

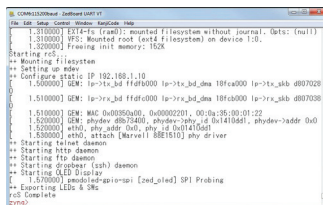
## GETTING STARTED

1. Connect 12 V power to barrel jack (J20).
2. Connect the UART port of ZedBoard™ (J14) to a PC using the MicroUSB cable.
3. Insert the included SD Card into J12.
4. Turn power switch (SW8) to ON. Board will power on. Green Power Good LED (LD13) should illuminate.
5. Wait approximately 15 seconds. The blue Done LED (LD12) should illuminate, and a default image will be displayed on the OLED (DISP1).
6. If the amber USB-Link Status (LD11) does not flicker to indicate activity, instructions for downloading the CY7C64225 USB-to-UART driver can be found on the website listed below.
7. Use Device Manager to determine the COM Port. Open a Terminal Program, configure to 115200/8/n/1/n.
8. Cycle power by turning the power switch (SW8) from ON to OFF and then back ON.
9. In the Terminal Window, a simple Linux image should boot with functionality that demonstrates the basic capabilities of ZedBoard™.
10. When you are done using Linux, run the command "poweroff" and then switch off ZedBoard™.

Please visit [www.zedboard.org/Support/Documentation](http://www.zedboard.org/Support/Documentation) for the complete Getting Started Guide with detailed setup instructions and numerous example designs.

## Features

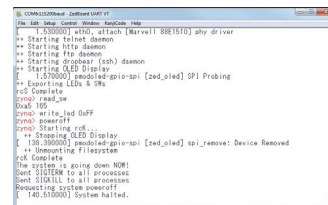
- **USB-OTG:** To use USB peripheral devices with ZedBoard™, install jumpers JP2 and JP3. To connect 2 or more devices, first connect a USB hub to the USB-OTG port.
- **ETHERNET:** After boot-up a dropbear ssh server, ftpd FTP server, and a httpd HTTP server will run. Refer to the documentation on these servers if you are interested in using them. A default website is hosted on the httpd server that can be reached at the static IP: 192.168.1.10.
- **VGA:** A test pattern is driven on the VGA connector by the programmable logic.
- **SWITCHES/LEDS:** Scripts are included for writing to the LEDs and reading the state of the switches. To read the state of the switches, run the command: "read\_sw." Control the LEDs with command: "write\_led <8-bit value>". To turn all 8 LEDs on, use command: "write\_led 0xFF".
- **OLED DISPLAY:** A default image should be displayed on the OLED after Linux has finished booting. In order to prolong the life of the OLED display, the manufacturer suggests that a specific powerdown sequence be used. Running the poweroff command before switching ZedBoard™ off will ensure that this procedure is correctly followed.



```

ZedBoard Linux boot v1
[0.000000] U-Boot (zcu102) mounted filesystem without journal. Opt: (null)
[1.310000] VFS: Mounted root (ext4 filesystem) on device 1:0.
[1.320000] Freeing init memory: 162K
Starting rsync
=> Mounting filesystem
=> Setting up mdev: IP 192.168.1.10
[1.500000] GEM: ip->ra_jd ffa0000 ip->ra_jd_ama 18fa000 ip->ra_sab 4807020
[1.510000] GEM: ip->ra_jd ffa0000 ip->ra_jd_ama 18fa000 ip->ra_sab 4807020
[1.510000] GEM: MAC Da0000200, Da0000210, 00:0a:35:00:01:22
[1.520000] GEM: phydev_d0a00, phydev_s0a0, f0a140a0, phydev_s0a0
[1.520000] eth0, phy_addr_0x0, phy_id f0a140a0
[1.530000] eth0, phy_addr_0x0, phy_id f0a140a0
=> Starting telnet daemon
=> Starting ftp daemon
=> Starting dropbear (ssh) daemon
=> Starting OLED Display
[1.600000] pmu@ad-gpio-spi [zed_oljed] SPI Probing
=> Exporting LEDs & SWs
rsync Complete
rsync: read_se
rsync: read_se
rsync: write_led 0xFF
rsync: poweroff
rsync: Starting rck
=> Unmounting filesystem
rsync: Starting OLED Display
[1.700000] pmu@ad-gpio-spi [zed_oljed] spi_remove: Device Removed
rck Complete
The system is going down NOW!
Send SYSTEMD to all processes
Send SIGKILL to all processes
Requesting system poweroff
[1.800000] System halted.
bye!

