletech NQ adapter. Refer to the Tokyo Eletech NQ Adapter section above for a description. See the picture C on page 13.

Replacement solder-down adapter A replacement 100-pin MQFP solder-down adapter for the ES-180-5690-50. See picture C on page 13.

128-pin adapter for the 161 Cx (square) A 128-pin TQFP adapter for the square C161 Cx package. It is a Tokyo Eletech NQ adapter. Refer to the Tokyo Eletech NQ Adapter section above for a description. See the picture C on page 13.

EMUL166-PC/ADP-EVAL-161 O/V/K
EMUL166-PC/ADP-EVAL-161 CI
ET / AS-C161-QF14S-NOH

ET / EPP-080-QF14A-SM



ET / AS-C161-QF14YAM-NOH

ES/180-5690-50

ES/180-000-2233

ES/180-5785-10

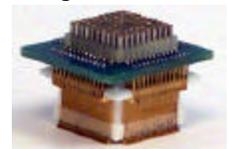
Emulator to Target Adapters and Accessories (Continued)

C161 (continued)

100-pin adapter for the C161 RI (square)	A 100-pin TQFP adapter for the square C161 RI package. It is a Tokyo Eletech NQ adapter. Refer to the Tokyo Eletech NQ Adapter section above for a description. See the picture C on page 13.	ES-180-5680-10
Replacement solder-down adapter base	A replacement 100-pin NQ TQFP solder-down adapter base for the ES-180-5680-10. See picture C on page 13.	ES/180-000-2225
Replacement IC cover	A replacement 100-pin TQFP plain IC cover for the ES-180-5680-10. See picture C on page 13.	ES/180-000-2226
Replacement adapter cover	A replacement 100-pin TQFP emulator adapter cover for the ES-180-5680-10. See picture C on page 13.	ES/180-000-2227
Replacement spacer	A replacement 100-pin TQFP spacer for the ES-180-5680-10. See picture C on page 13.	ES/180-000-3706

C163 and C165

100-pin adapter for the C163 and C165	A 100-pin TQFP adapter for the square C163 and C165. The bottom portion solders to the user board. Additional solder-down base is available, part number ET/EPP-100-QF49-SM. See picture A on page 13.	ET / R163/C165-QF49S-NOH
Replacement solder-down adapter	A replacement 100-pin TQFP solder-down adapter for the ET/R163/C165-QF49S-NOH, listed above.	ET / EPP-100-QF49-SM
100-pin adapter for the C163 and C165 YAM (square)	A 100-pin TQFP adapter for the square C163 and C165. The bottom portion of this adapter screws down to the top of the Yamaichi 100-pin socket (solder-down adapter IC149-100-014-S5 is not included; it can be purchased through Adapters.com). The top board connects to the bottom of the pod. See picture B on page 13.	ET / R163 / C165-QF49YAM-NOH
100-pin adapter for the C165 (rectangular)	A 100-pin MQFP adapter for the rectangular C165. The bottom portion solders to the user board. An additional solder-down base is available, part number ET/EPP-100-QF06-SM. See picture A on page 13.	ET / C165-QF065-NOH
Replacement solder-down adapter	A replacement 100-pin MQFP solder-down adapter for the ET/C165-QF065-NOH, listed above.	ET / EPP-100-QF06-SM



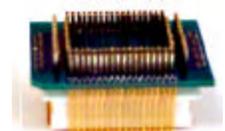
Emulator to Target Adapters and Accessories (Continued)

C164

<p>C164 CI Phytec kitCON Adapter</p>	<p>This adapter fits between the pod bottom connectors and the target. It is used by the C164 CI and Phytec kitCON C164CI board. See picture D on page 13.</p>	<p>EMUL166- PC/ADP-EVAL- 164CI</p>
<p>80-pin adapter for the C164 CI. Solder-down base</p>	<p>An 80-pin TQFP adapter for the square C164 CI package. It is a Tokyo Eletech NQ adapter. Refer to the Tokyo Eletech NQ Adapter section on page 13 for a description. See picture C on page 13.</p>	<p>ES-180-5550-20</p>
<p>Replacement solder-down socket</p>	<p>A replacement 80-pin TQFP solder-down adapter for the ES-180-5550-20. See picture C on page 13.</p>	<p>ES-000-2177-00</p>
<p>80-pin adapter for the C164 CI Yamaichi (square)</p>	<p>An 80-pin MQFP adapter for the square C164 CI. The bottom adapter screws down to the top of the Yamaichi 80-pin socket (IC149 series). The top board connects to the bottom of the pod. See picture B on page 13.</p>	<p>ES-180-5550-30</p>

