

DEPARTMENT OF PLANNING AND ZONING PLANNER'S REPORT

DATE: June 5, 2019
TO: Tonya Hutson
FROM: Lynn Patterson

RE: Design Review – 3303 North Whitney Avenue

BACKGROUND

The City of Hapeville has received a Design Review Application from Tia Muse and Brooke Fortenberry for the addition of solar panels to the roof of the existing building at 3303 North Whitney Avenue.

The property is zoned R-1, One-Family Detached, and is subject to the Neighborhood Conservation Area of the Architectural Design Standards.

CODE

- (e) Roof and chimney standards.
 - 1. Principal building roofs for one-family detached dwellings shall have a minimum usable life of thirty (30) years, per manufacturer's warranty.
 - 2. Roof shingles shall be slate, cedar, or asphalt.
 - 3. Roof tiles shall be clay, terra cotta or concrete.
 - 4. Metal roofs are:
 - a. Permitted on one-family and two-family detached dwellings if approved by the design review committee; and
 - b. Permitted on multifamily and townhouse dwellings only when screened from the adjacent street by a parapet wall.
 - 5. Gutters shall be copper, aluminum or galvanized steel.
 - 6. Downspouts shall match gutters in material and finish.
 - 7. Roof forms shall be based on architectural style.
 - 8. All roofs, excluding dormers, shall overhang a minimum of 12 inches beyond the facade.
 - 9. Dormers are permitted on all style homes (unless specified), but shall not be taller than the main roof to which they are attached.
 - 10. Chimneys exposed to the public view may not be faced in wood or cement based siding and may not be of an exposed metal or ceramic pipe. All chimneys shall be wrapped in a brick, stone or suitable masonry finish material.
 - 11. Chimneys on exterior building walls shall begin at grade.
 - Chimneys shall begin at grade and be faced with brick or stacked stone; extend chimneys between three and six feet above the roof line.

FINDINGS

The Architectural Design Standards do not provide guidance for the installation of roof-mounted solar panels. As solar panels are not directly allowed by the code, a Design Exception would be required.

CITY OF HAPEVILLE DESIGN REVIEW APPLICATION

SUBMITTAL	DATE: May 15, 2019
NOTE:	All applications must be typed or neatly printed. Applications or an authorized representative is required to personally appear at the Design Review Meeting to answer questions.
	The Design Review Committee meets the third Wednesday of each month. Every attempt will be made to place your application for review on the next month's agenda following the submittal of a completed application with supporting documents; however, that may not always be possible. The City reserves the right to schedule applications as deemed necessary.
Applicant:	Tia Muse/Brooke Fortenberry contact Number: 770-485-7438
Applicants Ad	dress: 2931 Lewis St Ste 300 Kennesaw GA 30144
E-Mail Address	s: <u>tia muse @ Creative solarusa</u> Coning Classification:
	oposed Work: 3303 N Whitney Ave Hapeville GA 30354
	FORMATION MUST BE PROVIDED): 14 009800140271
Property Owner	er: Travis Horsley Contact Number:
Project Desc Solar P	ription (including occupancy type): installing 4.80 KW of anels to roof top
Contractors I	Name: Alan Carrier Contact Number: 678-779-6248
	on: <u>Tia Muse</u> <u>Contact Number: 770-485-7438</u>
property. I do laccurate, and I application and reserves that rig I further unders full. I hereby ac write the Englis voluntarily com	application to the City of Hapeville, to the Design Review Committee for the above referenced hereby swear or affirm that the information provided here and above is true, complete and understand that any inaccuracies may be considered just cause for invalidation of this any action taken on this application. I understand that the City of Hapeville, Georgia, ght to enforce any and all ordinances regardless of any action or approval on this application. Stand that it is my/our responsibility to conform with all of City of Hapeville's Ordinances in cknowledge that all requirements of the City of Hapeville shall be adhered to. I can read and sh language and/or this document has been read and explained to me and I have full and pleted this application. I understand that it is a felony to make false statements or writings to eville, Georgia pursuant to O.C.G.A. 16-10-20 and I may be prosecuted for violation thereof.
Applicante	Signoturo

