

DESCRIPTION

4 inch LED square recessed downlight designed for glare free, even illumination. Featuring a two-stage diffused reflector system producing smooth distribution with excellent light control and low aperture brightness. Lumen packages range from 500 to 6000 with color temperatures of 2400K, 2700K, 3000K, 3500K, 4000K, and 5000K. VividTune: Dim-to-warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space. Tunable white technology - adjust the color temperature from warm white to cool white while independently controlling intensity.

Catalog #	Type
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES

Lower Shielding Reflector

Painted die cast aluminum or anodized aluminum lower reflector with a lensed upper optical chamber providing superior lumen output with minimal source brightness. Anodized reflectors are offered in all Portfolio Alzak® finishes. Available with non-conductive polymer trim. Reflector is retained with two torsion springs holding the flange tight to the finished ceiling surface. Plaster lathing ring accessory offered for flush reflector transition.

Plaster Frame / Collar

Galvanized steel plaster frame with adjustable collar adjusts for up to 2" thick ceilings and rotates +/- 7.5°.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

Junction Box

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring and push in lever connectors.

Thermal

Aluminum heat sink conducts heat away from the LED module for optimal performance and long life.

LED

Chip on board with a multitude of highly efficient white LED's, combined with a high reflectance upper reflector and convex transitional lens produce even distribution with no pixilation. Lumen output shall not decrease by more than 10% over the minimum life of 55,000 hours (L90 > 55,000 hours) Auto resetting, thermally protected,

LED's are turned off when safe operating temperatures are exceeded. Color variation within 2-step MacAdam ellipses. Quick disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80, 90 or 97 CRI. **D2W™** – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources. **W2N** - Tunable white CCT range 2700K to 6500K or 2000K to 5000K, 90 CRI.

Driver

Standard 120-277V 0-10V dimming driver provides flicker free dimming from 100% to 1%. Optional 120-277V phase dimming, <1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture. Distributed low voltage power system combines power, lighting, and controls with ease of installation.

Connected Lighting System Options

Two WaveLinX connected systems to choose from. Refer to WaveLinX system specifications and application guides for details.

WaveLinX Wireless System Tilemount Sensor Kit

- WaveLinX Wireless WTA tile mount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS - RealTime Location Services available.

WaveLinX Lite System Tilemount Sensor Kit

- WaveLinX Lite WTK tile mount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

WaveLinX Tilemount Kits Application

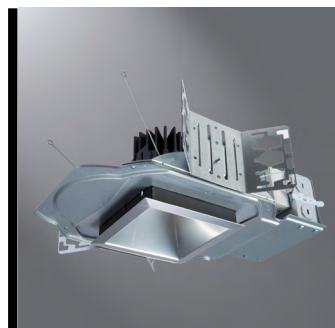
- The WTA and WTK tilemount kits include a control module mounted on the luminaire junction box via 1/2" knock-out, and a tilemount sensor on 54-inch whip; for ceiling installation by direct-mount spring clips or via mounting bracket in octagon ceiling boxes.
- The WTA and WTK tilemount kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.

Code Compliance

Thermally protected and cULUS listed for wet locations with covered ceiling. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. 2000 lumen and above are non-IC rated - insulation must be kept 3" from top and sides of housing. IC rated up to 1500 lumens. 5000 lumen and above are marked spacing and must follow spacing requirements. RoHS Compliant. Photometric testing completed in accordance with IES LM 79. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.

Warranty

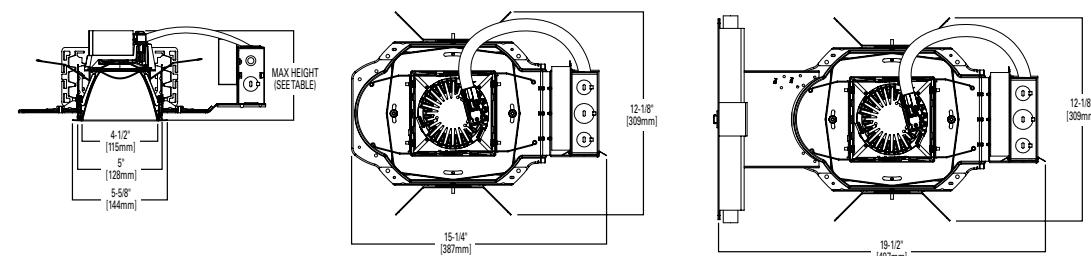
5-year warranty



LDSQ4B EU4B 4LBSQ

500-6000 Lumen LED

Die cast or Anodized Aluminum
Square Downlight
New Construction



	1000-2000 LUMENS	3000-5000 LUMENS	6000 LUMENS
STANDARD	5-3/8" [137mm]	5-3/8" [137mm]	7-1/8" [181mm]
SHALLOW	4-7/16" [113mm]	4-7/16" [113mm]	NA

VividTune
color tuning solutions
D2W™



Refer to ENERGY STAR® Qualified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.

