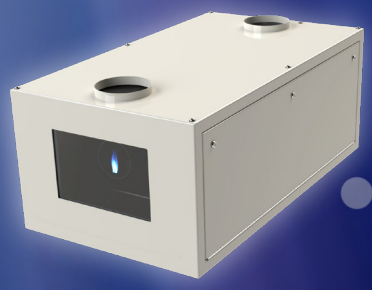
TEMPEST

Tacit

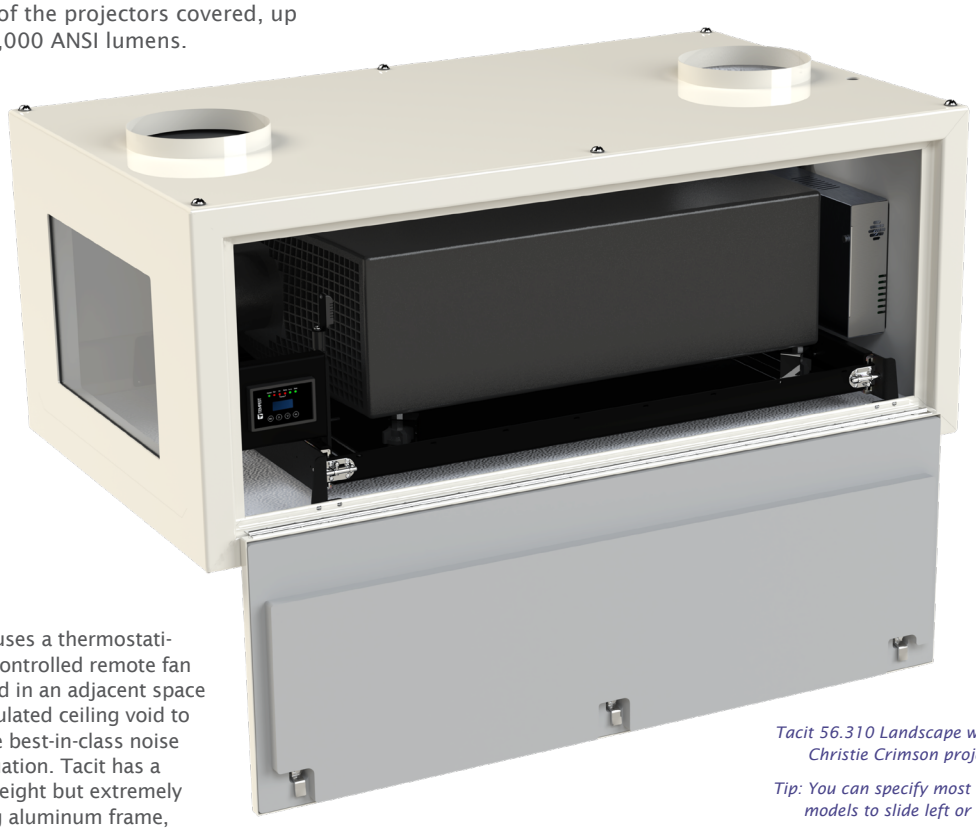
Hush Projector Enclosures 5-50K



Tacit
Hush Projector Enclosures

Tempest is the world's leading manufacturer of large format indoor projector enclosures for noise attenuation in presentation suites, digital cinema, live theatre and concert venues – any noise-sensitive indoor space. Larger Tacit models are projector-specific for projectors above 20K lumens, and have been tested and approved for each of the projectors covered, up to 50,000 ANSI lumens.

New:
Four full-featured Tacit models are now available for most projectors between 5-15,000 ANSI Lumens.



Tacit 56.310 Landscape with a Christie Crimson projector

Tip: You can specify most Tacit models to slide left or right

Tacit uses a thermostatically controlled remote fan located in an adjacent space or insulated ceiling void to assure best-in-class noise attenuation. Tacit has a lightweight but extremely strong aluminum frame, with threaded holes top and bottom for easy installation.

Tacit offers excellent projector access, with full-length lockable side access doors, and a projector slide that may be ordered for right or left access on all landscape and portrait models.

Standard colors: White (RAL 9003 semi-gloss) or black. Other colors to order.

Tacit is equipped with Tempest's patented DEC4 Control, featuring a comprehensive display and remote monitoring options.

Portrait and Ultra-Short-Throw versions are available to special order.

Why so Quiet?

There are several parts to the puzzle:

- First, Tacit enclosures are air-tight boxes with excellent seals, which do much of the work.
- Second, we line Tacit enclosures with two layers of high performance melamine sound insulation foam — rated incidentally to the highest fire safety standards.
- Third, we put the exhaust fan someplace else. As a rule of thumb, you need to blow through an enclosure about double the amount of air being handled by the projector itself.

That means forced cooling, and that means noise. The Tacit exhaust fan is located at the end of a duct (by others), which may be in an insulated ceiling space, an adjoining room or an outside wall.

The exhaust fan may also feed into the building air return, though we don't recommend feeding air to the enclosure inlets from the building air supply. It should be brought in at moderate temperature from a room or ceiling void.