Project Class (check on	e):	
Residential	Commercial	Mixed-Use Development
Project Type:		
New Commercial Co	nstruction	Addition to Existing Commercial Building
Addition to Existing F	Residential Structure	Accessory Structure
Site Plan, Grading &	Landscaping	New Single Family Residential Construction
/Other - solar par	iels	
Total Square Footage of pro	posed New Constructio	n:
Total Square Footage of exi	sting building:	
Estimated Cost of Construct	ion: <u>\$12,480</u>	
List/Describe Building Mater	ials on the exterior of th	e <u>existing</u> structure:
(17) Hanwha Q: (17) Enphase T.C. (1) Soladeck	-Cell Solar po 27-60-2-US m	xterior facade of the new structure: anels (data sheet provided) nicro inverters (data sheet provided) (data sheet provided)

NOTICE

Please be advised that the Community Service Department is here to assist all applicants regarding application procedures, meeting schedules and necessary deadlines. The Community Service Department does **NOT** make any final decisions for the Design Review Committee, Sign Committee, Planning Commission, Board of Appeals or rezoning request to Mayor and Council.

A complete application must be submitted before the Community Service Department will accept an application and forward the same to the appropriate entity.

Building inspections issued by the City of Hapeville are contracted out to State of Georgia Certified Inspectors. These inspectors make the final decisions regarding building, electrical, plumbing and HVAC work completed in the City of Hapeville. The Hapeville Fire Marshal conducts inspections issued through the Community Services Department as needed. Both the Certified Inspectors and Fire Marshal make the final decisions before Certificates of Occupancy's are issued.

Please be advised that the Community Service Department shall not be responsible for your purchasing materials, equipment, items, signs, etc... before you receive final approval by any entity whose approval is required.

I understand that it is a felony to make false statements or writings to the City of Hapeville, Georgia pursuant to O.C.G.A. 16-10-20 and I may be prosecuted for a violation thereof.

(Please Print & Initial)

swear or affirm that before receipt of an application, I have received this notice and I read and write the English language or I have had someone read and explain this document to me.



DEPARTMENT OF PLANNING AND ZONING

DESIGN REVIEW APPLICATION INSTRUCTIONS AND ACKNOWLEDGEMENT

I, the undersigned, agree that with following:	my signature and submission to the	City of Hapeville, I have done the
proposed project. The Archite	chitectural Design Guidelines and re ectural Design Guidelines may be fou apeville/codes/code of ordinances	ınd here:
✓ Ensured that my proposed pro of Ordinances.	pject meets all of the required criteri	a per the City of Hapeville Code
Submitted my application mat Design Review Committee me	erials in full by the published deadlineting.	ne for review by Staff prior to the
	ficiencies or components of the pro th in the Code. This explanation sho	
Understood that any deficience Design Review Committee me	cies in the application must be resolveting or the application may not be	red at least 10 days prior to the presented to the DRC for review.
iSubmitted architectural drawi Community Services or Plannir	ngs and details for all projects unlessing & Zoning Department.	s allowed in writing by the
0	d revisions by the Design Review Corepartment for review prior to reques	
Tia Muse	Sia Muse	5-6-19
Printed Name	Signature	Date

Should you have any questions, please do not hesitate to contact the Community Services Department at 404-669-2120.

Thank you for interest and investment in the City of Hapeville.

Google Maps 3308 N Whitney Ave

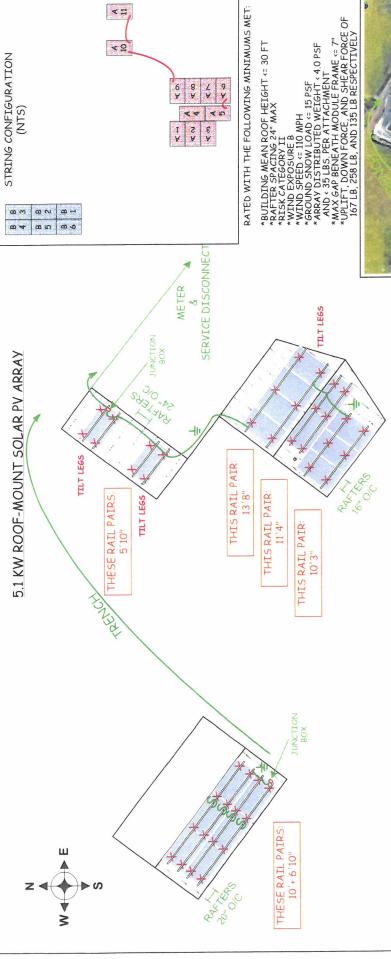


Google

Hapeville, Georgia

Street View - Sep 2018

5/30/2019, 11:44 AM 1 of 1



NOTES:

1 SHINGLE ROOF. ROOF DECKING IS PLANK, CONVENTIONAL FRAMING: 2X6 RAFTERS 16" O/C AT MAIN HOUSE, PITCH IS 9:12. 2X4 RAFTERS 20" O/C AT SHED, PITCH IS 7:12. 2X4 RAFTERS 24" O/C AT 2:12 ROOF, PITCH IS 2:12. PRE-MEASURE ALL AREAS TO CLEAR OBSTACLES AND ENSURE PROPER FIT, LEAVING SUFFICIENT ROOM FOR SETBACKS AND ACCESS PATHS.

2 MARK AND ATTACH MOUNTS & RAILS ACCORDING TO LAYOUT & MOUNT AND RAIL PATTERNS. RAIL SPACING IS 33" PORTRAIT, 20" LANDSCAPE, 27" TRANSITIONING BETWEEN THE TWO. RAIL SPACING VARIES TO ACCOMMODATE TILT LEGS. MOUNTS ARE AT VARYING INTERVALS, MAXIMUM DISTANCE BETWEEN MOUNT AND RAIL-EDGE OR SPLICE IS 24". (MAX MOUNTING SPAN 7') (INNER 50% OF PANEL SHOULD) BE BETWEEN RAILS.)

USE FIXED TILT LEG KITS W/ 20" NORTH TILT LEG FOR 2:12 ROOF AT 2-FT RAIL SPANS AND 5 FT B/W PANELS. USE FIXED TILT LEG KITS W/ 25" NORTH TILT LEG FOR 9:12 ROOF AT 3'6" RAIL SPANS.

- 3 MOUNT ENPHASE **Q TRUNK CABLE AND 1Q7 MICROINVERTERS,** NOTING STRING CONFIGURATION AND RECORDING MICROINVERTER S/N'S. INSTALL TERMINATORS AND UNUSED CONNECTOR CAPS. RUN ALL GROUNDS. MULTIPLE JUMPERS. USE LFMC AND 600V PV WIRE.
- MOUNT & CONNECT PANELS CENTERED OVER RAILS, RECORDING PANEL S/N'S. RAIL OVERHANGS ARE APROX. 2-3" PAST PANELS. CONNECT ALL JUMPERS, MANAGE WIRES. SEPARATION DISTANCE BETWEEN ADJACENT PANELS ‡-½" 4