ORDERING INFORMATION

SAMPLE NUMBER: LDSQ4B15D010EMBOD

Housing	Lumens ¹	Voltage	Driver	Options ⁵
LDSQ4B =LED Square Downlight 4" Nominal Aperture	05 =500 lumens ¹⁶ 10 =1000 lumens 15 =1500 lumens	Blank =120-277V 3 =347V (step down transformer)	500-4000 D010 =0-10V Dimming, 1% to 100%, 120V-277V D010TR =0-10V or Line Voltage Dimming, 5% to 100%, 120V-277V DE010 =0-10V Linear Dimming, 0% to 100%, 120V-277V D5LT =Fifth Light® DALI DT6 Logarithmic Dimming, 0% to 100%, 120V-277V DMX =DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V ⁹ DL2 =Lutron® Hi-Lume Forward Phase Dimming, 1% to 100%, 120V Only DLV =Low voltage dimming driver (1-100%) for use with DLVP system (3000 lumen and below) ^{6,10}	EMBOD =Bodine® Emergency Module with Remote Test Switch EMBOD7ST =Bodine® Emergency Module with Self Test Remote Test Switch EM7 =7W Emergency Module with Remote Test Switch EM14 =14W Emergency Module with Remote Test Switch EMV7 =7W Low Voltage Emergency Module with Remote Test Switch ² EMV14 =14W Low Voltage Emergency Module with Remote Test Switch ²
LDSQ4BCP =LED Square Downlight 4" Nominal Aperture, Chicago Plenum	20 =2000 lumens 30 =3000 lumens 40 =4000 lumens 50 =5000 lumens ¹² 60 =6000 lumens ¹²		5000-6000 D010TE =0-10V 1% or trailing edge 10%, 120-277V (120V only with trailing edge dimming) Tunable white 1000-2000 Lumens ¹³ 1DE010W2N2050 =0-10V dimming, 0% to 100%, 120V, 2000K - 5000K 1DE010W2N2765 =0-10V dimming, 0% to 100%, 120V, 2700K - 6500K 1D5LTW2N2050 =Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 120V, 2000K - 5000K 1D5LTW2N2765 =Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 120V, 2700K - 6500K 2DE010W2N2050 =0-10V dimming, 0% to 100%, 277V, 2000K - 5000K 2DE010W2N2765 =0-10V dimming, 0% to 100%, 277V, 2700K - 6500K 2D5LTW2N2050 =Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 277V, 2000K - 5000K 2D5LTW2N2765 =Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 277V, 2700K - 6500K	WTA = Factory installed WaveLinX sensor Kit ^{10, 15} WTK = Factory installed WaveLinX Lite Sensor Kit ^{10, 16}

SAMPLE NUMBER: EU4B10208035

Power Module	Lumen Levels ¹	CRI	Color		
EU4B =4" Universal LED Module	05 =500 lumens 1020 =1000, 1500, 2000 lumens 3040 =3000-4000 lumens 5000 =5000 lumens ¹² 6000 =6000 lumens ¹² 1015IC =1000, 1500 lumen IC rated	80 =80 CRI Minimum 90 =90 CRI Minimum 97 =97 CRI Minimum	80 CRI 27 =2700K 30 =3000K 35 =3500K 40 =4000K 50 =5000K	90 CRI 24 =2400K 27 =2700K 30 =3000K 35 =3500K 40 =4000K 50 =5000K	97 CRI 27 =2700K 30 =3000K
	Dim 2 Warm 109030D2W =1000 lumen, 90 CRI, Dim 2 Warm, IC rated 159030D2W =1500 lumen, 90 CRI, Dim 2 Warm, IC rated 209030D2W =2000 lumen, 90 CRI, Dim 2 Warm 309030D2W =3000 lumen, 90 CRI, Dim 2 Warm		Tunable white ¹³ 1020W2N902050 =1000, 1500, 2000 lumens, 90 CRI, tunable white 2000K-5000K 1020W2N902765 =1000, 1500, 2000 lumens, 90 CRI, tunable white 2700K-6500K		