This combination achieves excellent attenuation in the audience space, which is our sole aim.

Now Tempest Tacit enclosures monitor air temperature where it matters — right next to the projector air inlet. You can set a target air inlet temperature limit, and Tacit's variable speed remote fan will blow just hard enough to keep it there.

You told us that our user interface was great, but that it could be distracting or hard to reach on the outside. So now it's right where you need it, next to the projector.

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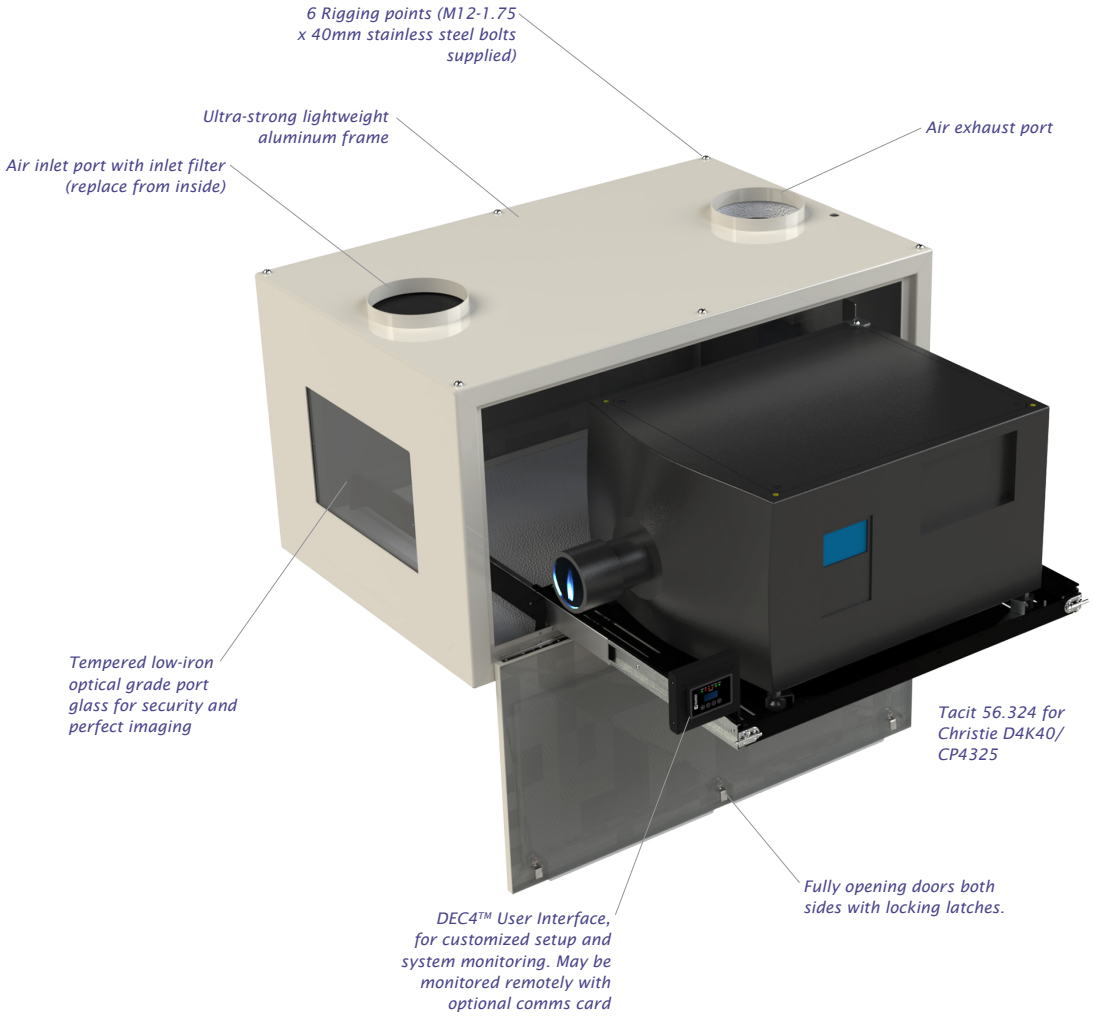
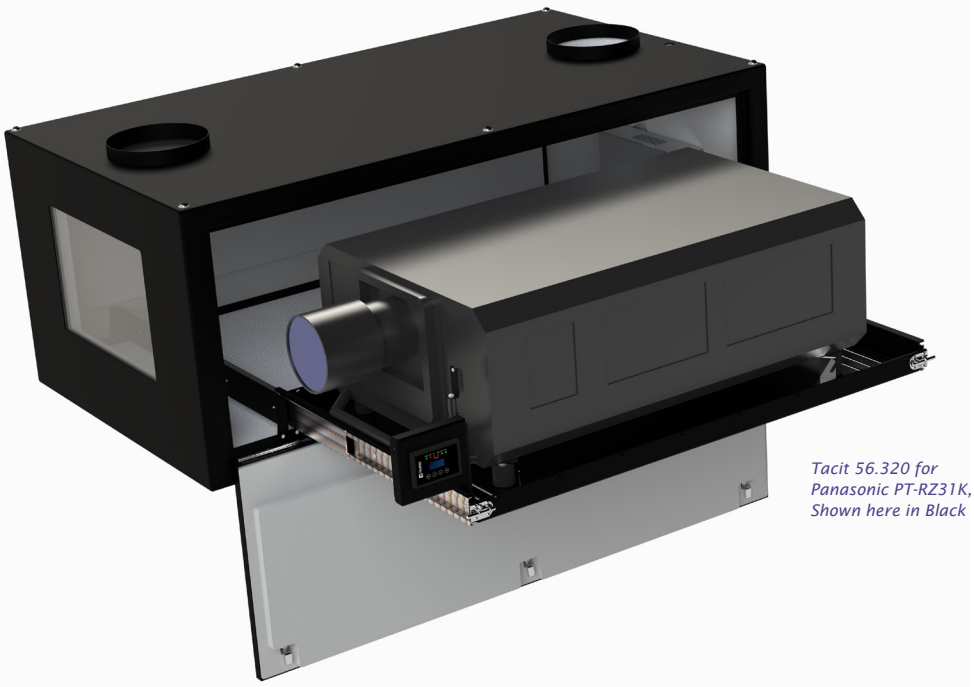
Hush Projector Enclosures

