# Getting Started with Turnkey Accelerator Systems TKAS-D2101



Design Gateway Co., Ltd.



### **Table of Contents**

1.	Intro	duction	. 1		
2. System Installation					
	2.1.	Product Registration	2		
	2.2.	Safety Instructions.	. 2		
	2.3.	Electrostatic Discharge Caution	.2		
	2.4.	Terms and conditions of Sales	.3		
	2.5.	Customer Support	. 6		
3.	Svst	em Validation	.7		
_	Before you begin		.7		
	Power	on and Login	. 8		
	Setup environment		. 9		
	Scan flash on Alveo card		.9		
	Scan partition				
	Get bo	Get board information			
	Card v	alidation	13		
	Card va	alidation test	15		



# 1. Introduction

This document provides hardware installation and software validation procedures for the Turnkey Accelerator Systems with Xilinx's Alveo<sup>™</sup> accelerator card and applies to Xilinx Machine Learning Suite 2021.1 and greater. Installation and maintenance should be performed by experienced user only.

### TKDAS-2101 Specification

- 1. Intel Gen 11<sup>th</sup> Core i7 Rocket Lake-s Processor with Deep Learning Boost AI acceleration and AVX-512 instruction set
- 2. DDR4-3200 MHz Memory up to 128 GB
- 3. Support up to 1x double slot Xilinx Alveo Accelerator card
  - Standard model Alveo U50
  - Changeable to U25, U30, U200, U250 and U280 as an option
- 4. PCIe Gen4 support
- 5. Tower case with Thermaltake CPU cooling system
- 6. Pre-installed and ready to use
  - Ubuntu 20.04 LTS Server
  - Xilinx Machine Learning Suite
  - Xilinx's Vitis AI Docker container
  - Design Gateway IP core performance evaluation demo



## 2. System Installation

#### 2.1. Product Registration

Please register your product by sending email with subject "Turnkey Accelerator Systems Product Registration" to <u>ip-sales@design-gateway.com</u>

Please visit Xilinx website to register your Alveo Accelerator card, create account and register your information.

https://www.xilinx.com/myprofile.html

#### 2.2. <u>Safety Instructions</u>

To ensure your personal safety and the safety of your equipment:

- Keep your work area and the computer/server clean and clear of debris
- Before opening the computer/system cover, shut down the computer/system and unplug the power cord.

#### 2.3. Electrostatic Discharge Caution

Electrostatic discharge (ESD) can damage electronic components when they are improperly handled, and can result in total or intermittent failures. Always follow ESD-prevention procedures when removing and replacing components.

To prevent ESD damage:

- Use an ESD wrist or ankle strap and ensure that it makes skin contact. Connect the equipment end of the strap to an unpainted metal surface on the chassis.
- Avoid touching the card against your clothing. The wrist strap protects components from ESD on the body only.
- Handle the card by its bracket or edges only. Avoid touching the printed circuit board or the connectors.
- Put the card down only on an antistatic surface such as the bag supplied in your kit.
- If you are returning the card to Xilinx Product Support, place it back in its antistatic bag immediately.

#### 2.4. Terms and conditions of Sales

- The Turnkey Accelerator System warranty is valid for 1 year under Design Gateway's terms and conditions of Sales as described in the link below https://dgway.com/terms conditions turnkey.html
- 2. Xilinx's Accelerator Card typical warranty period is 1 year under Xilinx Standard Terms and Conditions below.

https://www.xilinx.com/about/legal.html

- 3. Warranty of each component such as CPU, DDR Memory, SSD is depended on component's suppliers. Please check the detail in warranty card inside the box.
- 4. Warranty is void if any modification has been made to this product and any incorrect operation from this manual or warranty sticker is torn or damaged.
- 5. In order to claim for product exchange or technical support within warranty period, official receipt is required for unregistered customer as evidence of purchasing whereas official receipt is unnecessary for registered customer.

### 2.5. <u>Customer Support</u>

Customer can contact to <u>ip-sales@design-gateway.com</u> for support of any problem about Turnkey Accelerator Systems or visit our website at <u>www.design-gateway.com</u>.



