



CY3670

## FTG Programming Kit

Spec. # 38-07410 Rev. \*C

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# 1. FTG Programming Kit



## 1.1 Functional Description

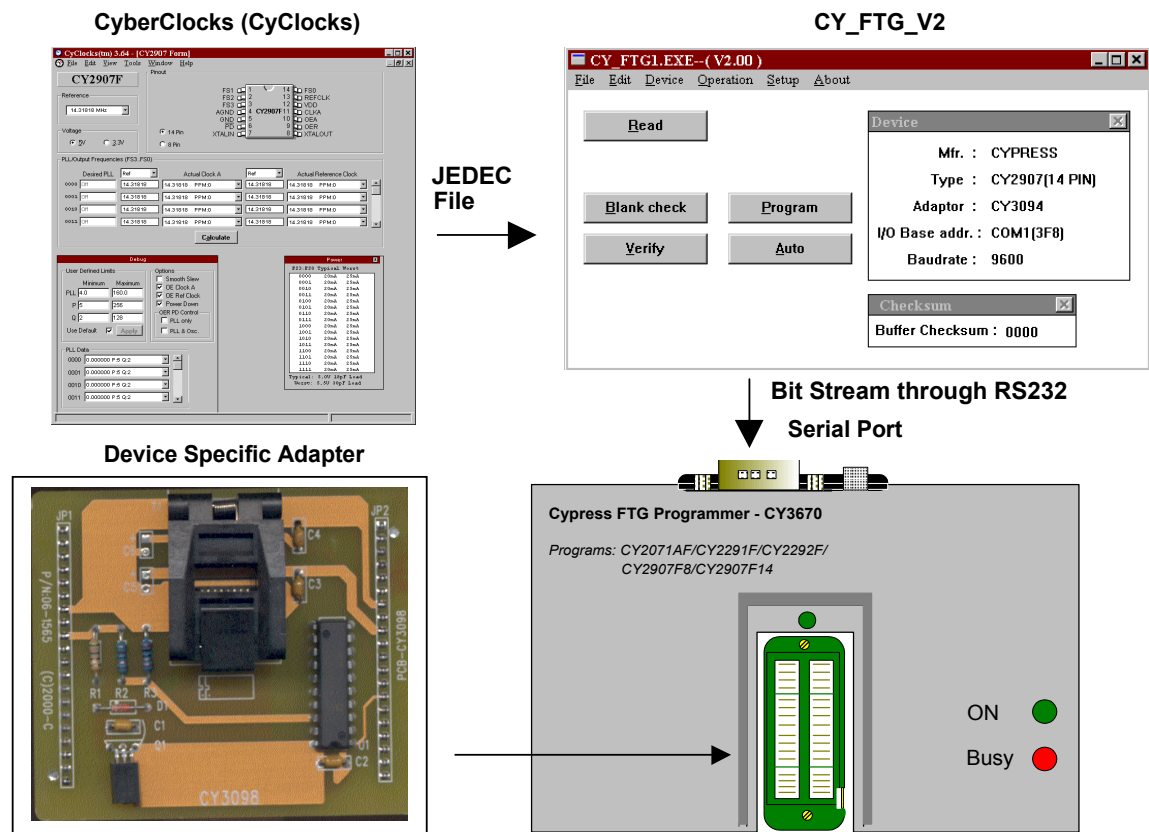
The **CY3670 FTG Programming Kit** enables users with a PC to program Cypress EPROM Field-Programmable Clock Generators quickly and easily. The two setup requirements are a power connection and a serial port connection with the PC, as shown in [Figure 1-1](#).

Using CyberClocks™ software, users can configure their parts to the required specifications and generate the corresponding JEDEC file, which is used for programming.

In addition, CyberClocks software provides PPM optimization and power calculations.

The JEDEC file is loaded into the CY\_FTG\_V2 software that communicates with the programmer. The CY\_FTG\_V2 software also has blank-check capabilities and the ability to read, verify, and view the EPROM table from a programmed device. This procedure is shown in [Figure 1-1](#).

Figure 1-1. Programming Procedure



## 1.2 Features

- Supports multiple Cypress EPROM Field Programmable Clock Generators: CY2291F, CY2292F (SOIC only), CY2907F8, and CY2907F14
- Separate device specific socket adapters
- Allows quick and easy prototyping
- Compact design for portability
- Easy to use interface: Microsoft® Windows®
- User friendly CyberClocks™ software for JEDEC file development

## 1.3 Kit Contents

- Programmer Unit
- Serial Port Cable
- AC/DC Adapter
- CD containing: CyClocks Software, CY\_FTG\_V2 Programmer Software, and data sheets for supported devices
- Socket adapters are required and are available separately

## 1.4 Setup

### 1.4.1 Hardware

The [CY3670 FTG Programming Kit](#) has a very simple setup procedure. As shown in [Figure 1-2](#), the two connections are the power and the RS232 serial cable to the computer. The programmer must be connected to a PC through a serial port and must receive power through the included AC/DC adapter. The AC/DC adapter is connected to a standard 110 V/220 V wall outlet. The final step is to use the appropriate adapter for the device to be programmed.