Landscape





Tacit 56.320 for Panasonic PT-RZ31K, Shown here in Black

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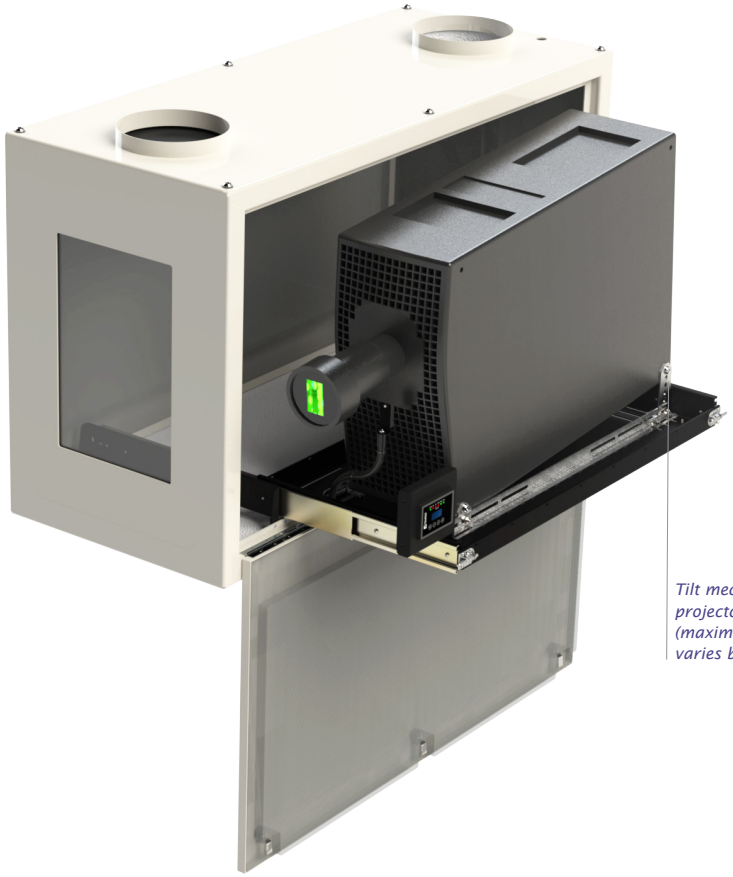
Portrait



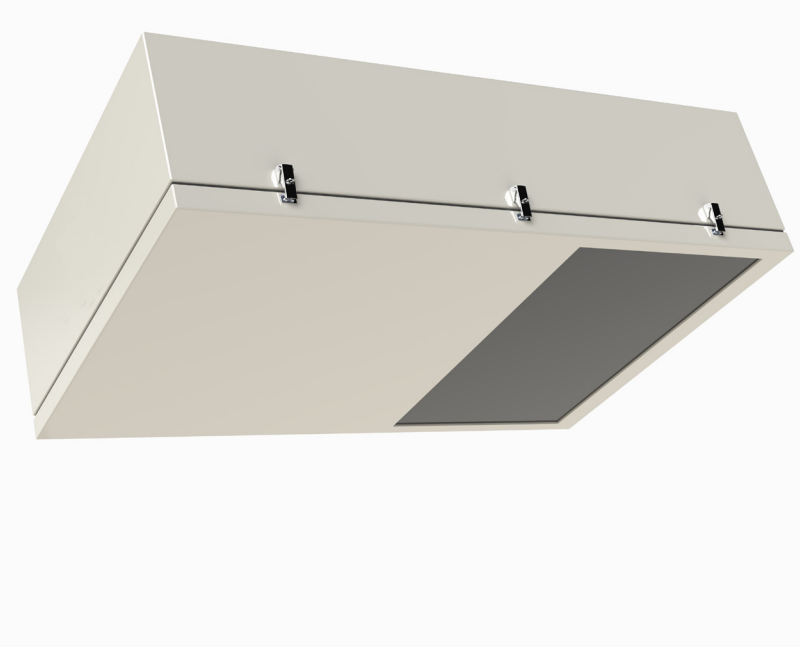
Tilt mechanism allows projector tilt adjustment (maximum tilt angle varies by projector).