INSTALL AND WIRE JUNCTION BOX, COORDINATING WITH ELECTRICIAN FOR PATH OFF ROOF. RUNS ARE 600V

2

COORDINATE WITH ELECTRICIAN AND HOME OWNER FOR TRENCH AND OTHER LINES THAT WILL CO-OCCUPY TRENCH 9

ORITH PMERICAN BOOM	CERTIFIED	2 SP.	MERGY PRACTITION
CK'D			
ВУ	REG		
DESCRIPTION	PROPOSAL v1		
DATE	01/27/19		

REVISIONS



Richard Gale



STRING CONFIGURATION (NTS)	A A A A A A A A A A A A A A A A A A A
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	5

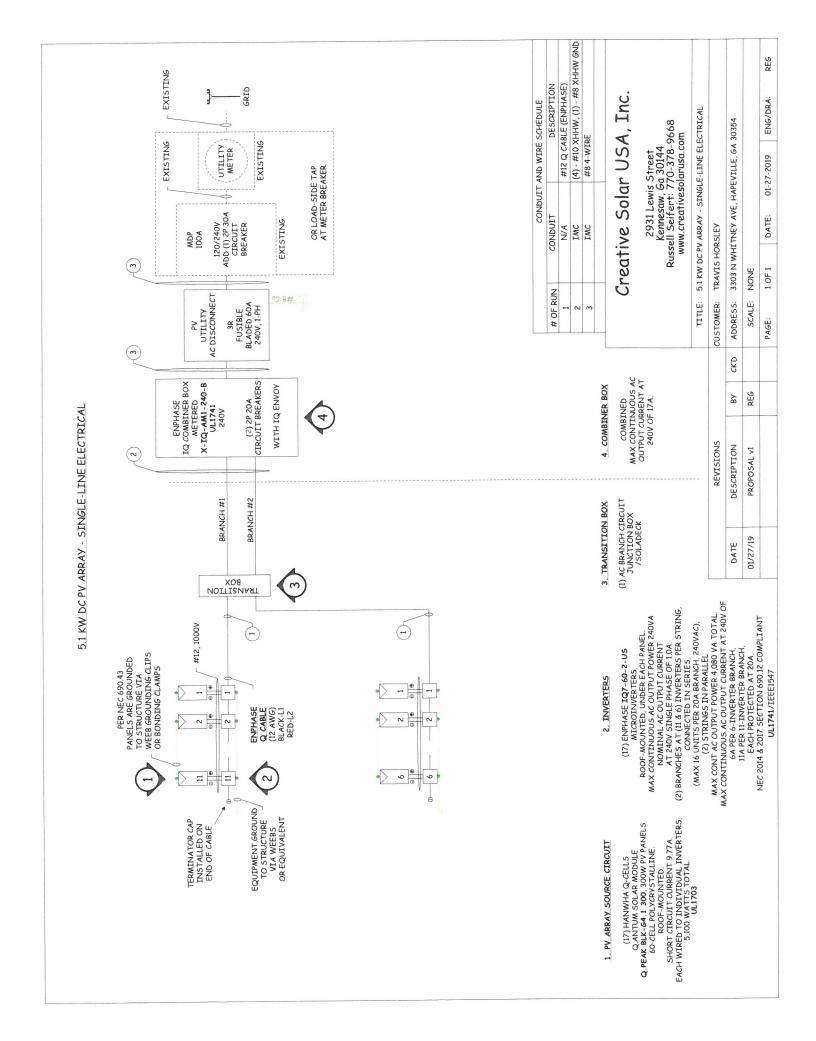
RATED WITH THE FOLLOWING MINIMUMS MET:

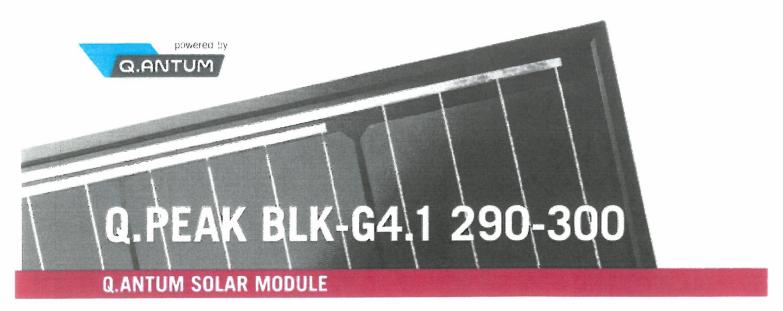
OVERHEAD MOCK-UP (NTS)

Creative Solar USA, Inc.

Kennesaw, 6a 30144 Russell Seifert: 770-378-9668 www.creativesolarusa.com 2931 Lewis Street

				PFG
		30354		FNG/DBA:
TITLE: 5.1 KW ROOF-MOUNT SOLAR PV ARRAY		ADDRESS: 3303 N WHITNEY AVE, HAPEVILLE, GA 30354	SCALE: 1" = 12' (OUTPUT: 8.5 X 11 LANDSCAPE)	DATE: 01-27-2019
WOUNT	SLEY	TNEY AVE	PUT: 8.5 X	DATE
5.1 KW ROOF	TRAVIS HOR	3303 N WHI	1" = 12' (OUT	1 OF 1
TITLE:	CUSTOMER:	ADDRESS:	SCALE:	PAGE:
TITLE: 5.1)	CUSTOMER: TRAVIS HORSLEY	ADDRESS: 330	SCALE: 1" =	





With its top performance and completely black design the new 1 PEAK BLK OFF is the ideal solution for all residential rooftop applications thanks to its innovative cell technology G ANTON. The world-record cell design was developed to achieve the best performance under real conditions — even with low radiation intensity and on clear, but summer days.



LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area and lower BOS costs thanks to higher power presses and an officiency rate of up to $16.3\,\%$.



