

### nTune<sup>™</sup> – Rubik Grayscale & Color Accent User Programming Guide

The nTune programming guide provides an overview of the Grayscale and Color Accent Mainstream Dynamic Features application in SensorView<sup>™</sup> with programming instructions for an nLight<sup>®</sup> enabled Acuity Brands Rubik luminaire with nTune technology.

### Features - Grayscale and Color Accent

- Full control over Grayscale speed on second pole
- Full control over Color Accent color on second pole
- Works will all existing nLight networks switches, sensors, and controls

Application Layout:







Mainstream Dynamic Color Accent with nTune<sup>™</sup> Technology

#### **Bill of Materials**

Symbol	Qty	Product	
	16	Rubik	nLight Enabled Fixtures
	1	nPODM 2P DX GRSC	On/Off, Raise/Lower Intensity, Grayscale Speed Control
	1	nPODM 2P DX COLOR	On/Off, Raise/Lower Intensity, Color Accent Color Control
	1	nWV PDT 16	Dual Technology Wide View Occupancy Sensor
	1	nPS 80	Bus Power Supply (80mA)
Options			
	1	nCM ADCX (RJB)	Automatic Dimming Control Photocell

NOTE: nLight enabled fixtures each consume either ~3mA of nLight bus power without a sensor or ~6mA of nLight bus power with a sensor:

- Bus power is supplied by power/relay packs (nPP16 family and nPS 80), power supplies (PP20 PL BP and nPANELS), nLight enabled fixtures (non-EMG or TUWH options), and bridges
- nPP16 D ER and nPP20 PL are self-powered and do not contribute bus power to the nLight zone
- Power for all bus power consuming devices is delivered via the CAT-5e
- nLight zones need to have a net positive amount of bus power

### **Typical nLight Bus Power Calculations**

nLight enabled luminaires with nTune



# Available nLight Wallpods with default Rubik control



WHITE	GRAY
SLOW	FAST
ON	
OFF	▼





nPODM 2P DX GRSC

nPODM 4S DX GRSC

nPODM 2P DX COLOR

nPODM 4S DX COLOR

## nPODM 4S DX GRSC factory default programming

Label	Grayscale Speed	Percentage
White	Static White (all cells at the same luminance)	Off (0%)
Gray	Static Grayscale	1%
Slow	Dynamic Grayscale with a slow speed	2%
Fast	Dynamic Grayscale with a fast speed	100%

### nPODM 4S DX COLOR factory default programming

Label	Cc	Percentage	
White	Static White (Color Accent cell matches other cells)	#FFFFF	Off (0%)
Color 1	Ferrari Red	#FF1C00	2%
Color 2	Dark Pastel Green	#03C03C	52%
Color 3	Denim	#1560BD	68%

## **Application Examples**

Grayscale



#### Static White Mode



**Color Accent** 



## Programming Rubik through SensorView

Acuity Brands Rubik luminaires with nTune technology have an nLight model nIO EZDL/EZDA GRSC or nIO EZDL/EZDA COLOR embedded device which displays as a dual pole device within SensorView.

#### **Rubik Grayscale**

- **Pole 1:** Intensity control maintains all of the same settings as the current nIO EZ PH/nIO EZDL CCT device, including capability to track switch/photocell/occupancy channels.
- **Pole 2:** Grayscale Speed ONLY tracks switch channels; does not have settings to track photocell/occupancy channels. Grayscale Speed pole does not support global channels