# 3. System Validation

### Before you begin

- Ensure that appropriate AC Power source for 750 Watts power consumption
- Prepare 100/1000 LAN cable with DHCP network support
- Connect TKDAS-2101 with Display, mouse and keyboard



Figure 3-1



Power on and Login 1. Push power on button to power systems



Figure 3-2 power on button location

2. Login with Server's name: tkas-d2101 username: tkas-user Password: tkas#01

Sep 13 22:40	<b>() - 4</b> ( () -
TYAS liner	
ubuntu®	
abalica	

Figure 3-3 Ubuntu login screen



Setup environment

- 3. Open Terminal
- 4. Type "source /opt/xilinx/xrt/setup.sh" then enter
  5. Type "source /opt/xilinx/xbtest/setup.sh" then enter

### Scan flash on Alveo card

6. Type "sudo /opt/xilinx/xrt/bin/xbmgmt flash --scan" then enter

Deprecation Warning	
The given legacy to be obsoleted :	sub-command and/or option has been deprecated in the next release.
Further informat: and options along sub-commands and documentation pag	ion regarding the legacy deprecated sub-commands g with their mappings to the next generation options can be found on the Xilinx Runtime (XRT) ge:
https://wilinw.g	ithub.io/XRT/master/html/xbtools_map.html
Please update you sub-commands and	ur scripts and tools to use the next generation options.
Please update you sub-commands and ard [0000:01:00.0] Card type:	ur scripts and tools to use the next generation options.
Please update you sub-commands and Card [0000:01:00.0] Card type: Flash type:	ur scripts and tools to use the next generation options. u250 SPI
Please update you sub-commands and Card [0000:01:00.0] Card type: Flash type: Flashable partit:	ur scripts and tools to use the next generation options. u250 SPI ion running on FPGA:
Please update you sub-commands and Card [0000:01:00.0] Card type: Flash type: Flashable partit: xilinx_u250_c	ur scripts and tools to use the next generation options. u250 SPI ion running on FPGA: gen3x16_base_3, [ID=0x48810c9d17860ef5], [SC=4.6.11]
Please update you sub-commands and Card [0000:01:00.0] Card type: Flash type: Flashable partit: xilinx_u250_c Flashable partit:	ur scripts and tools to use the next generation options. u250 SPI ion running on FPGA: gen3x16_base_3, [ID=0x48810c9d17860ef5], [SC=4.6.11] ions installed in system:
Please update you sub-commands and Card [0000:01:00.0] Card type: Flash type: Flashable partit: xilinx_u250_c Flashable partit: xilinx_u250_c	ur scripts and tools to use the next generation options. u250 SPI ion running on FPGA: gen3x16_base_3, [ID=0x48810c9d17860ef5], [SC=4.6.11] ions installed in system: gen3x16_base_3, [ID=0x48810c9d17860ef5], [SC=4.6.11]
Please update you sub-commands and Card [0000:01:00.0] Card type: Flash type: Flashable partit: xilinx_u250_c Flashable partit: xilinx_u250_c :kas-user@tkas-d2101	ur scripts and tools to use the next generation options. u250 SPI ion running on FPGA: gen3x16_base_3, [ID=0x48810c9d17860ef5], [SC=4.6.11 ions installed in system: gen3x16_base_3, [ID=0x48810c9d17860ef5], [SC=4.6.11 :~\$

Figure 3-4 show Alveo Card found, and Card ID is "0000:01:00.0".

- 5 -



Scan partition

7. Type "sudo /opt/xilinx/xrt/bin/xbmgmt partition --scan" then enter

```
tkas-user@tkas-d2101:~$ sudo /opt/xilinx/xrt/bin/xbmgmt partition --scan
Deprecation Warning:
    The given legacy sub-command and/or option has been deprecated
   to be obsoleted in the next release.
   Further information regarding the legacy deprecated sub-commands
    and options along with their mappings to the next generation
    sub-commands and options can be found on the Xilinx Runtime (XRT)
    documentation page:
   https://xilinx.github.io/XRT/master/html/xbtools_map.html
    Please update your scripts and tools to use the next generation
    sub-commands and options.
Card [0000:01:00.0]
   Partitions running on FPGA:
       xilinx_u250_gen3x16_base_3
           logic-uuid:
            48810c9d17860ef53e9e529e8b14ce39
            interface-uuid:
            695718ec21a232e45e1afcb4e558e11f
   Partitions installed in system:
        xilinx_u250_gen3x16_xdma_shell_3_1
           logic-uuid:
            bd5fb8abab266c3265918257b5048e88
            interface-uuid:
            f2f6c5e1273e78948f2c4806221462f2
tkas-user@tkas-d2101:~$
                     Figure 3-5 scan partition on Alveo card
```

Figure 3-5 show partition on Alveo card, found that no shell partition is running on Alveo card. It needs to re-program shell partition.