```



```

ZedBoard Linux boot v1
[0.000000] U-Boot (zcu102) attached [Marvell 88E1510] phy driver
=> Starting telnet daemon
=> Starting ftp daemon
=> Starting dropbear (ssh) daemon
=> Starting OLED Display
[1.200000] pmu@ad-gpio-spi [zed_oljed] SPI Probing
=> Exporting LEDs & SWs
rsync Complete
rsync: read_se
rsync: read_se
rsync: write_led 0xFF
rsync: poweroff
rsync: Starting rck
=> Unmounting filesystem
rsync: Starting OLED Display
[1.700000] pmu@ad-gpio-spi [zed_oljed] spi_remove: Device Removed
rck Complete
The system is going down NOW!
Send SYSTEMD to all processes
Send SIGKILL to all processes
Requesting system poweroff
[1.800000] System halted.
bye!

```

## AVNET DESIGN KIT LICENSE AND PRODUCT WARRANTY

THE AVNET DESIGN KIT ("DESIGN KIT" OR "PRODUCT") AND ANY SUPPORTING DOCUMENTATION ("DOCUMENTATION" OR "PRODUCT DOCUMENTATION") IS SUBJECT TO THIS LICENSE AGREEMENT ("LICENSE"). USE OF THE PRODUCT OR DOCUMENTATION SIGNIFIES ACCEPTANCE OF THE TERMS AND CONDITIONS OF THIS LICENSE. THE TERMS OF THIS LICENSE AGREEMENT ARE IN ADDITION TO THE AVNET CUSTOMER TERMS AND CONDITIONS, WHICH CAN BE VIEWED AT [www.avnet.com](http://www.avnet.com). THE TERMS OF THIS LICENSE AGREEMENT WILL CONTROL IN THE EVENT OF A CONFLICT.