INNOVATIVE ALL WEATHER TECHNOLOGY

Optimal yizlds, whatever the weather with excellent low-light and temperature herizoids.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti-PID Technology', Hot-Spot-Protect and Traceable Quality fra \mathbb{Q}^{12}



EXTREME WEATHER RATING

High tech a untinum after trame, certified for high show (6400 Pay and wind loads (4000 Pa) regarding IEC



MAXIMUM COST REDUCTIONS

Up to 10% lower logistics costs due to higher module capacity per box.



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year timear performance guarantee .



THE IDEAL SOLUTION FOR:











ASC for confirming the x at a Figure against grounded with conductive the Lifeth conserved modelle surface. PSI C. 1681

bee data stress on rear for the there of the stress.



41 4pibs (18.8 sg) Weight

Front Cover D. Dam (3. 2 mm) thermally are stressed glass with anti-reflection technology

Composite from Back Cover

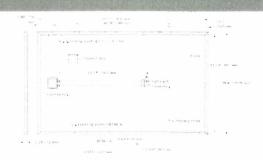
Black anodized aligninum Frame

6 < 10 monerowstalline Q ANTUM solar cells Cell

) with 4 0.8 m = 2.34 5.4 5 $k_{\rm s}$ (2.95). From 165 TI errors (11.90 mm/s) [15.19 mm/ Protection class (PSP) with bypass diades Junction box

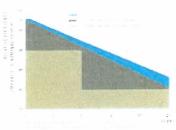
4 mm; Solar cable, (=) \$39,37 m (1,000 mm), (-) \$39,37 m (1,000 mm) Cable

Multi-Contact MC4 or MC4 intermaleable, IP68 Connector



1	ECTRICAL CHARACTERISTICS		100000000000000000000000000000000000000			
	VERICLASS			790	295	300
MIN	IMUM PERFORMANCE AT STANDARD TEST	CONDITIONS, 576	POWER TOLERANCE	-5 W / -0 W (
	Power at MPP:	$P_{\nu \sim r}$	(W)	250	295	300
	Short Circuit Current	$t_{\rm ic}$	EAF	44 45 A	te /11	9.77
E E	Open Circuit Voltage	V_{∞}	(V)	39-19	39.48	39.76
E N	Gurrent at MPP*	1,,,,,	fAl	9.07		9.26
	Voltage at MPP*	٧,	(Y)	11 99	11.19	32.41
	Efficiency*	η	[%]	.174	17.7	- 18 C
1/15	IMUM PERFORMANCE AT NORMAL OPERAT	ING CONDITIONS N	OC.			
	Power at MPP ²	Pv··	(W)	214 9	: si:	221.8
Bom	Short Circuit Current	f _{is.}	(A)		1.82	7. AM
100	Open Circuit Voltage	V_{∞}	[V]	\$6 E1	26.40	87.19
M	Current at MPP*	luce	TAT	. 12		7,27
	Voltage at MPP*	٧.,	(Y)	3G 12	30.30	30,49

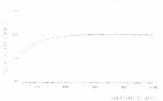
Q CELLS PERFORMANCE WARRANTY



At least 48% or norminal power during that year. Thereafter man (2.6% dispendible) also year. At least 92.5% at immediate cover up to 100 years. At least 83 or 5 of norminal covers up to 25 years.

Full war at the in accordance with the Advanty beam of the CCTEC calls reprincible whose serped to courts.

PERFORMANCE AT LOW IRRADIANCE



Typical module assistances of a car consistance conditions compared to ATC conditions in the Chickwest

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{sc}	C.	[%2K]	. () t(d	Temperature Coefficient of V _×	#	(% ZK)	-0.28
Temperature Coefficient of P	٧	1%-/K1	0.39	Normal Operating Cell Temperature	NOCT	I FI	113 +5,4145 +3701

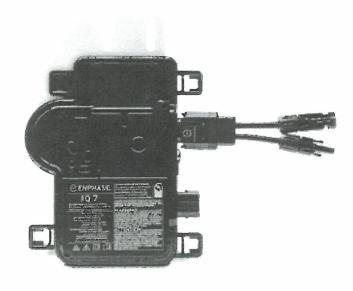
PROPERTIES FOR SYSTEM O	ESIGN			
Maximum System Voltage V,	{ Y 1	1000 BC: 1000 OU	Safety Class	Þ
Maximum Series Fuse Rating	[A DC]	23	Fire Rating	CHECK TYPE 1 (UL)
Design load, push (UL)?	[fbs/ft*]	75 hairtPa-	Permitted module temperature on continuous duty	40 F in to -185 F 1 40 C up to -85 C
Bearing land, and (1913)	tibe Mil	10 m 176 for Par	can octaliat on manual	