C167

<p>C167 CR Phytec kitCON adapter</p>	<p>A 144-pin adapter with 4*40-pin connectors (female) on both sides. It fits between the pod bottom connectors and the target. It is used by C167/C167 CR target boards and Phytec kitCON C167 CR board. See picture D on page 13.</p>	<p>EMUL166- PC/ADP-EVAL- 167CR</p>
<p>144-pin adapter for the C167 /CR/SR (square)</p>	<p>A 144-pin MQFP adapter for the square C167 /CR/SR. The bottom adapter solders to the user board. Additional solder-down base is available, part number ET/EPP-144-QF10-SM. See picture A on page 13.</p>	<p>ET / AS-C167- QF10S-NOH</p>
<p>Replacement solder-down adapter</p>	<p>A replacement 144-pin MQFP solder-down adapter for the ET/AS-C167-QF10S-NOH, listed above.</p>	<p>ET / EPP-144- QF10-SM</p>
<p>144-pin Yamaichi adapter for the C167 (square)</p>	<p>A 144-pin MQFP adapter for the square C167. The bottom portion of this adapter screws down to the top of the Yamaichi 144-pin socket (solder-down adapter IC149-144-K11453-05 is not included; it can be purchased through Adapters.com). The top board connects to the bottom of the pod. See picture B on page 13.</p>	<p>ET / AS-C167- QF10S-YAM- NOH</p>
<p>Clipover adapter</p>	<p>A clipover Delta Probe for the Infineon C167 and STMicroelectronics ST10 144-pin microcontrollers such as C167 CR and ST10-F168.</p>	<p>EMUL166- PC/ADP-144PIN- DELTA</p>



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Isolator/Extender and Conversion Cards

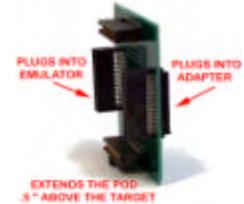
Isolator and extender for all C16x pods An isolator/extender for all C16x pods. Adds about 2" (50.8mm) of clearance between the pod and the target and has jumpers allowing individual isolation of each pin to the target. Comes with comprehensive pinout specifications which are also available on our website.

ISO166/ST10-EXT



Extender board This board fits between the pod and the adapter to give additional clearance between the pod and the target. It raises the pod an additional 0.50" (12.7mm) above the target. It does not support the 10-pin XBUS connector (JP46) used by some Xperipheral daughtercards.

EMUL166-PC/Extender-144



80-pin conversion adapter An emulator conversion adapter, 80-pin, .65mm pitch. This adapter plugs into/covers a Yamaichi 80-pin socket part # IC149-080-117/017-B5/S5 to Adapters.com's 80-pin .65mm pitch TQ and NQ male pin patterns (000-4532 = TQ/000-2177-00 = NQ).

ES-110-7400-15



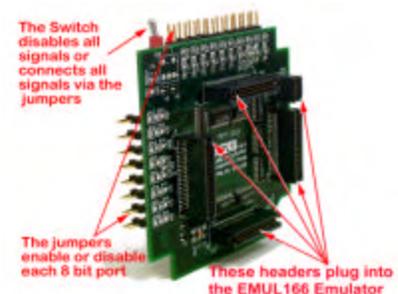
Socket adapter A PQFP socket adapter, base solders down into 144-pin QFP AMP production socket footprint.

EMUL166-PC/ADP-PGA144

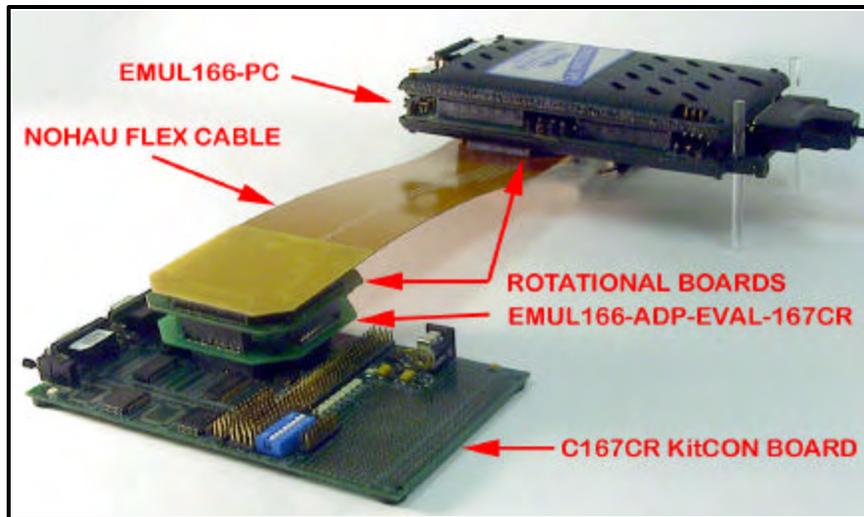


3V Adapter / Isolator This mezzanine board inserts between the emulator and the target adapter to provide 3-volt target operation. Currently this supports the C161 and C165 3-volt parts, but will support all future C166 and ST10 3-volt versions. There are jumpers to allow any parallel port in its entirety to be disconnected from the target.