			Log Out (administrator
		SENSORVIEW Devices	Control Network Channels Management
		Properties Current Se	ttings Default Settings Statu
we Defaults Save Defaults and Apply Now		nIO EZDL GRSC (0136FB9F	) (nIO EZDL GRSC) [ZoneDevice]
Basic	Rubik		
Override:	Contrast Level: Standard		Pattern Number 3 Cell:
Normal			Random Numbered
Dimming	Speed Percent:	75%	Speed Switch Tracking:
Follow Photocell Mode:		Off On	Enabled Disabled
Disabled			
Dimming Rate:		Idle Time Until Dim:	
Normal	3	7.5 min	
Low / High Trim Levels:	101	Maintain Dim Level when Vacant:	
	100%	No Yes	
Unoccupied Dim / Occupied Bright Levels:		WallPod Dimming Adjustments:	
	1%	Permanent	
	- 100%		
Photocell			
Dual Zone Offset:			
0%			
Special Modes			
Special Operating Modes:		Timed Expiration of Manual Off:	
Normal	3	Disabled Enabled	
		الخصيف	
Occupancy Expiration of Manual Off:			
Dirabled Enabled			
Disabled Enabled			



These settings each have the following operation:

• Contrast Level: Allows the user to set the contrast of the grayscale luminaire to Standard, Enhanced, or Maximum



- Grayscale Speed Percent: Current grayscale speed of luminaire as a percentage. The grayscale speed percentage maps to luminaire behavior via the following chart:
- Speed Switch Tracking: Allows user to enable/disable switch tracking commands for the grayscale speed
- Pattern Number 3/5/9 Cell: Sets the luminaire to display a Random grayscale pattern when in static grayscale mode (default) or a particular pattern number (to assist with patterning in an installation). The pattern number has no effect in dynamic gray mode (2%-100%)

Percentage	Behavior
Off (0%)	Static White (all cells at the same luminance)
1%	Static Grayscale Pattern
2%	Dynamic Grayscale with a slow speed
¥ ¥ ¥	¥ ¥ ¥
100%	Dynamic Grayscale with a fast speed

#### **Rubik Color Accent**

- Pole 1: Intensity control maintains all of the as the current nIO EZ PH/nIO EZDL CCT devi capability to track switch/photocell/occupand
- Pole 2: Color Accent Color ONLY tracks sv does not have settings to track photocell/oc channels. Color Accent Color pole does not global channels.

Rubik Color Accent	
<ul> <li>Pole 1: Intensity control - maintains all of the same sett as the current nIO EZ PH/nIO EZDL CCT device, includi capability to track switch/photocell/occupancy channels</li> </ul>	ngs Vetwork Vetwork
<ul> <li>Pole 2: Color Accent Color – ONLY tracks switch chan does not have settings to track photocell/occupancy channels. Color Accent Color pole does not support global channels.</li> </ul>	els; Find devices Save Defaults Save Defaults and Apply Now Follow Protocell Middle: Disabled Disable
Color Number:     Color Nu       54%     Off       Custom Color 93%:     Custom Custom (ustom)       #cc4e5c     #dc143c       Hue     #dc143c       Saturation     Custom (ustom)       #960018     Custom (ustom)       #g8817b     Custom (ustom)       Custom (ustom)     #g8817b       Custom (ustom)     #g8817b       Custom (ustom)     #g8817b	aber Switch Tracking: Disabled olor 94%: olor 96%: v olor 98%: v olor 98%: v olor 98%: v olor 90%: v olor 100%: v olor
<ul> <li>These settings each have the following operation:</li> <li>Color Number: Current color accent color of luminaire a percentage. The color will map to luminaire behavior the following chart</li> </ul>	IS IS Color Number
Color Number Switch Tracking: Allows user to enable/	

- Color Number Switch Tracking: Allows user disable switch tracking commands for the color accent color
- Custom Color: Allows the user to replace color numbers 93-100 with custom colors