[Figure 1-3](#) on page 7 is a close up of the socket and shows the correct orientation for placing the device in the socket. The device must be placed according to the device placement that appears on each adapter. The dots correspond to pin 1 of the device.

**Note:** When plugging the AC/DC adapter into an outlet, be sure to set the 110 V/220 V switch to the correct setting (110 V in the US) as shown on the power adapter in [Figure 1-2](#) on page 7. If no switch exists, it automatically selects between 110 V and 220 V.

Figure 1-2. FTG Programming Kit Setup

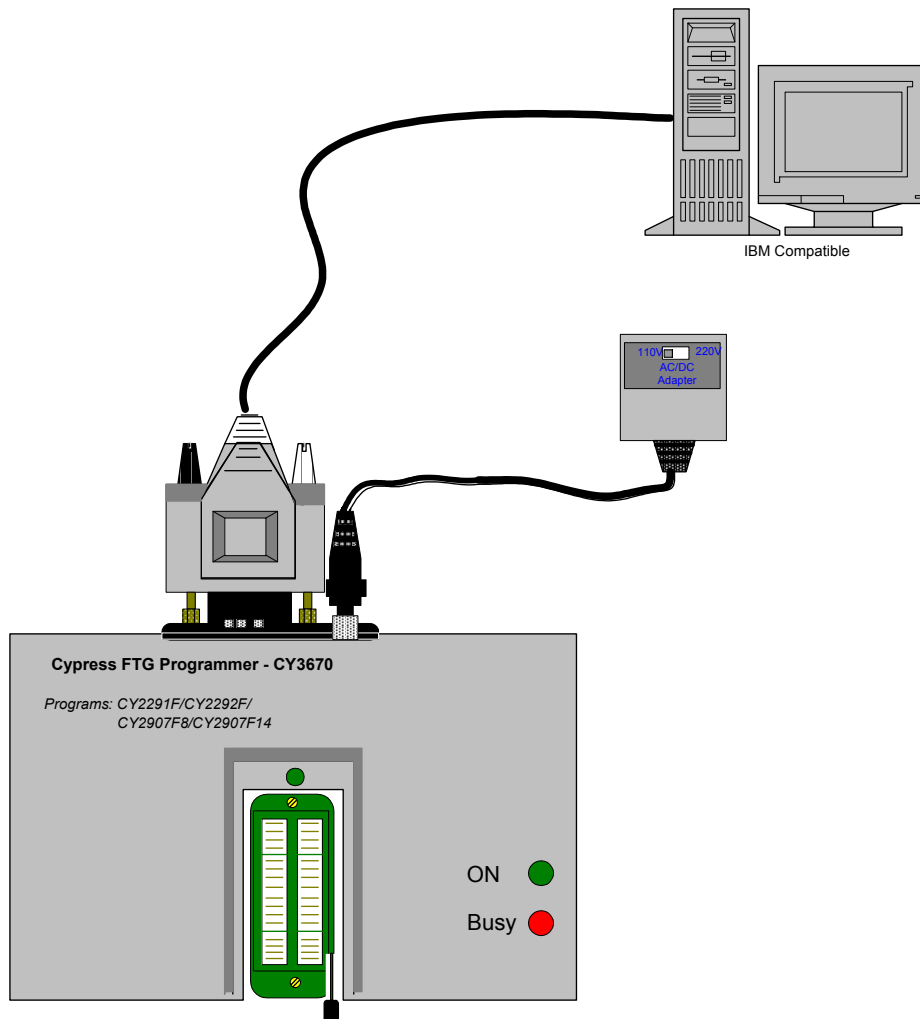
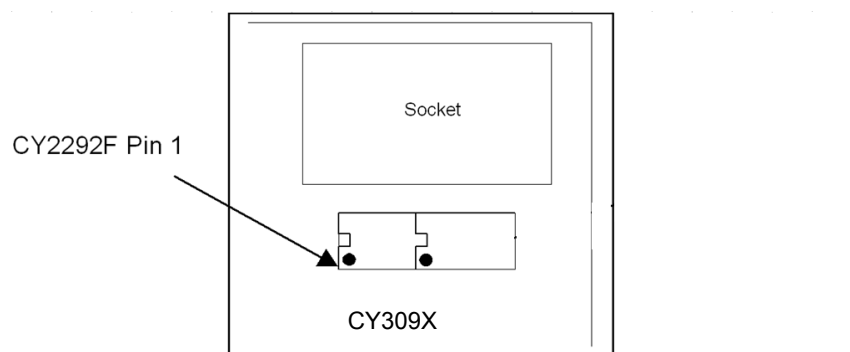


Figure 1-3. Device Orientation Diagram On The Adapter



## 1.4.2 Software

Setting up the software is as easy as setting up the hardware. The included CD contains CyClocks, CY\_FTG\_V2, a readme file, and a folder containing data sheets. The readme file contains information on programming procedures and must be read first.