EMUL166-PC/ADP-3V



Extender Flex Cable Assemblies



Nohau 10-inch flex cable

A 10-inch flex cable used to extend an adapter away from the emulator board. This flex cable is made by Nohau and is a 50 ohm transmission line that works at speeds in excess of 100 MHz. Requires a rotational board pair (EMUL/ADP/FLEX-ST10/166-RB) for connection at each end. The combined assembly is inserted between the emulator and the target adapter. By rotating these boards, the cable can approach the target from any of four quadrants providing access no matter what the hardware configuration.

EMUL / ADP / FLEX-UNIV

Rotational boards

Set of two rotational boards to use with the flex cable to extend the adapter away from the emulator. One of the boards fits between the pod and flex cable, and the other board fits between the flex cable and the target adapter. Rotational boards for other microcontroller families are available through Nohau. Mechanical specifications are available for the custom rotational boards.

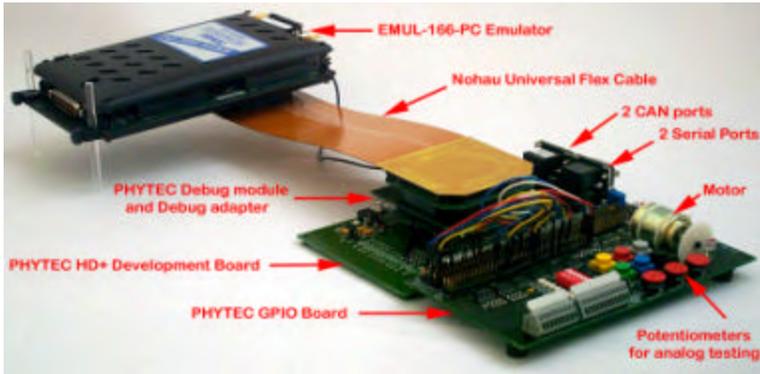
EMUL / ADP / FLEX-ST10/166-RB

Adapters.com 80-pin flex cable

This cable is made by Adapters.com for connection to the Tokyo Eletech NQ solder-down sockets. This is an 80-pin, .65mm pitch high-speed emulator flex cable. Interfaces to Adapters.com's 80-pin TQ Series part # 000-4532 and NQ Series part # 000-2177-00.

ES-110-8135-40

Evaluation Boards From PHYTEC



Evaluation boards from PHYTEC can be purchased through Nohau, your Nohau representative or directly from PHYTEC: www.phytec.com or 1-800-278-9913.

These are the same starter kits as sold by Infineon.

If you purchase an emulator and you have (or purchase) a PHYTEC kitCON board, the adapters for kitCON 16x are free.

Evaluation board for the C161	kitCON161 evaluation board. Used with the ADP/EVAL-161 O/V/K adapter. (Includes this 161 adapter with an emulator and trace board purchase.)	Infineon / SABC1610START
Evaluation board for the C163/C165	kitCON163 evaluation board. Same board used for C165 CPU. You need to use a solder-down adapter.	Infineon / SABC163FSTART
Evaluation board for the C164	kitCON164 evaluation board. Used with the ADP/EVAL-164 CI adapter. (Includes this 164 adapter with an emulator and trace board purchase.)	Infineon / SABC164CISTART
Evaluation board for the C167	kitCON167 evaluation board. Used with the ADP/EVAL-167CR adapter. (Includes this 167 adapter with an emulator and trace board purchase.)	Infineon / SABC167CRSTART
C167 CR Phytec kitCON adapter	A 144-pin adapter with 4*40-pin connectors (female) on both sides. It fits between the pod bottom connectors and the target. It is used by C167/C167 CR target boards and Phytec kitCON C167 CR board. See picture D on page 13. The four headers to be soldered to the kitCON board are included.	EMUL166-PC/ADP-EVAL-167CR

MCU	C161	C163/C165	C164	C167
Adapters for kitCON 16X	EMUL166-PC/ADP-EVAL-161 O/V/K	A solder-down adapter has to be used, see page 13.	EMUL166-PC-EVAL-164CI	EMUL166-PC/ADP-EVAL-167CR

phyCORE Rapid Development Kit	This is a series production module designed for use in a customer final product or a PHYTEC development board. This phyCORE module contains a C167 CR Infineon controller, FLASH, RAM and support circuitry in a compact package. To connect a Nohau emulator for program development, a special debug module is available.	KPCM-009
Debug Kit	This module has the same electrical characteristics and pinout as the phyCORE module and is used in its place during the debugging phase. The Nohau emulator plugs into the debug module via the DA-004-C1 converter adapter. No additional target adapter is needed, although the Nohau Flex cable and isolator boards can be used. This part (KDCM-009-C1) consists of part numbers: DCM-009 and DA-004-C1.	KDCM-009-C1
GPIO	This board connects to the Development board to add useful devices such as a DC motor, potentiometers, pushbuttons, LEDs, dipswitches, and connection for a serial LCD. A wire wrap and breadboard areas are provided, as well as all microcontroller signal lines.	PCM-989