SAMPLE NUMBER: 4LBSQ1LI

Trim	Distribution	Flange	Finish	
4LB =4" LED	SQ =Square Anodized Aluminum CSSQ =Cast Shallow Square, Die Cast Aluminum ⁷ PSSQ =Plastic Shallow Non-Conductive ^{5,7}	0 =White Polymer Trim Ring ¹¹ 1 =Self-flanged ⁸ 2 =White Painted Self-flanged	LI =Specular Clear ³ H =Semi-Specular Clear ³ WMH =Warm Haze ³ WH =Wheat ³ GPH =Graphite Haze ³	B =Specular Black ³ MW =Matte White MB =Matte Black ⁴ MMS =Matte Metallic Silver ⁴

Accessories

PRSQ4=Plaster Lathing Ring for use with Rimless Flange (order with polymer trim ring flange option)
LGSKT4SQIP66 = IP66 Gasket Kit

Bar Hangers

HB26=C-channel Bar Hanger, 26" Long, Pair
HB50=C-channel Bar Hanger, 50" Long, Pair
RMB22=Wood Joist Bar Hanger, 22" Long, Pair

Transformers

H347=347 to 120V Step Down Transformer, 75VA
H347200=347 to 120V Step Down Transformer, 200VA

Connected Lighting Systems^{6, 10}

WTA = Field installed WaveLinX sensor Kit¹⁵
WTK = Field installed WaveLinX Lite Sensor Kit¹⁶

Notes:

- Nominal Lumens will vary depending on selected color, driver and reflector finish.
- UL/US approved only.
- Available on anodized aluminum
- Available on cast aluminum only
- Matte white finish and self flange
- Not available with Chicago Plenum.
- Offered up to 4000 lumens
- Flange is the same finish as the reflector
- DMX fixtures default to full on upon loss of DMX signal.
- Refer to system specifications for additional information, features, and benefits. Order either factory installed option or accessory. Use with 0-10V driver.
- Not available with cast shallow

12 Product is marked spacing and must be installed with the following minimum spacing

- Center to center of adjacent luminaire: 36"
- Center of luminaire to side of building member: 18"
- Minimum overhead: 1/2"

13 Non-IC

14 WTA = WaveLinX wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with 0-10V only.

15 WTK = WaveLinX Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinX Lite system specifications)

16 Limited to D010 drivers.

ENERGY

ENERGY DATA
Sound Rating: Class A standards
(Values at non-dimming line voltage)
Minimum Starting Temperature: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)
Input Voltage: UNV (120V - 277V)
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)
Input Frequency: 50/60Hz

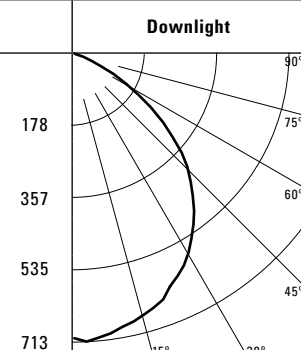
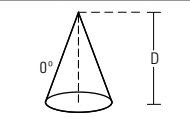
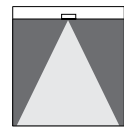
1000 Lumen D010		1500 Lumen D010	
Input Power: 11W	THD: <14%	Input Power: 15.5W	THD: <13%
120V Input Current: 0.09A	277V Input Current: 0.04A	120V Input Current: 0.13A	277V Input Current: 0.06A

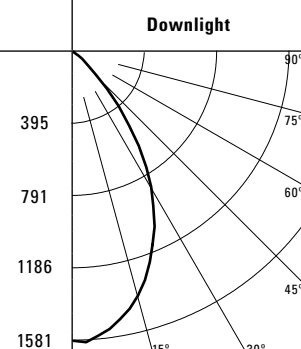
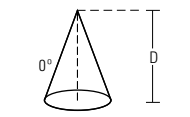
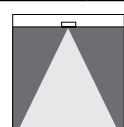
2000 Lumen D010		3000 Lumen D010	
Input Power: 21.2W	THD: <9%	Input Power: 27.6W	THD: <10%
120V Input Current: 0.18A	277V Input Current: 0.08A	120V Input Current: 0.23A	277V Input Current: 0.10A

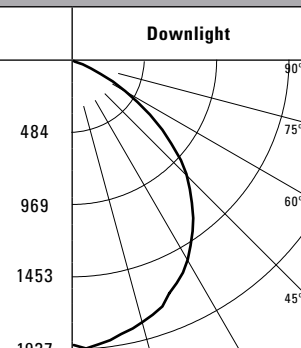
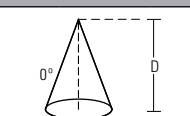
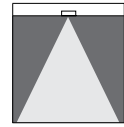
4000 Lumen D010	
Input Power: 41.6W	THD: <13%
120V Input Current: 0.35A	277V Input Current: 0.15A

