

iRay 1717M2.5

Configuration Introduction

1. Verifying Opal or Ultra configuration

a. Opal

Verify 2.4.0.7 or higher is installed.

Verify Venu_2011 Driver pack is installed.

Verify Use new venu Driver is selected in the Developers tab.

b. Ultra

Verify 3.2.0.36 or higher is installed.

Verify Venu_2011 Driver pack is installed.

- c. Opal / Ultra Device configuration Tab.
- d. The iRay 1717M2.5 requires the iRayMk3 Maven Driver pack selection.

Maven		
iRayMk3 💌	32-bit 💌	#1 💌

e. The 1717M2.5 supports software selection for Offset , gain , and Defect . It also requires the Post offset selection.

Corrections				
Offset:	Software Post			
Gain:	Software 💌			
Defect:	Software 💌			

f. TFT refresh settings are: Upon Connection Checked , Periodically Off , Only in acquire checked. (These settings cause the panel to capture and discard a dark image , clearing the TFT.)

TFT Refresh	
Upon Connection	
Upon Launch	
Periodically	
● Off	
🔍 On (always)	
🔍 On (if idle)	
Rate (sec): 180	
Only in acquire	



g. Passive / Inner trigger X-Ray Synchronization Configuration.

X-Ray Synchronization Mode: Passive
Integration Unit Port:
Exposure Window (msec): 30000
Read-Out Delay (msec): 10

h. Integrated / Bucky controlled configuration.

(Note this configuration requires additional hardware components.)

X-Ray Synchronization Mode: Bucky
Integration Unit Port: COM3 💌
Exposure Window (msec): 1000
Read-Out Delay (msec): 10

i. Network interface configuration section is for dual panel support. For all single panel configurations, it should be configured as follows.

Network Interface
Local IP: 192.168.8.188
Local Port: 28000
Panel IP: 192.168.8.8
Connection: None
Wired Adapter
-DISABLED-
Manage
WiFi Adapter
-DISABLED-
Manage
WiFi SSID: iray-ap-ssid
WiFi Key: 12345678

2. Verifying IP address configuration

- a. The iRay 1717M2.5 Flat panel Detector requires the network adapter used to connect to the panel to be configured to the IP address of 192.168.8.188 .
- b. Left Click "Start" > Left click "control panel" >



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c. Left click "view network status and tasks."



d. Left click "Change adapter Settings."



e. Right click the network adapter connected to the FPD > Left click properties (note: The recommended network adapter to be used for the iRay 1717M2.5 FPD is the Intel Gigabit CT)



Network Connections					<u>- 0 ×</u>
G - Network and Inte	Network Connections	s - 🛛 🕶	Search Network (Connections	<u> </u>
File Edit View Tools Advanced	Help	postion Donomo H		=	
iRay 1717M2.5 Unidentified network Disable Status Diagnose Bridge Connections	Adapter	Wired Network Network cable unplug Intel(R) Ethernet Cor	gged nnection I217-LM		
Create Shortcut Delete Rename					
1 item selected					

f. Left click to Highlight "Internet protocol version 4 (TCP/IPV4)" > left click "Properties."

🏺 iRay 1717M2.5 Pro	perties	×
Networking Sharing		
Connect using:		
Intel(R) Gigabit	Internet Protocol Version 4 (TO	CP/IPv4) Properties
	General	
This connection uses Image: Client for Mic Image: Client for Mic Image: Client for Mic Image: Client for Mic	You can get IP settings assigned this capability. Otherwise, you n for the appropriate IP settings.	d automatically if your network supports need to ask your network administrator
File and Print	Obtain an IP address auto	matically
✓ Internet Prot	• Use the following IP addre	ss:
🗹 🔺 Link-Layer T	IP address:	192 . 168 . 8 . 188
Cink-Layer I	Subnet mask:	255.255.255.0
Install	Default gateway:	
Description	C Obtain DN5 server address	s automatically
Transmission Contr wide area network	Use the following DNS serv	ver addresses:
across diverse inte	Preferred DNS server:	· · ·
	Alternate DNS server:	
	Validate settings upon exi	it Advanced
		OK Cancel

3. <u>Configuration and Calibration Utility IDemo 2.0.0.5</u>

- a. Begin configuration and calibration is done via the Idemo Utility .
- b. Click Start > left click iRay (My computer Icon) > double click "Local Disk (C:)" > Use windows explorer to Browse to C:\Opal\Plugins 32\iRayMK3\