If shell partition is running, skip to step 10



 Type "sudo /opt/xilinx/xrt/bin/xbmgmt partition --program --name xilinx\_u250\_gen3x16\_xdma\_shell 3\_1 --card 0000:01:00.0" then enter

eprecation War	ing:
The given 1	gacy sub-command and/or option has been deprecated
to be obsol	ted in the next release.
Further inf	rmation regarding the legacy deprecated sub-commands
and options	along with their mappings to the next generation
sub-command	and options can be found on the Xilinx Runtime (XRT)
documentati	n page:
https://xil	nx.github.io/XRT/master/html/xbtools_map.html
Please upda	e your scripts and tools to use the next generation
sub-command	and options.
rogramming PLP	on Card [0000:01:00.0]
artition file:	/opt/xilinx/firmware/u250/gen3x16/xdma-shell/partition.xsabir
rogram success	ully
kas-user@tkas-	2101:~\$
	Figure 3-6 program shell partition successfully

9. Re-scan partition, type "sudo /opt/xilinx/xrt/bin/xbmgmt partition --scan" then enter



Figure 3-7 show shell partition is running on Alveo card.



#### Get board information

10. Type "xbutil scan" then enter

```
tkas-user@tkas-d2101:~$ xbutil scan
Deprecation Warning:
    The given legacy sub-command and/or option has been deprecated
    to be obsoleted in the next release.
    Further information regarding the legacy deprecated sub-commands
and options along with their mappings to the next generation
    sub-commands and options can be found on the Xilinx Runtime (XRT)
    documentation page:
    https://xilinx.github.io/XRT/master/html/xbtools_map.html
    Please update your scripts and tools to use the next generation
    sub-commands and options.
INFO: Found total 1 card(s), 1 are usable
System Configuration
              Linux
OS name:
Release:
                5.4.0-84-generic
               #94-Ubuntu SMP Thu Aug 26 20:27:37 UTC 2021
Version:
               x86_64
System Product Name
Machine:
Model:
               16
31874 MB
CPU cores:
Memory:
Glibc:
                2.31
Distribution: Ubuntu 20.04.3 LTS
Now:
                Tue Oct 5 02:45:03 2021 GMT
                     XRT Information
               2.11.648
Version:
Git Hash:
                38a348510a76068a67d988128c3368f554e7b97b
               2021.1
2021-07-02 15:46:58
Git Branch:
Build Date:
                2.11.648,38a348510a76068a67d988128c3368f554e7b97b
XOCL:
XCLMGMT:
                2.11.648,38a348510a76068a67d988128c3368f554e7b97b
 [0] 0000:01:00.1 xilinx_u250_gen3x16_xdma_shell_3_1 user(inst=128)
tkas-user@tkas-d2101:~$
```

Figure 3-8 board information

Figure 3-8 show U250 board information and board ID is "0000:01:00.1".