To install CyClocks, the preferred method is to download and install the latest version of CyberClocks software from the Cypress website. Be sure to check for CyberClocks updates at <http://www.cypress.com/cyberclocks>. CyClocks is now a subset of CyberClocks. Users must be aware that CyberClocks is not the same as the CyberClocks Online web-based application.

The CY\_FTG\_V2 software does not require installation. Copy the CY\_FTG\_V2 directory from the CD to the desired location on your machine. A COM port and BAUD rate must be set when the CY\_FTG\_V2 is first run. The latest version of this software may be located by searching the Cypress website <http://www.cypress.com> for "CY3670".

## 1.5 Adapters

The [CY3670 Kit](#) does not include any socket adapters. The necessary adapters may be ordered from Cypress Semiconductor. To order an adapter, contact your local Cypress sales office or representative, or visit the online store at [www.cypress.com](http://www.cypress.com). The section [1.7 Ordering Information](#) lists the available adapters and their corresponding devices.

## 1.6 Electrical Characteristics

| Item | Part Description       | Cypress Part Number | Characteristics                                                                                                                                                                                                                                                 |
|------|------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Cypress FTG Programmer | CY3670              | Voltage 12 VDC. Supports CY2292F, CY2291F, CY2907F8, and CY290714 through adapters purchased separately.                                                                                                                                                        |
| 2    | Serial Cable           | —                   | UL approved standard 9 pin serial cable. (RS232: one end male /other end female) 80 C, 300V, VW-1, 28AWG, AWM I/II.                                                                                                                                             |
| 3    | Power Adapter          | —                   | Input: 110 V/220 V AC, 60/50 Hz<br>The CY3670 programmer draws from 100 to 150 mA. At this load, the adapter supplies 12 V, which is the required voltage. The rated Output: 9 V DC is specified for 1 A load (This adapter does not have a voltage regulator.) |

## 1.7 Ordering Information

Be sure to check for CyberClocks updates at <http://www.cypress.com/cyberclocks>.

| Ordering Code | Description                                    |
|---------------|------------------------------------------------|
| CY3670        | FTG Programmer Kit                             |
| CY3093        | Socket Adapter for CY2291F                     |
| CY3095        | Socket Adapter for CY2292F (SOIC package only) |
| CY3097        | Socket Adapter for CY2907F8                    |
| CY3098        | Socket Adapter for CY2907F14                   |



## 1.8 Document Revision History

Table 1-1. Revision History

| Revision | PDF Creation Date | Origin of Change | Description of Change                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|-------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| **       | 07/24/02          | CKN              | New Kit                                                                                                                                                                                                                                                                                                                                                                                                                            |
| *A       | See ECN           | KVM/AESA         | Change title from "CY3670 PTG Programming Kit" to "CY3670 FTG Programming Kit" for consistency<br>Change document status from Preliminary to Final<br>Remove references to socket adapter CY3099 and support for CY2292FZ (TSSOP package)<br>Clarify that the CY3670 kit does not include any socket adapters<br>Correct obsolete website URLs<br>Correct software references: previously referred to CyClocks but not CyberClocks |
| *B       | 04/06/2010        | CXQ              | Removed inactive part number CY3096 from the Ordering Information table. Updated Template.                                                                                                                                                                                                                                                                                                                                         |
| *C       | 02/05/2011        | CXQ              | No technical updates.                                                                                                                                                                                                                                                                                                                                                                                                              |

## 1.9 Documentation Conventions

Table 1-2. Document Conventions for Guides

| Convention         | Usage                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Courier New        | Displays file locations, user entered text, and source code:<br>C:\...cd\icc\                                                          |
| <i>Italics</i>     | Displays file names and reference documentation:<br>Read about the <i>sourcefile.hex</i> file in the <i>PSoC Designer User Guide</i> . |
| [Bracketed, Bold]  | Displays keyboard commands in procedures:<br>[Enter] or [Ctrl] [C]                                                                     |
| File > Open        | Represents menu paths:<br>File > Open > New Project                                                                                    |
| <b>Bold</b>        | Displays commands, menu paths, and icon names in procedures:<br>Click the <b>File</b> icon and then click <b>Open</b> .                |
| Times New Roman    | Displays an equation:<br>$2 + 2 = 4$                                                                                                   |
| Text in gray boxes | Describes Cautions or unique functionality of the product.                                                                             |