Like all Tacit models, each Tacit portrait enclosure is customized for the intended projector, so we need to know the projector you're using when you order.

Not all projectors may be used in portrait mode — check with your projector manufacturer before ordering.

Some projectors may be used in portrait mode but only in one orientation — either base left or base right (picture here shows a Christie Crimson installed base left.

Ultra Short Throw



Tacit UST enclosures allow you to paint the whole wall from just above or below. UST enclosures are wider than standard landscape enclosures, to allow for the extreme width of the projection beam without clipping.

Tacit UST enclosures may be configured to mount above the image (projecting down) or below it (projecting up). Due to the wide variety of UST lens solutions on the market, Tacit UST enclosures are specially built for your project: Contact Tempest and talk to us about your next UST adventure!

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Installation

Tacit Remote Blower Kit

51.RFA.220 (Tacit 050-150)

51.RFA.270 (Tacit 210 and up)

Tacit's powerful remote blower must be located in an adjoining space to the Tacit enclosure, out of audience earshot. Connection to the the enclosure is via one 2-conductor power cable (48Vdc, 120W), and one twisted pair for speed control and status feed-back — a CAT5 cable is fine. The cable may be pulled back to the enclosure through the exhaust duct if desired.

Mount the blower kit either in a convenient space in free air, or in the side of a building return HVAC duct.

Fan Speed Control

Tacit uses a powerful variable-speed blower in a remote location to keep the projector at optimum operating temperature.

The remote blower will run at the minimum speed required to maintain the target projector inlet temperature, keeping fan noise to a minimum and enabling virtually infinite fan life.

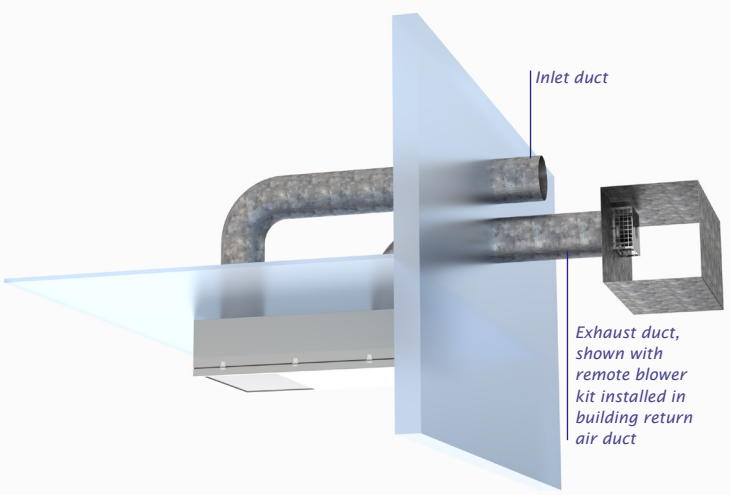
Tacit's temperature sensor is now located exactly where you need it — right by the projector's inlet vent, and user settings allow you to set a target inlet temperature to suit the needs of your projector.

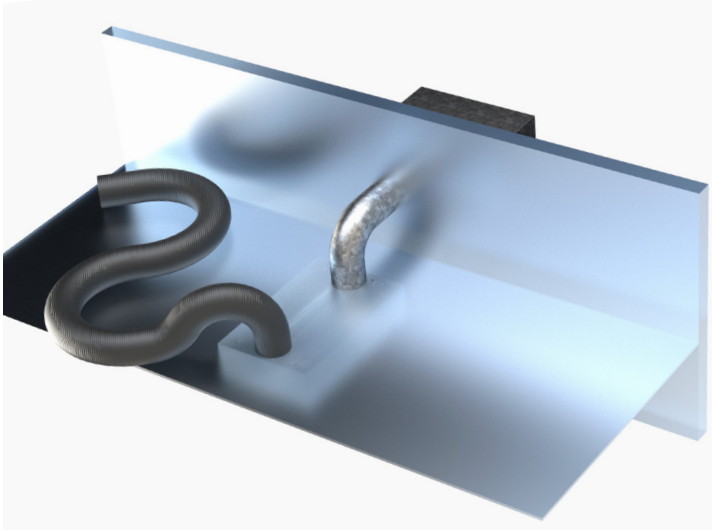
Ductwork (by others)

For best results, install 250mm (10") air ducts for air inlet and exhaust (200mm/8in for Tacit 050-150).

The exhaust duct should be as short as possible (maximum 10m/30ft), and with a minimum of sharp bends, to optimize airflow.

The inlet duct should ideally connect to an adjoining air-conditioned space, for best cooling and acoustic performance. DO NOT pull air from the building HVAC supply if it may be used for heating as well as air conditioning.





If it is impractical to bring inlet air from a remote location, use a length of padded flexible hose (250mm/10in ID) in an 'S' configuration to draw in air and muffle any noise escaping through the air inlet path.