# Programming Rubik through SensorView – Rubik Color Number Chart

Percentage	Color Name	Color	Percentage	Color Name	Color
1%	Pastel Red	#FF6961	26%	Pastel Brown	#836953
2%	Ferrari Red	#FF1C00	27%	Brown	#964B00
3%	Chestnut	#CD5C5C	28%	Sepia	#704214
4%	Jasper	#D73B3E	29%	Dark Brown	#654321
5%	Maroon	#800000	30%	Dark Lava	#483C32
6%	Manual Maroon	#5A1414	31%	Saffron	#F4C430
7%	Dark Sienna	#3C1414	32%	Amber	#FFBF00
8%	Atomic Tangerine	#FF9966	33%	Dark Goldenrod	#B8860B
9%	Flame	#E25822	34%	Lemon	#FFF700
10%	Dark Coral	#CD5B45	35%	Dandelion	
11%	Dark Chestnut	#986960	36%	Citrine	#E4D00A
12%	Dark Pastel Red	#C23B22	37%	Dark Khaki	#BDB76B
13%	Rust	#B7410E	38%	Lime	
14%	Burnt Umber	#8A3324	39%	Pear	#D1E231
15%	Auburn	#6D351A	40%	Apple Green	#8DB600
16%	Sunset		41%	Olive	#808000
17%	Pastel Orange	#FFB347	42%	Army Green	#4B5320
18%	Fawn	#E5AA70	43%	Inchworm	#B2EC5D
19%	Dark Orange	#FF8C00	44%	Celadon	
20%	Gamboge	#E49B0F	45%	Dollar Bill	#85BB65
21%	Desert	#C19A6B	46%	Camouflage Green	#78866B
22%	Safety Orange	#FF6700	47%	Green	#008000
23%	Copper	#B87333	48%	Aquamarine	#7FFFD4
24%	Burnt Orange	#CC5500	49%	Clover	#00FF6F
25%	Golden Brown	#996515	50%	Ash Grey	#B2BEB5

# Programming Rubik through SensorView – Rubik Color Number Chart

Percentage	Color Name	Color	Percentage	Color Name	Color
51%	Caribbean Green	#00CC99	76%	Bright Lavender	#BF94E4
52%	Dark Pastel Green	#03C03C	77%	Violet	#8F00FF
53%	Jade	#00A86B	78%	Purple Heart	#69359C
54%	Cadmium Green	#006B3C	79%	Magenta	#FF00FF
55%	British Racing Green	#004225	80%	Pastel Violet	#CB99C9
56%	Cyan	#00FFFF	81%	Byzantine	#BD33A4
57%	Sky Blue	#87CEEB	82%	Plum	#8E4585
58%	Pastel Blue	#AEC6CF	83%	Dark Magenta	#8B008B
59%	Dark Cyan	#008B8B	84%	Byzantium	#702963
60%	Cerulean	#007BA7	85%	Classic Rose	#FBCCE7
61%	Dark Slate Gray	#2F4F4F	86%	Pastel Magenta	#F49AC2
62%	Alice Blue	#F0F8FF	87%	Sky Magenta	#CF71AF
63%	Cornflower Blue	#6495ED	88%	Bright Pink	#FF007F
64%	Azure	#007FFF	89%	Dark Raspberry	#872657
65%	Air Force Blue	#5D8AA8	90%	Eggplant	#614051
66%	Glaucous	#6082B6	91%	Dark Pink	#E75480
67%	Steel Blue	#4682B4	92%	Dark Scarlet	#560319
68%	Denim	#1560BD	93%	Dark Terra Cotta	#CC4E5C
69%	Cadet	#536878	94%	Crimson	#DC143C
70%	Cobalt	#0047AB	95%	Cordovan	#893F45
71%	Dark Cerulean	#08457E	96%	Carmine	#960018
72%	Oxford Blue	#002147	97%	Rosewood	#65000B
73%	Blue	#0000FF	98%	Cinereous	#98817B
74%	Duke Blue	#00009C	99%	Pastel Gray	#CFCFC4
75%	Royal Blue	#002366	100%	Battleship Grey	#848482