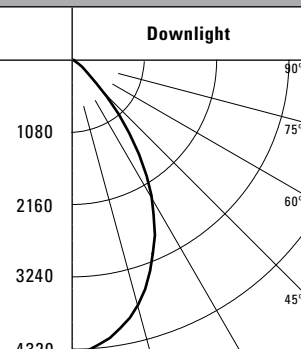
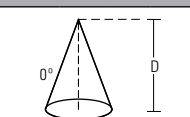
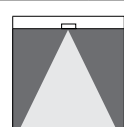
Lumens	120V		277V	
	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)
1000 Lumen D010	1.02	0.041	2.18	0.021
1500 Lumen D010	1.02	0.042	2.24	0.064
2000 Lumen D010	1.02	0.077	2.43	0.027
3000 Lumen D010	1.15	0.067	3.26	0.027
4000 Lumen D010	1.2	0.088	3.9	0.03

PHOTOMETRY

		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE																																																										
Test Number	P35089					<table><tr><th>Degrees Vertical</th><th>Candela</th></tr><tr><td>0</td><td>704</td></tr><tr><td>5</td><td>690</td></tr><tr><td>15</td><td>663</td></tr><tr><td>25</td><td>605</td></tr><tr><td>35</td><td>515</td></tr><tr><td>45</td><td>401</td></tr><tr><td>55</td><td>232</td></tr><tr><td>65</td><td>76</td></tr><tr><td>75</td><td>2</td></tr><tr><td>85</td><td>0</td></tr><tr><td>90</td><td>0</td></tr></table>		Degrees Vertical	Candela	0	704	5	690	15	663	25	605	35	515	45	401	55	232	65	76	75	2	85	0	90	0	<table><tr><th>Zone</th><th>Lumens</th><th>% Fixture</th></tr><tr><td>0-30</td><td>534</td><td>35.5</td></tr><tr><td>0-40</td><td>857</td><td>57</td></tr><tr><td>0-60</td><td>1395</td><td>92.7</td></tr><tr><td>0-90</td><td>1504</td><td>100</td></tr><tr><td>90-180</td><td>0</td><td>0</td></tr><tr><td>0-180</td><td>1504</td><td>100</td></tr></table>			Zone	Lumens	% Fixture	0-30	534	35.5	0-40	857	57	0-60	1395	92.7	0-90	1504	100	90-180	0	0	0-180	1504	100	<table><tr><th>Average Candela Degrees</th><th>Average 0° Luminance</th></tr><tr><td>45</td><td>43408</td></tr><tr><td>55</td><td>30960</td></tr><tr><td>65</td><td>13765</td></tr><tr><td>75</td><td>591</td></tr><tr><td>85</td><td>0</td></tr></table>		Average Candela Degrees	Average 0° Luminance	45	43408	55	30960	65	13765	75	591	85	0
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Module	EU4B10208035																																																																				
Trim	4LBCSSQ1MMS																																																																				
Lumens	1504																																																																				
Efficacy	107.4 Lm/W																																																																				
SC	1.19																																																																				
																																																																					

		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT				CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE	
Test Number	P35088							Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance
Housing	LDSQ4B15D010							0	1574	0-30	996	68.5	45	10500
Module	EU4B10208035							5	1550	0-40	1322	91		
Trim	4LBSQ1LI							15	1364					
Lumens	1453							25	1017					
Efficacy	103.8 Lm/W	35	440	45	97	0-60	1447	99.5	55	1868				
SC	0.91	55	14	65	4	0-90	1453	100	65	724				
		75	1	90-180	0	0	75	296						
		85	0	0-180	1453	100	85	0						
		90	0											

		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE	
Test Number	P202481					Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance
Housing	LDSQ4B40D010					0	1924	0-30	1458	35.5	45	18216
Module	EU4B30508035					5	1886	0-40	2342	57	55	15774
Trim	4LBCSSQ1MMS					15	1812					
Lumens	4110					25	1653	0-60	3812	92.7	65	10088
Efficacy	95.5 Lm/W	35	1408	0-90	4110	100	75	2368				
SC	1.19	45	1096	90-180	0	0			85	0		
		55	634	0-180	4110	100						
		65	208									
		75	6									
		85	0									
		90	0									