In cases where additional ductwork is not feasible such as in historic buildings, consider Tempest's *Zen* standalone enclosures.

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Tacit
Hush Projector Enclosures

Tacit — or Zen?

Tempest also offers Zen standalone (ductless) indoor projector enclosures.

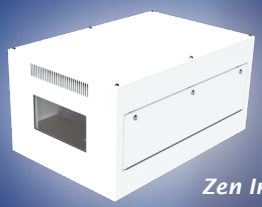
There is not much difference in noise attenuation between Tacit and Zen enclosures, but they both offer advantages for different types of application:

Use Tacit:

- *Slightly better acoustic performance*
- *Portrait, UST versions*
- *Custom applications*
- *Hostile environments (eg: pool areas, theme park rides)*
- *if heat load in the space is an issue*

Use Zen:

- *Simple installation*
- *No air ducts*
- *Landscape format*



Zen Info

TEMPEST

Acoustic Performance

Frequency (Hz)	Ambient dB	Projector (Panasonic PT-RZ21K) dB	Projector in Tacit 210.L Enclosure dB
20	19.4	28.2	21.9
25	17.8	29.9	21.7
32	13.6	24.7	18.5
40	17.3	24.0	26.7
50	12.2	23.2	25.8
63	16.3	26.6	25.9
80	15.0	25.1	23.9
100	7.3	28.3	24.5
125	8.0	31.6	27.1
160	1.6	34.0	25.8
200	-1.5	37.7	26.2
250	-1.2	39.0	27.6
315	-1.7	36.3	22.4
400	-1.1	35.7	20.4
500	-0.4	37.0	16.7
630	-0.1	36.2	13.7
800	0.6	35.4	13.5
1,000	1.3	35.5	11.4
1,250	1.9	34.2	8.6
1,600	3.9	31.9	6.0
2,000	3.4	29.6	5.2
2,500	4.3	31.8	5.2
3,150	5.2	29.1	5.8
4,000	6.2	23.0	6.4
5,000	7.0	19.9	7.1
6,300	7.6	17.6	7.6
8,000	7.9	14.8	7.9
10,000	8.0	13.9	8.0
12,500	8.0	12.2	8.0
16,000	8.1	13.3	8.1
20,000	8.7	21.0	8.3
dBA	**17.0**	**44.0**	**25.5**

Acoustic Performance Data

The data shown were generated in an anechoic chamber, using a Panasonic PT-RZ21K projector and a Tacit 56.210.L enclosure. Three tests were performed:

1. Ambient chamber sound pressure level
2. Projector, 100% ight output, on isolated mount
3. Projector, running in Zen enclosure, on isolated mount.

Detailed acoustic test data, from anechoic and reverberant chambers, are available for download here.

Acoustic Test Setup (Anechoic Chamber)

Test Lab:

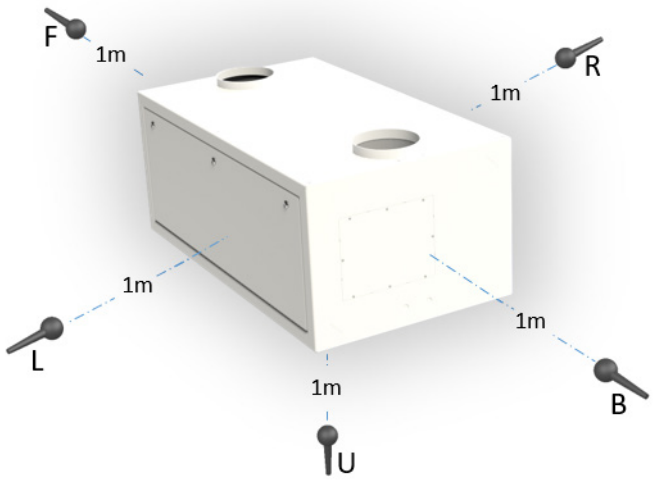
Western Electro-Acoustic Laboratory, Santa Clarita, California

Date: April 9th, 2021

Microphones:

1. 1m in front of test unit
2. 1m right of test unit
3. 1m left of test unit
4. 1m behind test unit
5. 1m below test unit

Mic values were integrated to arrive at the above values.