#### Card validation

11. Type "xbutil validate -d 0000:01:00.1 --verbose" then enter

tkas-user@tkas-d2101:~\$ xbutil validate -d 0000:01:00.1 --verbose Verbose: Enabling Verbosity Starting validation for 1 devices Validate Device : [0000:01:00.1] Platform : xilinx\_u250\_gen3x16\_xdma\_shell\_3\_1 SC Version : 4.6.11 : 0x0 Platform ID \_\_\_\_\_ Test 1 [0000:01:00.1] : Aux connection : Check if auxiliary power is connected Description Test Status : [PASSED] \_\_\_\_\_ Test 2 [0000:01:00.1] : PCIE link : Check if PCIE link is active Description Test Status : [PASSED] \_\_\_\_ Test 3 [0000:01:00.1] : SC version : Check if SC firmware is up-to-date : [PASSED] Description Test Status -----Test 4 [0000:01:00.1] : Verify kernel Description : Run 'Hello World' kernel test Xclbin : /opt/xilinx/firmware/u250/gen3x16/xdma-shell/test/ve rify.xclbin Testcase : /opt/xilinx/xrt/test/22\_verify.py Test Status : [PASSED] : DMA Test 5 [0000:01:00.1] Description : Run dma test : Host -> PCIe -> FPGA write bandwidth = 8547.561462 M Details B/s Host <- PCIe <- FPGA read bandwidth = 11645.660314 M B/s Test Status : [PASSED] : iops Test 6 [0000:01:00.1] Description : Run scheduler performance measure test Xclbin : /opt/xilinx/firmware/u250/gen3x16/xdma-shell/test/ve rify.xclbin Testcase : /opt/xilinx/xrt/test/xcl\_iops\_test.exe Details : IOPS: 214627 (hello) Test Status : [PASSED]

Figure 3-9 card validation

```
DESIGN
GATEWAY
```

```
Test 7 [0000:01:00.1]
                          : Bandwidth kernel
                           : Run 'bandwidth kernel' and check the throughput
    Description
    Xclbin
                          : /opt/xilinx/firmware/u250/gen3x16/xdma-shell/test/ba
ndwidth.xclbin
                          : /opt/xilinx/xrt/test/23_bandwidth.py
    Testcase
    Details.
                          : Maximum throughput: 52187 MB/s
    Test Status
                           : [PASSED]
Test 8 [0000:01:00.1]
                          : Peer to peer bar
    Description
                          : Run P2P test
    Details
                          : P2P bar is not enabled
    Test Status
                          : [SKIPPED]
Test 9 [0000:01:00.1]
                          : Memory to memory DMA
    Description
                           : Run M2M test
    Details
                           : bank0 -> bank1 M2M bandwidth: 12668.58 MB/s
                             bank0 -> bank2 M2M bandwidth: 12691.31 MB/s
                             bank0 -> bank3 M2M bandwidth: 12692.37 MB/s
                             bank1 -> bank2 M2M bandwidth: 12685.81 MB/s
                             bank1 -> bank3 M2M bandwidth: 12685.23 MB/s
                             bank2 -> bank3 M2M bandwidth: 12704.92 MB/s
    Test Status
                           : [PASSED]
Test 10 [0000:01:00.1]
                          : Host memory bandwidth test
                          : Run 'bandwidth kernel' when host memory is enabled
    Description
    Details
                          : Host memory is not enabled
    Test Status
                          : [SKIPPED]
Test 11 [0000:01:00.1]
                        : vcu
    Description
                          : Run decoder test
    Details
                          : Verify xclbin not available or shell partition is no
t
                             programmed. Skipping validation.
    Test Status
                           : [SKIPPED]
Validation completed. Please run the command '--verbose' option for more details
Validation Summary
1 device(s) evaluated
1 device(s) validated successfully
0 device(s) had exceptions during validation
Validated successfully [1 device(s)]
  - [0000:01:00.1] : xilinx_u250_gen3x16_xdma_shel1_3_1
Validation Exceptions [0 device(s)]
Warnings produced during test [0 device(s)] (Note: The given test successfully v
alidated)
Unsupported tests [1 device(s)]
- [0000:01:00.1] : xilinx_u250_gen3x16_xdma_shell_3_1 : Test(s): 'Peer to peer bar', 'Host memory bandwidth test', vcu
tkas-user@tkas-d2101:~$
                        Figure 3-9 card validation (continue)
```

Figure 3-9 show card is evaluated and validated successfully.