## Local Switch Channels Tracking Screenshot

Admin Updates Overview	1				SENSORVIEW Devices	Log Out (administrator)
9 selected	Labels IDs	Channels				Local Channels Global Channels
Find devices	Ŷ	Save	_			
Commissioning Tool	•	Curitals	0	au Dhataaall		
▼ Port 1	•	Switch	<b>Occupan</b>	cy Photocell		
▼ nIO EZDL COLOR (0136FB6F)		Channel 1	Off On	1 broadcasting devices	9 tracking devices	8
Pole 1						
Pole 2				nPODM 2P DX (00E11F3A) Pole 1	nIO EZDL GRSC (0136FB0A) F nIO EZDL GRSC (0136FB9F) F	role 1 Pole 1
nIO EZDL COLOR (013735C6)					nIO EZDL GRSC (013734E0) F	'ole 1
Pole 1					nIO EZDL GRSC (0137360E) F	ole 1
Pole 2					nIO EZDL GRSC (013736A8) F nIO EZDL GRSC (01373764) F	role 1 Pole 1
nIO EZDL COLOR (01373678)					nIO EZDL GRSC (0138950D) F	vole 1
Pole 1					10 EZDL GRSC (01389674) F	ole I
Pole 2		A 2: Channel 2	Off On	1 broadcasting devices	9 tracking devices	8
nIO EZDL COLOR (0138946F)						
Pole 1				nPODM 2P DX (00E11F3A) Pole 2	nIO EZDL GRSC (0136FB0A) F	ole 2
Pole 2					nIO EZDL GRSC (01301 B91) F	role 2
nIO EZDL GRSC (0136FB0A)	=				nIO EZDL GRSC (0137360E) F nIO EZDL GRSC (0137360F) F	ole 2 Pole 2
Pole 1					nIO EZDL GRSC (013736A8) F	ole 2
Pole 2	<b>×</b>				nIO EZDL GRSC (01373764) F	vole 2
▼ nIO EZDL GRSC (0136FB9F)	•				nIO EZDL GRSC (01389674) F	ole 2
Pole 1		a 31 Channel 3	Off On	1 broadcasting devices	4 tracking devices	•
Pole 2				1 brouddasting devices		8
nIO EZDL GRSC (013734E0)	•			nPODM 2P DX (0110CD79) Pole 1	nIO EZDL COLOR (0136FB6F)	Pole 1
Pole 1					nIO EZDL COLOR (013735C6) nIO EZDL COLOR (01373678)	Pole 1 Pole 1
Pole 2					nIO EZDL COLOR (0138946F)	Pole 1
<ul> <li>nIO EZDL GRSC (0137360E)</li> </ul>	•		(a) (a)			
Pole 1		Channel 4	Off On	1 broadcasting devices	4 tracking devices	8
Pole 2				nPODM 2P DX (0110CD79) Pole 2	nIO EZDL COLOR (0136FB6F)	Pole 2
nIO EZDL GRSC (0137360F)	•				nIO EZDL COLOR (013735C6)	Pole 2
Pole 1					nIO EZDL COLOR (01393076)	Pole 2
Pole 2	<b>~</b>					
nIO EZDL GRSC (013736A8)	•	New Channel				
Pole 1						
Pole 2						
🔻 nIO EZDL GRSC (01373764)	-					
Pole 1						
Pole 2	<b>×</b>					
▼ nIO EZDL GRSC (0138950D)	-					
Pole 1						

#### Scheduling Rubik Luminaire Changes Through Profiles

System scheduling can be used to adjust the grayscale speed, grayscale contrast, color accent color number, and color accent custom color 100 through the day – this is accomplished by creating "global profile scenes" at scheduled times of the day.

#### There are two notes that should be applied/considered when using this feature:

- "Global profile scenes" modify all device settings to defaults, except for those added in the settings window. Therefore, if the luminaire intensity ("occupied bright level") has been modified by the end user from a dimming WallPod, the "WallPod dimming adjustments" setting should be set to "permanent" to stop the luminaire intensity from changing when each scheduled event implements. The same process applies to the "override" setting if the lights were overridden off by a WallPod device.
- The "dimming rate" setting on the nIO device can be used to adjust the amount of time to transfer from one setting to another when a "profile scene" implements.
  - Slowest 300 seconds
- Faster 2 seconds
- Slow 15 seconds
- Faster 1 second

• Normal - 5 seconds

## Example of "global profile scenes" created in SensorView





