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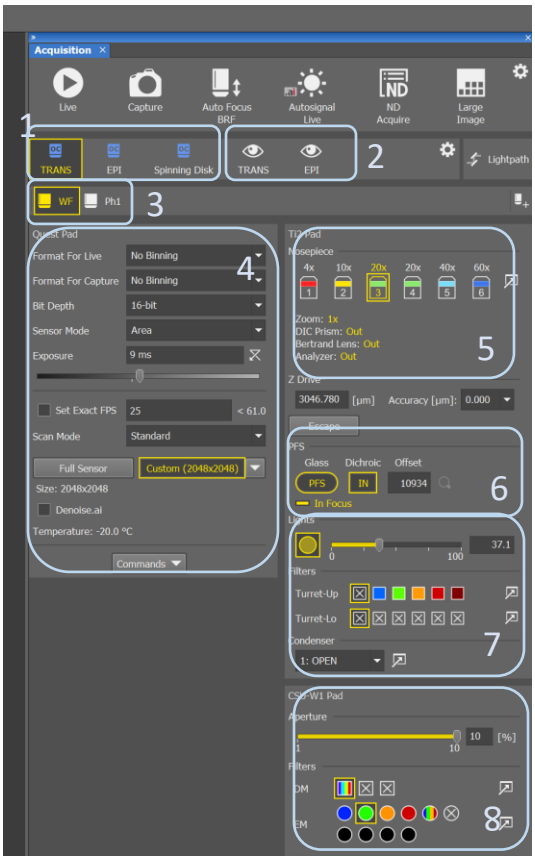
Nikon CSU-W1 Spinning Disk Confocal Condensed User Guide

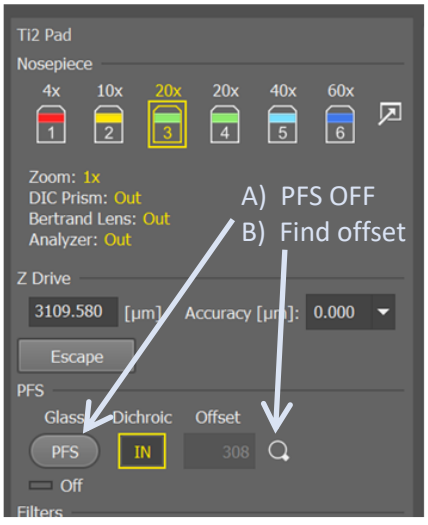
Software overview

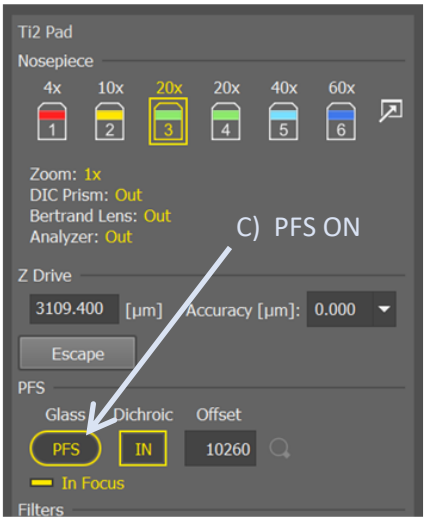


1) Microscope settings to camera
2) Microscope settings to eyepieces
3) Microscope subsettings (user adjustable)
4) Camera settings
5) Objective lenses
6) PFS (see below)
7) Widefield filters (Sola Lamp excitation)
8) Spinning disk filters (Laser excitation)

Perfect Focus System (PFS)

Using the Perfect Focus System enables you to hold a particular focal plane even with changing solutions, changing temperatures or over extended periods of time.





PFS instructions:

A) Make sure PFS is off.
B) Find the offset.
C) It should now be on and “In Focus”.

You can test this by putting something heavy on the stage while you are imaging. If PFS is off, it will go out of focus. If PFS is on, it will not. When performing multi-dimensional acquisitions, the PFS checkbox appears in the channels tab even when you are not using multiple channels.

Objectives

Mag	NA	Immersion media	Coverslip thickness (mm)	Correction collar	Working distance (mm)	Objective type
4x	0.2	Air	--	--	20	CFI60 Plan Apochromat Lambda D 4x
10x	0.3	Air	0.17	--	16	CFI60 Plan Fluor Phase Contrast DLL 10x Ph1
10x	0.5	Glycerin	0-0.17	Refractive index 1.33-1.51	5.5	CFI Plan Apo LWD 10x Glycerin Immersion
20x	0.45	Air	0-2	Coverslip thickness	6.9-8.2	CFI60 Super Plan Fluor ELWD 20x Ph1
20x	0.75	Oil, silicone oil, glycerin or water	0-0.17	Immersion medium and coverslip thickness	0.51–0.33	CFI60 Plan Fluor 20x Multi-Immersion
20x	0.8	Air	0.17	--	0.8	CFI60 Plan Apochromat Lambda D 20x
40x	1.15	Water	0.15-0.19	Coverslip thickness	0.59-0.61	CFI60 Apochromat Lambda S LWD 40x Water Immersion
60x	1.42	Oil	0.17	--	0.15	CFI60 Plan Apochromat Lambda D 60x Oil
100x	1.45	Oil	0.17	--	0.13	CFI60 Plan Apochromat Lambda D 100x Oil

Standard objective lenses (not phase compatible)
Objective lenses that are phase compatible
Specialty lenses kept on the shelf (not on the turret)

Widefield filters (Sola excitation)

Name	Excitation band (nm)	Dichroic (nm)	Emission band (nm)
DAPI (Hoechst, Pacific Blue, Coumarins, Blue dyes)	378/52 (352-404)	409	447/60 (417-477)
FITC (Fluorescein, GFP, Alexa-488, Cy2, Green dyes)	466/40 (446-486)	495	525/50 (500-550)
TRITC (rhodamine, Cy3, Alexa-568, mCherry, tdTomato, PE)	554/23 (542.5-565.5)	573	609/54 (582-636)
Cy5 (Alexa-647, APC, miRFP)	618/50 (593-643)	652	698/70 (663- 733)
Cy7 (Alexa-750, Dylight-755, Zombie NIR)	708/75 (670.5-745.5)	757	809/81 (768.5-849.5)

Spinning disk filters (Laser excitation)

Name	Excitation line (nm)	Emission band (nm)
DAPI (Hoechst, Pacific Blue, Coumarins, Blue dyes)	405	455/50 (430-480)
FITC (Fluorescein, GFP, Alexa-488, Cy2, Green dyes)	488	525/36 (507-543)
TRITC (Rhodamine, Cy3, Alexa-568, mCherry, tdTomato, PE)	561	605/52 (579-631)
Cy5 (Alexa-647, APC, miRFP)	640	705/72 (669-741)

Alexas and DyLights are named for their excitation wavelengths.