PACKAGING INFORMATION	
Number of Modules per Pallet	32
Number of Pallets per 53' Container	3C
Number at Pallets per 40' Container	26
	68 3 m + 45 Am + 46 1 m m × 115 mm + 1120 mm (
Patter Weight	14351051641 *g1
	Number of Modules per Pallet Number of Pallets per 53' Container Number of Pallets per 40' Container Pallet Dimensions (L × W × H)

NOTE Institution instructor, which the followed Skie tox, extra accordant mentions in the following of the following in the following institution and

Enphase IQ 7 and IQ 7+ Microinverters

9.9 (4) 2 9.9



CENTERED SERVICES CO.

The high-powered smart grid-ready

Enphase IQ 7 Micro** and Enphase IQ 7+ Micro**

dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enchase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enchase IQ Envoy", Enphase IQ Battery 1, and the Enphase Enlighten I monitoring and analysis software

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.

Lasy to Install

- · .uchiweighi anu sinole
- Fuster installation with improved, lighter two tyre capling
- Redi mrepic shuldown conofen; (NEC 2014 8 2017)

Productive and Reliable

- Opinnized for high powered 60 cell and 72 be 12 modules.
- More than a million bours of testing.
- Classif double-insulated enploaure
- Ut listed

Smart Grid Ready

- Complies with advanced grid support, voltage and incogenovarde chrough requirements:
- Remotely updates to respond to changing and requirements
- · Contigurable for varying quid profiles.
- Meets CA Rule 21 (UL 1741-SAL

10 - Micro systematic support if get stabilities.