1. Limited License. Avnet grants You, the Customer, ("You" "Your" or "Customer") a limited, non-transferable, license to: (a) use the Product for Your own internal testing, evaluation and design efforts at a single Customer site; (c) make, use and sell the Product in a single production unit. No other rights are granted and Avnet and any other Product licensor reserves all rights not specifically granted in this License Agreement. Except as expressly permitted in this License, neither the Design Kit, Documentation, nor any portion may be reverse engineered, disassembled, decompiled, sold, donated, shared, leased, assigned, sublicensed or otherwise transferred by Customer. The term of this License is in effect until terminated. Customer may terminate this license at any time by destroying the Product and all copies of the Product Documentation.
2. Changes. Avnet may make changes to the Product or Product Documentation at any time without notice. Avnet makes no commitment to update or upgrade the Product or Product Documentation and Avnet reserves the right to discontinue the Product or Product Documentation at any time without notice.
3. Product Documentation. Product Documentation is provided by Avnet on an "AS-IS" basis and does not form a part of the properties of the Product. All Product Documentation is subject to change without notice. Avnet makes no representation as to the accuracy or completeness of the Product Documentation, and DISCLAIMS ALL REPRESENTATIONS, WARRANTIES AND LIABILITIES UNDER ANY THEORY WITH RESPECT TO PRODUCT INFORMATION.
4. Limited Product Warranty. AVNET WARRANTS THAT AT THE TIME OF DELIVERY, THE PRODUCTS SHALL MEET THE SPECIFICATIONS STATED IN AVNET DOCUMENTATION FOR SIXTY (60) DAYS FROM DELIVERY OF PRODUCTS. IF THE CUSTOMER CAN PROVIDE PROOF THAT THE QUALIFIED AVNET PRODUCT WAS PURCHASED FOR THE PURPOSE OF AND DEPLOYED AS A COMPONENT IN THE CUSTOMER'S COMMERCIALLY AVAILABLE PRODUCT THE WARRANTY WILL BE EXTENDED TO TWELVE (12) MONTHS FROM THE DATE OF PURCHASE. TO THE EXTENT PERMITTED BY LAW, AVNET MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, SUCH AS WARRANTY OF MERCHANTABILITY, FITNESS FOR PURPOSE OR NON-INFRINGEMENT. YOUR SOLE AND EXCLUSIVE REMEDY FOR BREACH OF AVNET'S WARRANTY IS, AT AVNET'S CHOICE: (i) REPAIR THE PRODUCTS; (ii) REPLACE THE PRODUCTS AT NO COST TO YOU; OR (iii) REFUND YOU THE PURCHASE PRICE OF PRODUCTS.
5. LIMITATIONS OF LIABILITY. CUSTOMER SHALL NOT BE ENTITLED TO AND AVNET WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE, INCLUDING, WITHOUT LIMITATION, BUSINESS INTERRUPTION COSTS, LOSS OF PROFIT OR REVENUE, LOSS OF DATA, PROMOTIONAL OR MANUFACTURING EXPENSES, OVERHEAD, COSTS OR EXPENSES ASSOCIATED WITH WARRANTY OR INTELLECTUAL PROPERTY INFRINGEMENT CLAIMS, INJURY TO REPUTATION OR LOSS OF CUSTOMERS, EVEN IF AVNET HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE PRODUCTS AND DOCUMENTATION ARE NOT DESIGNED, AUTHORIZED OR WARRANTED TO BE SUITABLE FOR USE IN MEDICAL, MILITARY, AIR CRAFT, SPACE OR LIFE SUPPORT EQUIPMENT NOR IN APPLICATIONS WHERE FAILURE OR MALFUNCTION OF THE PRODUCTS CAN REASONABLY BE EXPECTED TO RESULT IN A PERSONAL INJURY, DEATH OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. INCLUSION OR USE OF PRODUCTS IN SUCH EQUIPMENT OR APPLICATIONS, WITHOUT PRIOR AUTHORIZATION IN WRITING OF AVNET, IS NOT PERMITTED AND IS AT CUSTOMER'S OWN RISK. CUSTOMER AGREES TO FULLY INDEMNIFY AVNET FOR ANY DAMAGES RESULTING FROM SUCH INCLUSION OR USE.
6. LIMITATION OF DAMAGES. CUSTOMER'S RECOVERY FROM AVNET FOR ANY CLAIM SHALL NOT EXCEED CUSTOMER'S PURCHASE PRICE FOR THE PRODUCT GIVING RISE TO SUCH CLAIM IRRESPECTIVE OF THE NATURE OF THE CLAIM, WHETHER IN CONTRACT, TORT, WARRANTY, OR OTHERWISE.
7. INDEMNIFICATION. AVNET SHALL NOT BE LIABLE FOR AND CUSTOMER SHALL INDEMNIFY, DEFEND AND HOLD AVNET HARMLESS FROM ANY CLAIMS BASED ON AVNET'S COMPLIANCE WITH CUSTOMER'S DESIGNS, SPECIFICATIONS OR IN-STRUCTIONS, OR MODIFICATION OF ANY PRODUCT BY PARTIES OTHER THAN AVNET, OR USE IN COMBINATION WITH OTHER PRODUCTS.
8. U.S. Government Restricted Rights. The Product and Product Documentation are provided with "RESTRICTED RIGHTS." If the Product and Product Documentation and related technology or documentation are provided to or made available to the United States Government, any use, duplication, or disclosure by the United States Government is subject to restrictions applicable to proprietary commercial computer software as set forth in FAR 52.227-14 and DFAR 252.227-7013, et seq., its successor and other applicable laws and regulations. Use of the Product by the United States Government constitutes acknowledgment of the proprietary rights of Avnet and any third parties. No other governments are authorized to use the Product without written agreement of Avnet and applicable third parties.
9. Ownership. Licensee acknowledges and agrees that Avnet or Avnet's licensors are the sole and exclusive owner of all Intellectual Property Rights in the Licensed Materials, and Licensee shall acquire no right, title, or interest in the Licensed Materials, other than any rights expressly granted in this Agreement.
10. Intellectual Property. All trademarks, service marks, logos, slogans, domain names and trade names (collectively "Marks") are the properties of their respective owners. Avnet disclaims any proprietary interest in Marks other than its own. Avnet and AV design logos are registered trademarks and service marks of Avnet, Inc. Avnet's Marks may be used only with the prior written permission of Avnet, Inc.
11. General. The terms and conditions set forth in the License Agreement or at [www.avnet.com](http://www.avnet.com) will apply notwithstanding any conflicting, contrary or additional terms and conditions in any purchase order, sales acknowledgement confirmation or other document. If there is any conflict, the terms of this License Agreement will control. This License may not be assigned by Customer, by operation of law, merger or otherwise, without the prior written consent of Avnet and any attempted or purported assignment shall be void. Licensee understands that portions of the Licensed Materials may have been licensed to Avnet from third parties and that such third parties are intended beneficiaries of the provisions of this Agreement. In the event any of the provisions of this Agreement are for any reason determined to be void or unenforceable, the remaining provisions will remain in full effect. This constitutes the entire agreement between the parties with respect to the use of this Product, and supersedes all prior or contemporaneous understandings or agreements, written or oral, regarding such subject matter. No waiver or modification is effective unless agreed to in writing and signed by authorized representatives of both parties. The obligations, rights, terms and conditions shall be binding on the parties and their respective successors and assigns. The License Agreement is governed by and construed in accordance with the laws of the State of Arizona excluding any law or principle, which would apply the law of any other jurisdiction. The United Nations Convention for the International Sale of Goods shall not apply.