		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE	
Test Number	P202480					Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance
Housing	LDSQ4B40D010					0	4301	0-30	2720	68.5	45	4058
Module	EU4B30508035					5	4235	0-40	3613	91		
Trim	4LBSQ1LI					15	3727				0-60	3952
Lumens	3970					25	2779	0-90	3970	100		
Efficacy	92.3 Lm/W					35	1202				90-180	0
SC	0.91	45	265	0-180	3970	100	85	0				
		55	38									
		65	11									
		75	3									
		85	0									
		90	0									

WaveLinX Lite - WTK Tilemount Sensor



- Intuitive Android™ or Apple® iOS® app for basic system code compliant set up and configuration via Bluetooth
- Up to 28 unique areas per project site (WaveLinX Lite Bluetooth network)
- Up to 50 devices for an area, any one of 16 control zones, up to 6 occupancy sets, and custom lighting scenes
- Automatic occupancy or vacancy, sensor sensitivity, daylight dimming, etc. configurable through the app
- Refer to the WaveLinX system specifications for details



Device Security



Manual Dimmer



Occupancy Sensor



Daylighting Control



Manually Switched ON/OFF



Tuning Control

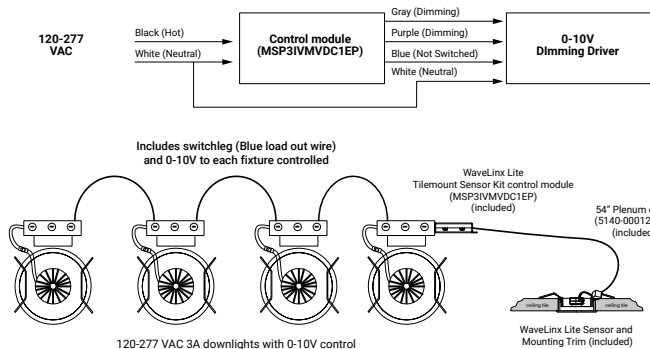


Lumen Maintenance Control

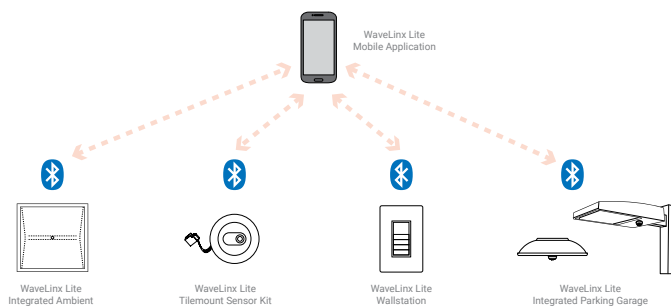


Scenes

WaveLinX Lite WTK Tilemount Wiring Diagram



WaveLinX Lite Bluetooth Enabled System



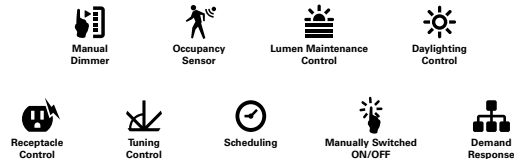
WaveLinX Wireless – WTA Tilemount Sensor



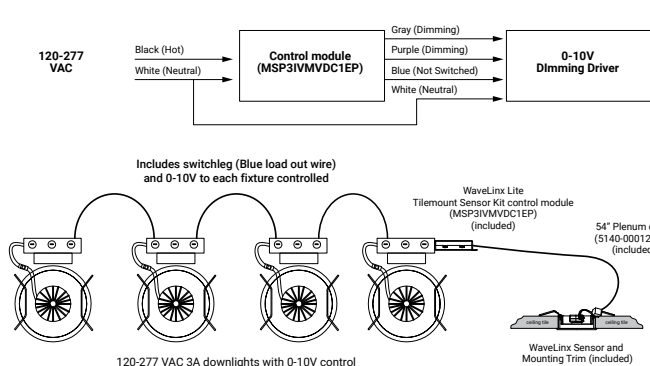
- WaveLinX Wireless functionality configures zones and customizes settings from one secure mobile app
- Automatic code commissioning that meets the strictest codes
- Fixtures and sensors integrate with Wireless Area Controller, Wall Stations, and Control Devices
- Stand-Alone Offices or Entire Building Network Installations



WaveLinX mobile app settings



WaveLinX Lite WTA Tilemount Wiring Diagram



WaveLinX Wireless Trellix Building Management Integration