Tacit
Hush Projector Enclosures

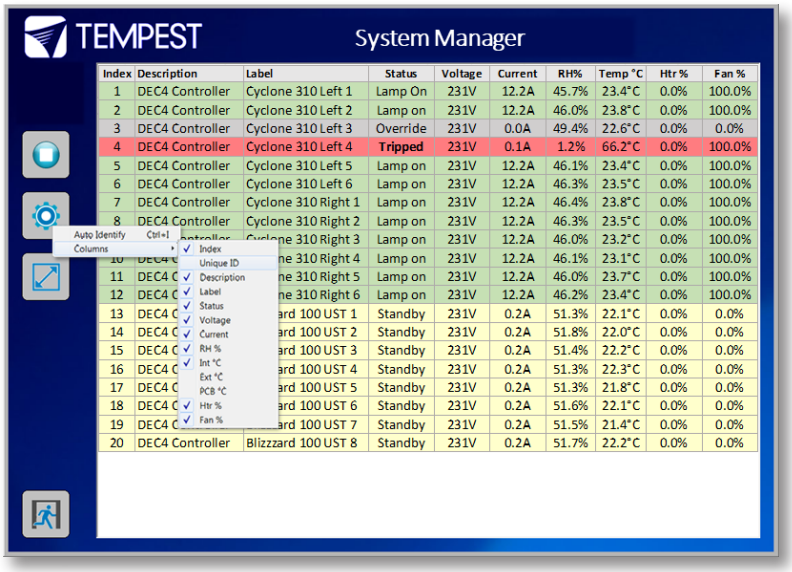
Tempest System Manager

Tempest System Manager is a Windows app running on a local PC connected to your enclosures over a local area network.

TSM discovers any Tempest enclosures present on the network at initialization, and monitors system attributes in real time, including lamp, fan and heater status, temperature, relative humidity and more.

TSM may also be used to upload firmware updates to enclosure controllers over the network, without having to visit each enclosure.

The TSM license includes 12 months unlimited user support from Tempest electronics partner JESE, and continuing support is available for a modest annual fee.



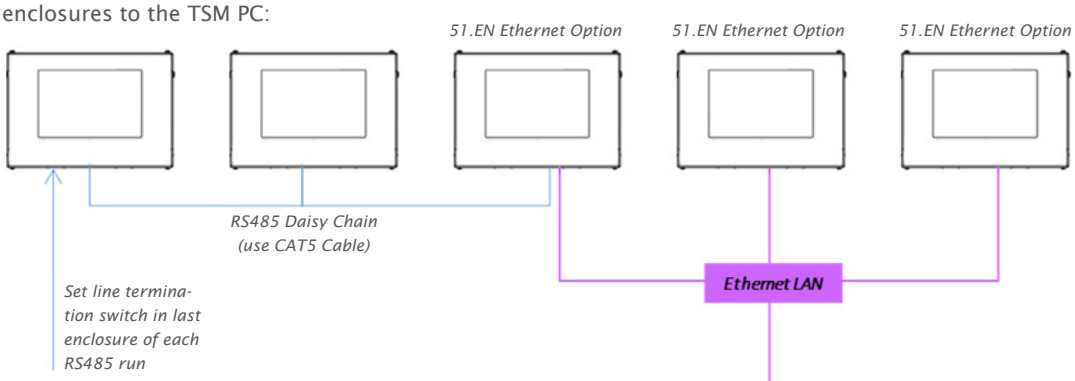
Index	Description	Label	Status	Voltage	Current	RH%	Temp °C	Htr %	Fan %
1	DEC4 Controller	Cyclone 310 Left 1	Lamp On	231V	12.2A	45.7%	23.4°C	0.0%	100.0%
2	DEC4 Controller	Cyclone 310 Left 2	Lamp on	231V	12.2A	46.0%	23.8°C	0.0%	100.0%
3	DEC4 Controller	Cyclone 310 Left 3	Override	231V	0.0A	49.4%	22.6°C	0.0%	0.0%
4	DEC4 Controller	Cyclone 310 Left 4	**Tripped**	231V	0.1A	1.2%	66.2°C	0.0%	100.0%
5	DEC4 Controller	Cyclone 310 Left 5	Lamp on	231V	12.2A	46.1%	23.4°C	0.0%	100.0%
6	DEC4 Controller	Cyclone 310 Left 6	Lamp on	231V	12.2A	46.3%	23.5°C	0.0%	100.0%
7	DEC4 Controller	Cyclone 310 Right 1	Lamp on	231V	12.2A	46.4%	23.8°C	0.0%	100.0%
8	DEC4 Controller	Cyclone 310 Right 2	Lamp on	231V	12.2A	46.3%	23.5°C	0.0%	100.0%
9	DEC4 C	ne 310 Right 3	Lamp on	231V	12.2A	46.0%	23.2°C	0.0%	100.0%
10	DEC4 C	ne 310 Right 4	Lamp on	231V	12.2A	46.1%	23.1°C	0.0%	100.0%
11	DEC4 C	ne 310 Right 5	Lamp on	231V	12.2A	46.0%	23.7°C	0.0%	100.0%
12	DEC4 C	ne 310 Right 6	Lamp on	231V	12.2A	46.2%	23.4°C	0.0%	100.0%
13	DEC4 C	ard 100 UST 1	Standby	231V	0.2A	51.3%	22.1°C	0.0%	0.0%
14	DEC4 C	ard 100 UST 2	Standby	231V	0.2A	51.8%	22.0°C	0.0%	0.0%
15	DEC4 C	ard 100 UST 3	Standby	231V	0.2A	51.4%	22.2°C	0.0%	0.0%
16	DEC4 C	ard 100 UST 4	Standby	231V	0.2A	51.3%	22.3°C	0.0%	0.0%
17	DEC4 C	ard 100 UST 5	Standby	231V	0.2A	51.3%	21.8°C	0.0%	0.0%
18	DEC4 C	ard 100 UST 6	Standby	231V	0.2A	51.6%	22.1°C	0.0%	0.0%
19	DEC4 C	ard 100 UST 7	Standby	231V	0.2A	51.5%	21.4°C	0.0%	0.0%
20	DEC4 Controller	Blizzzard 100 UST 8	Standby	231V	0.2A	51.7%	22.2°C	0.0%	0.0%