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OPALStudyList		IRAY _	
Snipping Tool		🚱 🖓 🖳 🕈 IRAY 🔹 🔹 🌠 Search IRAY	2
Notepad +	OPAL	Ele Edit View Iools Help	\bigcirc
Paint •	Documents	Hard Disk Drives (2)	
Getting Started	Pictures	Local Disk (C:)	
Connect to a Projector	IRAY	Music 79.1 GB free of 117 GB	
Calculator	Control Panel	Videos	
Sticky Notes	Devices and Printers	IRAY A Devices with Removable Storage (2)	
TeamViewer 7 Host	Default Programs	Local Disk (C:)	
SQL Server Management Studio	Help and Support		•
All Programs Search programs and files	👔 Shut down 🕨	OPAL-PC Workgroup: WORKGROUP Processor: Intel(R) Core(TM) i3-4130 CPU @ 3.40GHz	
🍠 Start 🥖 🏹 🚺 🔅 🖬 🔇	à	4 items	

c. Double click IDemo_Interface



d. Select Start > Connect .







e. Select Config.

Basic Configuration						ControlBox Configuration	
Main Version:	1.1.1.7		Trigger:	Inner 💌		Version:	
Read Version:	1.1.0.2		SN:	VV0720C174209		Product type:	
Product type:	29		Temperature:	0.00	? R	SN:	
VT:	1.68	v	Humidity:	0.00	% R	HVG Prep On Level	
PGA:	5		Tube Ready Time:	800	ms	C Low Valid C High Valid	
Time Span:	1800	ms	Exp Window:	30000	ms	HVG XRay Enable In Level	
Acquire Delaw	500	mc	Eat Dolay	1000		C Low Valid O High Valid	
Acquire Delay.	125		Inner Delay:		me	HVG XRay On Level	Reset ROM
Integrate:	120	μs	-Svochox	Jo	1113		
Clear Time:	500	ms	Tube Ready Time:	0	ms R W	Low Valid C High Valid	Write(ROM)
Low Va	id O High Valid		Offeet Made			HVG YPay Sync In Level	
			Pre Mode:	0		Low Valid High Valid	Read(ROM)
Detec	tor Auto Clear: 🔽		Offset Mode	No.			
			onsermode.			Dynamic Configuration	Write
Row Pre Delay:	20	µs Dete	ector Auto Clear Period:	2000	ms		
Row Post Delay:	20	μs	Pkts Interval Time:	30	μs	AFE Config: 0	
FPD			PC			AFE Mode: 0	Read
MAC: 05	06 07 08	09 00	MAC: 0A 0B	OC OD	0E 00	Sync EXP Delay Time: 0 ms	
192	168 8 8	Derts 27888	192 168	8 188 Devi	tu 28000	Sync EXP Time: 0 ms	Reset
IP: 102.	100.0.0	Port: 12/000	IP: 152 - 100			TFT Integrate Delay: 0 ms	
Mammo			AEC Main Times			Frame Number: 0	Exit
Exposure Mode:			AEC Main Time:		ms	Binning Mode: 1*1	
Dyna Offset Mode:	0		Dyna Offset Time:	0	ms	Zoom Mode: no zoom	
Correct Folder:	0					Dynamic:	
Sensor						Update Firmware	
Read Grid Sta	us Read Shock	Log Clear Shock Log	Shock Threshold:	0	RW	Update Type:	
						Select Update Reload	

f. Standard configuration for Calibration are:

Trigger: Inner

Exp Window: 30000

After those configurations have been verified or changed, left click "Write (ROM)" > left click **Exit**.

g. Remove all objects from field of view including the grid and bucky cover > Set SID to 60" > align panel to tubehead > open collimator to ensure full panel coverage.

(NOTE: If using an integrated generator, it must be configured to make exposure in Direct Mode. Run the manufacturers software parallel to IDemo to control the generator settings, or adjust KV and MAS from the generators console.)

h. Turn on post offset using the offset dropdown on the bottom right hand corner. Click **Create** to start the calibration.

Correction
Offset: POST 💌
Gain: NO 💌
Defect: NO 💌
Create



i. Type 6000 in the expected gray value field and click new gain point. Estimated exposure level for the 6000GV target is 72kv 4.0mas

Correction Wizard	Correction Wizard
Gain Defect Dynamic	Gain Defect Dynamic
PREP Acquire PREP Acquire	PREP Acquire PREP Acquire
Expected Average Expected Gray Value >> Currer Average 0 Certer Average 0 Select Select	Epected Average Selected Gain (9) Epected Gay Value Selected Gain (9) Solo Curret Average (0) New Gain Port Select
Create Gain Conext File	Create Gain Correct File
OK	OK

j. Select PREP..