<u>Card validation test</u> 12. Type "**xbtest -d 0000:01:00.1 -c verify**" then enter

GEN_016 :: GEN_016 :: 1:00.1 -j / json -x /op stress.xclb c_pfm_def.j GEN_039 :: ############# GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x cst_pfm_de GEN_039 :: GEN_016 ::	GENERAL GENERAL opt/xilinx/xb in -e /opt/ son GENERAL ############# GENERAL j /opt/xilinx clbin -e /c f.json	:: xbtest/l xilinx :: ###### :: nx/xbt ypt/xil	Scanning Executin /lib/xili ib/xilir //xbtest/ ######## Command est/lib/ t/lib/xi inv/ktc	g xbtest libra ng: /opt/xilin linx-u250-gen3xl /lib/xilinx-u2 ####################################	ries. x/xbt x16-x 6-xdm 50-ge ##### linx/ pen3x1	 dma-sh ma-shel n3x16- ###### xbtest 6-xdma	/bin/xbte ell-3.1/ .1-3.1/xc xdma-she ######### /5/bin/s -shell-3
GEN_016 :: 1:00.1 -j / json -x /op stress.xclb GEN_039 :: ########## GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x test_pfm_de GEN_039 :: GEN_039 :: GEN_016 ::	GENERAL opt/xilinx/xb in -e /opt/ son GENERAL ############ GENERAL j /opt/xili /opt/xilinx clbin -e /c f.json	:: xbtest/l vtest/l xilinx :: ###### :: .nx/xbt s/xbtes pt/xil	Executir //ib/xil ib/xil //xbtest/ ######## Command est/lib/ t/lib/xi inv/ktest	<pre>hg: /opt/xilin Linx-u250-gen3x1 /lib/xilinx-u2 ####################################</pre>	x/xbt x16-x 6-xdm 50-ge ##### linx/ pen3x1	est/5/ :dma-sh ia-shel n3x16- ###### xbtest 6-xdma	bin/xbte ell-3.1/ .1-3.1/xc xdma-she ######### /5/bin/x -shell-3
L:00.1 -j / json -x /op stress.xclb _pfm_def.j GEN_039 :: ########## GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x cst_pfm_de GEN_039 :: GEN 016 ::	<pre>opt/xilinx/xb in -e /opt/ son GENERAL ############### GENERAL j /opt/xilin /opt/xilinx clbin -e /c f.json</pre>	<pre>xbtest / xilinx :: ####### :: .nx/xbt :/xbtes ppt/xil</pre>	<pre>/lib/xil ib/xilir /xbtest/ ####################################</pre>	Linx-u250-gen3x1 /lib/xilinx-u2 //lib/xilinx-u2 ////////////////////////////////////	8x16-x 6-xdm 50-ge ##### linx/ en3x1	dma-sh ma-shel n3x16- ###### xbtest 6-xdma	<pre>ll-3.1/xc .1-3.1/xc .xdma-she ####################################</pre>
json -x /op stress.xclb pfm_def.j GEN_039 :: ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	t/xilinx/xb in -e /opt/ son GENERAL ########### GENERAL j /opt/xili /opt/xilinx clbin -e /c f.json	vtest/1 xilinx :: ###### :: nx/xbt x/xbtes pt/xil	<pre>ib/xilir (/xbtest) ####################################</pre>	nx-u250-gen3x1 /lib/xilinx-u2 ************************************	6-xdm 50-ge ##### linx/ en3x1	a-shel n3x16- ###### xbtest 6-xdma	1-3.1/xc xdma-she ######## /5/bin/x -shell-3
stress.xclb pfm_def.j GEN_039 :: ########### GEN_039 :: :01:00.1 - fy.json -x st_stress.x cst_pfm_de GEN_039 :: GEN 016 ::	<pre>in -e /opt/ son GENERAL ############# GENERAL j /opt/xili /opt/xilinx clbin -e /c f.json</pre>	xilinx :: ###### :: nx/xbt x/xbtes pt/xil	<pre>x/xbtest/ ####################################</pre>	/lib/xilinx-u2 ####################################	50-ge ##### linx/ en3x1	n3x16- ###### xbtest 6-xdma	-xdma-she ######## /5/bin/>
pfm_def.j GEN_039 :: ########### GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x cest_pfm_de GEN_039 :: GEN 016 ::	son GENERAL ############# GENERAL j /opt/xilinx clbin -e /o f.json	:: ###### :: nx/xbt /xbtes pt/xil	######################################	######################################	##### linx/ en3x1	###### xbtest 6-xdma	######## /5/bin/3
GEN_039 :: ########### GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x cest_pfm_de GEN_039 :: GEN 016 ::	GENERAL ############ GENERAL j /opt/xili /opt/xilinx clbin -e /o f.json	:: ###### :: nx/xbt /xbtes pt/xil	######################################	######################################	##### linx/ en3x1	###### xbtest 6-xdma	/5/bin/>
GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x cest_pfm_de GEN_039 :: GEN 016 ::	GENERAL j /opt/xili /opt/xilinx clbin -e /o f.json	:: nx/xbt /xbtes pt/xil	Command est/lib/ t/lib/xi	line: /opt/xi /xilinx-u250-g llinx-u250-gen	linx/ en3x1	xbtest 6-xdma	/5/bin/»
GEN_039 :: 0:01:00.1 - fy.json -x st_stress.x cest_pfm_de GEN_039 :: GEN 016 ::	j /opt/xili /opt/xilinx clbin -e /o f.json	nx/xbt /xbtes pt/xil	command est/lib/xi	/xilinx-u250-g llinx-u250-gen	en3x1	6-xdma	-shell-3
fy.json -x st_stress.x cest_pfm_de GEN_039 :: GEN 016 ::	<pre>j /opt/xili /opt/xilinx clbin -e /c f.json</pre>	/xbtes pt/xil	t/lib/xi	/xilinx-u250-gen	en3x1	6-xdma	-shell-
ty.json -x st_stress.x cest_pfm_de GEN_039 :: GEN 016 ::	/opt/xilinx clbin -e /c f.json	pt/xil	inv/vbt	Llinx-u250-gen		SS. 995786	
st_stress.x cest_pfm_de GEN_039 :: GEN_016 ::	clbin -e /c f.json	pt/xil	inv/vn+		3x16-	xdma-s	hell-3.1
GEN_039 :: GEN_039 :: GEN_016 ::	f.json			est/lib/xilinx	-u250	-gen3x	16-xdma-
GEN_039 :: GEN 016 ::							
GEN 016 ::	GENERAL	::	XBTEST X	version: 5.0.0	6		
THE TRANSPORT	GENERAL	1.1		- SW Build	: 3	061717	on Fri
05 GMT 202	0						
GEN_016 ::	GENERAL	::		- Process II	: 4	221	
GEN_016 ::	GENERAL	::	#######	*****	#####	######	****
****	###########	######	****	****	1		
GEN_016 ::	GENERAL	::	System:				
GEN_016 ::	GENERAL	: : ;	0	- User	20	tkas-	user
GEN 016 ::	GENERAL			- Name	82	Linux	
GEN 016 ::	GENERAL	::		- Node	:	tkas-	d2101
GEN 016 ::	GENERAL	::		- Release	:	5.4.0	-84-gene
0990043 <del>00</del> 996438 03934							a service of the services
GEN 016 ::	GENERAL	:::		- Version	1	#94-U	buntu Sk
20:27:37 U	TC 2021						00000000 <del>0</del> 0000 0000
GEN 016 ::	GENERAL	1.2		- Machine	1	x86 6	4
GEN 039 ::	GENERAL		XRT vers	aion: 2.11.648		2510	-
GEN 016 ::	GENERAL			- XRT build	date:	2021-	07-02 15
		1000					5.0 A.D. D.
GEN 016	GENERAL.	12-11	*****		*****	######	*******
	*******		*****	************			
GEN_039 ::	GENERAL		Start of	E session at:	Tue O	ct 05	10:19:13
GEN_039 ::	GENERAL	::	#######	*****	#####	######	########
*****	############	######	****	****	t.		
ITF_008 ::	DEVICE	::	Device:	xilinx_u250_g	en3x1	6_xdma	_shell_3
COCK TOPO CONTRACTOR OF THE							
0:01:00.1	2.9						
	GEN_039 :: GEN_016 :: 05 GMT 202 GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: 0:27:37 U GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: GEN_016 :: TH*####################################	est_pfm_def.json GEN_039 :: GENERAL GEN_016 :: GENERAL O5 GMT 2020 GEN_016 :: GENERAL GEN_016 :: GENERAL ####################################	est_pfm_def.json         GEN_039 :: GENERAL ::         GEN_016 :: GENERAL ::         05 GMT 20200         GEN_016 :: GENERAL ::         GEN_016 :: GENERAL ::         ####################################	est_pfm_def.json         GEN_039 :: GENERAL :: XBTEST v         GEN_016 :: GENERAL ::         05 GMT 2020         GEN_016 :: GENERAL ::         GEN_039 :: GENERAL ::         GEN_0	est_pfm_def.json         GEN_039 :: GENERAL       :: XBTEST version: 5.0.0         GEN_016 :: GENERAL       :: - SW Build         05 GMT 2020	est_pfm_def.json         GEN_039 :: GENERAL       :: XBTEST version: 5.0.0         GEN_016 :: GENERAL       :: - SW Build       : 3         05 GMT 2020       GEN_016 :: GENERAL       :: - Process ID : 4         GEN_016 :: GENERAL       :: - Process ID : 4         GEN_016 :: GENERAL       :: ***********************************	est_pfm_def.json         GEN_039 :: GENERAL :: XBTEST version: 5.0.0         GEN_016 :: GENERAL :: - SW Build : 3061717         05 GMT 2020         GEN_016 :: GENERAL :: - Process ID : 4221         GEN_016 :: GENERAL :: ##################################