TSM Model Numbers

51.TSM.10	Up to 10 enclosures
51.TSM.25	Up to 25 enclosures
51.TSM.50	Over 25 enclosures

Monitoring Connections

There are two ways to connect enclosures to the TSM PC:



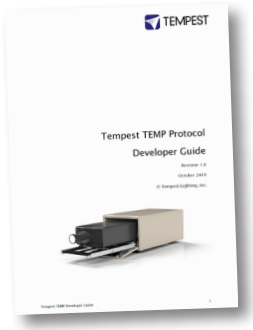
1. RS485 and Ethernet

Daisy-chain a group of Cyclone enclosures together with an RS485 cable, and use a 51.EN Ethernet board at the end of the line to connect to the network.

2. Ethernet in each Enclosure

Specify the 51.EN Ethernet option and connect each enclosure to the network.

TEMP Protocol



Tempest also publishes a simple protocol for use by integrators wishing to monitor enclosures over an existing control network.

Connection options are the same as for System Manager.

Download the TEMP Developer Guide here:

TEMPEST

Tacit
Ordering Guide

Tacit Projector Enclosure Dimensions[1]			Enclosure								Shipping							
Model	Orientation[2]	Typical Projectors[3]	L (cm)	W (cm)	H (cm)	Kg	L (in)	W (in)	H (in)	Lb	L (cm)	W (cm)	H (cm)	Kg	L (in)	W (in)	H (in)	Lb
56.050.L	Landscape	*Most, 5-7,000 Lumens*	74	76	37	27	29	30	15	59	91	91	61	43	36	36	24	94
56.050.P	Portrait		74	43	71	29	29	17	28	64	91	91	61	45	36	36	24	99
56.100.L	Landscape	*Most, 7-10,000 Lumens*	86	81	39	39	34	32	16	85	91	91	61	55	36	36	24	120
56.100.P	Portrait		86	43	76	43	34	17	30	95	91	91	61	59	36	36	24	130
56.125.L	Landscape	*Panasonic PT-MZ Series*	86	91	39	43	34	36	16	94	91	107	61	59	36	42	24	129
56.125.P	Portrait		86	43	86	47	34	17	34	104	91	107	61	63	36	42	24	139
56.150.L	Landscape	*Most 12-15,000 Lumens*	107	81	44	48	42	32	18	106	132	86	51	69	52	34	20	151
56.150.P	Portrait		107	48	81	54	42	19	32	118	132	86	51	74	52	34	20	163
56.200.L	Landscape	*Epson EB-PU 22xx*	86	91	46	48	34	36	18	106	107	112	71	85	42	44	28	186
56.200.P	Portrait		86	51	91	14	34	20	36	30	107	71	117	88	42	28	46	193
56.202.L	Landscape	*Panasonic PT-RQ25K, DPI M-Vision 23K*	112	81	46	17	44	32	18	38	132	102	71	95	52	40	28	210
56.202.P	Portrait		112	51	76	14	44	20	30	30	132	71	102	98	52	28	40	215
56.204.L	Landscape	*Christie M4K-25*	117	81	51	17	46	32	20	38	137	102	76	98	54	40	30	216
56.204.P	Portrait		117	56	76	14	46	22	30	30	137	76	102	100	54	30	40	221
56.210.L	Landscape	*Panasonic PT-RZ21K, Barco G100*	127	91	51	19	50	36	20	42	147	112	76	119	58	44	30	261
56.210.P	Portrait		127	56	86	14	50	22	34	30	147	76	112	122	58	30	44	268
56.250.L	Landscape	*Epson L-30000*	127	91	51	19	50	36	20	42	147	112	76	119	58	44	30	261
56.250.P	Portrait		127	56	86	14	50	22	34	30	147	76	112	122	58	30	44	268
56.305.L	Landscape	*Panasonic PT-RQ35K, RZ34K, Barco UDM*	132	86	61	18	52	34	24	40	152	107	86	141	60	42	34	310
56.305.P	Portrait		132	66	81	15	52	26	32	32	152	86	107	143	60	34	42	314
56.310.L	Landscape	*Barco UDX 40K*	137	91	56	19	54	36	22	42	157	112	81	147	62	44	32	324
56.310.P	Portrait		137	61	86	15	54	24	34	32	157	81	112	150	62	32	44	331
56.314.L	Landscape	*Christie Griffyn 32K*	147	91	61	19	58	36	24	42	168	112	86	157	66	44	34	344
56.314.P	Portrait		147	66	86	15	58	26	34	32	168	86	112	159	66	34	44	350
56.322.L	Landscape	*DPI Titan Laser 37K*	142	94	61	20	56	37	24	45	163	114	86	176	64	45	34	388
56.322.P	Portrait		142	66	102	16	56	26	40	36	163	86	127	180	64	34	50	396
56.514.L	Landscape	*Christie Griffyn 50K*	147	94	61	20	58	37	24	45	168	114	86	172	66	45	34	379
56.514.P	Portrait		147	66	97	16	58	26	38	36	168	86	122	176	66	34	48	388
56.522.L	Landscape	*DPI Insight 8K 37K*	163	94	71	20	64	37	28	45	183	114	97	238	72	45	38	524
56.522.P	Portrait		163	76	112	16	64	30	44	36	183	97	137	243	72	38	54	534
56.525.L	Landscape	*Panasonic PT-RQ50K*	163	94	66	20	64	37	26	44	183	114	91	202	72	45	36	444
56.525.P	Portrait		163	71	91	16	64	28	36	36	183	91	117	205	72	36	46	451