Correction Wizard	
Gain Defect Dynamic	
	PREP Acquire PREP Acquire
Expected Average Expected Gray Value [6000 New Gain Port.	New Port Selected Gain 0 Current Average 0 Select
	Grede Dan Correct File
	OK

Watch for the "Exposure enabled" status in the panel activity section of IDemo.

	ownestion Mixand			
	Gain Defect Dynamic			1
		PREP Acquire PREP Acq	uire	
	Expected Average	New Point	Selected Point	ts
	Expected Gray Value	Selected Gain Ju		
	6000	Current Average 0		
		-> Center Average 0 ->		
	New Gain Point	Select		
		Create Gain Correct File		
Í				ок
		Pos(X:2875 Y:1503) Value: 16383	0 (ms)	Exposure enable

Make an exposure. The Panel activity section states the following commands image getting... (delay time:x), exposure prohibit (post offset), exposure enable (post offset), got image, then the center average values populates.

Review the Center average value, it needs to be +/- 100 of your expected target value of 6000.

If it is not within the range, adjust KV and mAs, select **PREP** again, wait for "Exposure enabled," and make an exposure.

If it does land within the range of +/- 100 of the 6000 gray value > click Select and it is added to the list on the right side as part of the calibration.

Make a total of five (5) exposures of the 6000 gray value field.

I. After all exposures have been completed and added to the calibration list > select the **Create Gain Correct** file.



Correction Wizard
Gain Defect Dynamic
PREP Acquire PREP Acquire
Expected Average New Point Selected Gain 5 Expected Gray Value Selected Gain 5 1: 5787, 6055 6000 Current Average 5798 1: 5784, 6055 IDerno I: 5798, 6068
Create Gain Correct File

m. Exit the gain calibration screen > turn off post offset > click **Create** > click the **Defect** tab.

Correction —	
Offset: NO	•
Gain: NO	-
Defect: NO	•
Create	

n. Select current frame 1 and click Start creating (NOTE: Stay as close as possible to the on screen requested KV value.) Click PREP. Make an exposure within 30 seconds and wait until it posts the "got" image in red . Review the center avg value and make sure it is +/- 100 of the Target gray value. If the value is what is expected, select the Current drop down, and select the next highest Frame > select Create > select PREP> makes your next exposure.



o. After all 19 images have been exposed click Create Defect.

ain Defect			
	PREP Acquir	re PREP Acquire	
The	defect file was cr	eated success	fully!
Please set expected gray value: Get the light image: 12/19,(Aver Please set expected gray value: Get the light image: 13/19,(Aver Please set expected gray value: Get the light image: 14/19,(Aver Please set expected gray value: Get the light image: 15/19,(Aver Please set expected gray value: Get the light image: 16/19,(Aver Please set expected gray value: Get the light image: 17/19,(Aver Please set expected gray value: Get the light image: 18/19,(Aver Please set expected gray value: Get the light image: 18/19,(Aver Please set expected gray value: Get the light image: 19/19,(Aver Please set expected gray value: Get the light image: 19/19,(Aver The defect file creating The defect file was created succ	11000, [kV=70] for image: 12/19 age:10641; Center:11067; Lost Pac 11000, [kV=70] for image: 13/19 age:10637; Center:11062; Lost Pac 11000, [kV=70] for image: 14/19 age:10641; Center:11068; Lost Pac 11000, [kV=70] for image: 15/19 age:10641; Center:11067; Lost Pac 11000, [kV=70] for image: 16/19 age:10632; Center:11057; Lost Pac 11000, [kV=70] for image: 17/19 age:10637; Center:11064; Lost Pac 11000, [kV=70] for image: 18/19 age:10652; Center:11080; Lost Pac 11000, [kV=70] for image: 19/19 age:10645; Center:11071; Lost Pac	ketmo) ketmo) ketmo) ketmo) ketmo) ketmo)	
	aate Light File		
Create Offset	Current: 19	Start creating	Create Defect
		Auto Completion	Create Most Gain

- p. Select Create Most Gain.
- q. Exit the Correction wizard > Exit IDem.o
- r. Copy the entire directory from C:\Opal\plugins32\iRayMk3\res\correct\panel_sn to c:\Opal\data\default\correct\panel_sn
- s. Launch Opal Or Ultra and take some test exposures.