Figure 3-10 all tests passed

```
Repeating last content of dynamic display mode:
                                :: ********************************
 INFO
          :: GEN_039 :: GENERAL
**************
 INFO
          :: GEN_039 :: GENERAL
                                :: Command line: /opt/xilinx/xbtest/5/bin
/xbtest -d 0000:01:00.1 -j /opt/xilinx/xbtest/lib/xilinx-u250-gen3x16-xdma-shell
-3.1/test/verify.json -x /opt/xilinx/xbtest/lib/xilinx-u250-gen3x16-xdma-shell-3
.1/xclbin/xbtest_stress.xclbin -e /opt/xilinx/xbtest/lib/xilinx-u250-gen3x16-xdm
a-shell-3.1/xbtest_pfm_def.json
 INFO
          :: GEN_039 :: GENERAL
                                 :: XBTEST version: 5.0.0
 INFO
          :: GEN_039 :: GENERAL
                                 :: XRT version: 2.11.648
 INFO
          :: GEN_039 :: GENERAL
                                 :: Start of session at: Tue Oct 05 10:19:
13 2021 +07
 INFO
          :: GEN_039 :: GENERAL
                                 ****************
 INFO
          :: ITF_008 :: DEVICE
                                 :: Device: xilinx_u250_gen3x16_xdma_shell
 3_1 / BDF: 0000:01:00.1
 INFO
         :: ITF_009 :: DEVICE
                                :: Loading xclbin. This could take up to
20.000 seconds
 CRIT WARN :: GEN_037 :: XBT_SW_CFG :: Memory compute unit krnl_memtest_host_
01_00 targeting host memory HOST[0] found in xclbin, but allocated memory is 0.
Compute unit will be ignored
 CRIT WARN :: VER_011 :: VERIFY
                                 :: Test skipped for compute unit krnl_mem
test_host_01_00
 STATUS
               ON GOING TESTS
      --1
   Testcase
                     Pending
                                Completed
                                            Passed
                                                      Failed
                                                                 Err
       Warnings
                  Remaining time (s) | Parameters
   ors
       Ŧ
 0
                                                 1
                                                           0
   Verify
                                      1
 0
   1 |
                               n/a | n/a
 Card status: Power: 47 W; Temperature: 50 C; Qty of measurements: 2
 Messages stats: 0 Warnings, 2 Critical Warnings, 20 Passes, 0 Errors, 0 Failur
es encountered
 Elapsed: 3 s
                               INFO
        :: GEN 040 :: GENERAL
INFO
        :: GEN_040 :: GENERAL
                               :: End of session at: Tue Oct 05 10:19:16 2
021 + 07
INFO
        :: GEN 040 :: GENERAL
                               :: 0 Warnings, 2 Critical Warnings, 19 Pass
es, 0 Errors, 0 Failures encountered
INFO
        :: GEN 040 :: GENERAL
                               *****
#######
PASS
        :: GEN_024 :: GENERAL
                               :: RESULT: ALL TESTS PASSED
tkas-user@tkas-d2101:~$
                  Figure 3-10 all tests passed (continue)
```

13. Alveo card ready to use



## **Revision History**

Revision	Date	Detail of change
1.0	26 October 2021	Initial Release