[1] *Due to continuous product development, weights and dimensions are subject to change. Check with Tempest before construction work.*

[2] *Landscape and Portrait versions shown here. UST versions are custom or semi-custom. Please consult Tempest for details*

[3] *For projectors not shown here, please contact Tempest — we will be happy to accomodate any projector type*

All Tacit products are built to order. Please contact Tempest for lead times.

All sales are subject to Tempest Lighting, Inc. Standard Terms and Conditions of Sale, available for download at www.tempest.biz.

All Schedule B Export Code: 9405.99.0000

Custom Colors

The enclosures in this brochure are shown in our standard warm white semi-gloss or black. Any RAL color available to special order.

Options

56.UR.xxx	Unistrut Rail Kit *(Use the 3-digit enclosure model #, eg 56.UR.200 for Tacit 56.200)*
51.IFL.11	Replacement Inlet Filter Tacit 56.1xx-3xx Models
51.IFL.13	Replacement Inlet Filter Tacit 56.400 and up
51.EN	Ethernet Board, for Tempest TEMP monitoring
51.TSM.xx	Tempest System Manager
0000.CL	Custom Color — specify any RAL #, plus % gloss desired

CAD drawings and user manuals at www.tempest.biz

Tacit Configurator

Please complete this form and email to us at info@tempest.biz

Name		
Company		
Email		
Phone		
Projector & Lens Model #	Projector:	Lens:
Tacit Model	56. _____	
Quantity		
Destination Country		
Install Date		
Enclosure Type	Landscape ☐ Portrait ☐ Ultra Short Throw ☐	
Projector Slide	Left (as shown here) ☐ Right ☐ *Front (custom)* ☐ *Back (custom)* ☐	
Projector Mount	Landscape/UST: Feet Down ☐ Feet Up ☐ Portrait: Feet Left ☐ Feet Right ☐	
Supply Voltage	230VAC (L, N, E) ☐ 200-208VAC (L1, L2, E) ☐ *(+ Neutral if desired for 120V aux power)* 100-120VAC (L, N, E) ☐ *(Tacit 050-150 only)*	
Unistrut Kit	Yes, Qty _____ No ☐	*Mounting: Top* ☐ *Bottom* ☐
Ethernet	Yes, Qty _____ No ☐	*51.D4.23 (TSM)* ☐ *51.D4.15 (TEMP)* ☐
Spare Inlet Filter	Yes, Qty _____ No ☐	
Color	Standard, Warm White ☐ Standard, Black ☐ Custom, RAL # _____ Gloss Level * _____% * *Gloss levels higher than 30% may show up weld marks. Tempest advises against high gloss finishes and accepts no liability in this event.*	

Projector Power Outlet *(all types include IEC 60320 C13 Aux Power)*:
IEC 60320 C19 20Amp _____ ☐ (Standard)
IEC 60309 30/32Amp _____ ☐
NEMA L6-20 _____ ☐ NEMA L6-30 _____ ☐

UST Lens Configuration:

90deg Up ☐

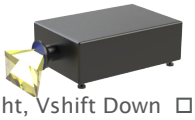
90deg Down ☐

Periscopic A ☐

90deg Right ☐

90deg Left ☐

Periscopic B ☐

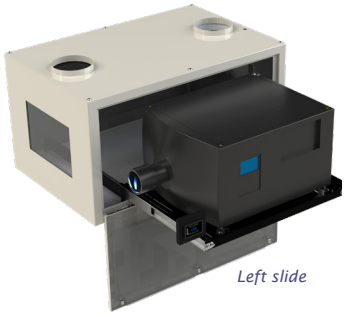

Straight, Vshift Down ☐

Straight, Vshift Up ☐

Custom Requests:

Factory Use Only:	
SO Number	
Date	
Electrical	IEC ☐ NEMA ☐

User manuals, 2D and 3D CAD drawings at www.tempest.biz


Left slide

Made in the USA

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In the interest of continuous product improvement, specifications are subject to change without notice

Tempest Lighting, Inc.,
11845 Wicks Street, Sun Valley, CA 91352, USA
www.tempest.biz info@tempest.biz
t: +1 818 787 8984 f: +1 818 252 7101