Enphase 10 7 and 10 7+ Microinverters

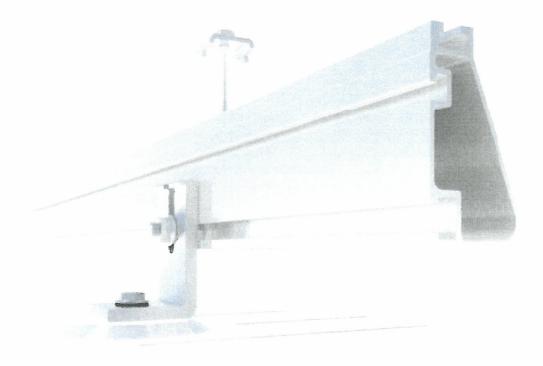
INPUT DATA (DC)	107-60-2-US / 107-60-B-US		IQ7PLU5-72-2-US / IQ7PLUS-72-B-US		
Commonly used module painings	235 W - 350 W +		235 W - 440 W -		
Module compatibility	60-cell PV modules only		66 cell and 72 cell PV modules		
Maximum input DC voltage	48 V		60 V		
Peak power tracking voltage	27 V 37 V		27 V - 45 V		
Operating range	16 V - 48 V		15 V - 60 V		
Min/Max start voltage	22 V - 48 V		22 V 160 V		
Max DC short circuit current (module (sc)	15 A		15 A		
Overvoltage class UC port			14		
GC port backfeed current	0 A		0 A		
ov array configuration	Tix 1 ungrounded array. No addition AC side protection requires max 20				
OUTPUT DATA (AC)	IQ 7 Microinverter		IQ 7+ Microinverter		
Peak output power	250 VA		295 VA		
Maximum cantinuous outquit power	240 VA		240 94		
Nominal (L.L.) voltage/range ^z	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V	
Maximum continuous output current	10 A (240 V)	1 (5 A (208 V)	121A (240 V)	1.39 A (208 V)	
Nominal frequency	60 Hz		60 Hz		
Extended frequency range	47 68 Hz		47 68 Hz		
4C short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms		
Maximum units per 20 A (I-1) branch strout?	16 (240 VAC)	13 (208 VAC)	13 (24f) VAC)	11 (208 VAC)	
Overvoltage class AC port					
AC port backfeed current	0 A		0.4		
Power factor setting	1.0		1.0		
Power factor (adjustable)	0.85 leading 1	0.85 lagging	0.85 leading	185 lagging	
EFFICIENCY	@240 V	@208 V	@240 V	@20B V	
Peak efficiency	976%	97.6%	97.5 %	973%	
CEC weighted efficiency	970%	970":	97.0%	97,0 %	
MECHANICAL DATA			AND		
Ambient temperature range	-40°C to +65°C				
Relative humidity range	4% to 100% (car	adensina)			
Connector type (107 60 2 US & 107PLUS 72 2 US)			Iditional Q DCC 5 a	idapter)	
Connector type (107-60-8-US & 107P) US-77-8-US)	Friends PV2 (M Adaptors for un PV2 to MC4 o				
Dįmensrons (WxHxD)	212 mm x 175 n	nm x 30 2 mm (with	nout bracket)		
	212 mm x 175 n 1 08 kg (2 38 lb		nout bracket)		
Weight			nout bracket)		
Weight Geofing	1 08 kg (2 38 lb		naut bracket)		
Weight Cooling Approved for wet locations	1 08 kg (2 38 lb Natural convect		out brecket)		
Dimensions (WxHxD) Weight Cooling Approved for wet locations Pollution degree	1 08 kg (2 18 lb Natural convect Yes PD3	s) non - No fans		në emblosure	
Weight Ceoling Approved for wet locations Pollution degree Englesure	1 08 kg (2 08 lb Natural convect Yes PD3 Class II double-	s) non - No fans Insulated, corresio		ne enclosure	
Weight Centing Approved for wet locations Pollution degree Environmental calegory / UV exposure rating	1 08 kg (2 18 lb Natural convect Yes PD3	s) non - No fans Insulated, corresio		rie enclosure	
Weight Cealing Approved for wet locations Pollution degree Environmental category / UV exposure rating FEATURES	1 08 kg (2 18 lb. Natural convect Yes PD3 Class II double- NEMA Type 6 /	s) unn - No fans insulated, corresio outdoor		ne enclosure	
Weight Confing Approved for wet locations Pollution degree Engineure Environmental category / UV exposure rating FEATURES Communication	1 08 kg (2 38 lb. Natural convect Yes PD3 Class II double- NEMA Type 6 /	s) inn - No fans insulated corresio outdoor nmunication (PLC)	n resistant polyme		
Weight Confing Approved for wet locations Pollution degree Enciosure Environmental category / UV exposure rating FEATURES Communication Monitoring	1 08 kg (2 38 lbr Natural convect Yes PD3 Class II dnuble- NEMA Type 6 / Power Line Con Enlighten Mans 8 eth aptions re	s) inco- No fans inculated, corresio outdoor inmunication (PLC) iger and MvEnlighte	n resistant polyme en monitoring optic f an Enphase IQ En	ens soy.	
Weight Cooling Approved for wet locations	1 08 kg (2 38 lbr Natural convect Yes PD3 Class II double- NEMA Type 6 / Power Line Con Enlighten Mans 8eth options re The AC and DC disconnect requ	ion - No fans Insulated, corresion outdoor nmunication (PLC) ider and MyEnlighte quire installation of connectors have be uired by NEC 690.	n resistant polyme en monitoring optic f an Enphase IQ En	EDS	
Weight Cooling Approved for wet locations Pollution degree Enciesure Environmental category / UV exposure rating FEATURES Communication Monitoring	1 08 kg (2 38 lbr Natural convect Yes PD3 Class II double- NEMA Type 6 / Power Line Con Enlighten Mans 8eth options re The AC and BC disconnect requ CA Rine 21 (IL UL 62109-4, UL) CANY CSA-C22. This product is	insulated corresion outdoor nminication (PLC) oper and MyEnlighte quire installation of connectors have builted by NEC 690. 1741-SAI 12EE1547, ECC 2 NO 1071-01. UL Listed as PV Ra	n resistant polyme en monitoring optin f an Enphase (Q En een evaluated and : Part 15 Class 8. (p d Shut Dewn Equ	ons voy. approved by UL for use as the load-break	

No enforced DCDAC ratio. See the compatibility calculator at https://enphase.com/en/us/support/modele-compatibility
 Nomenal voltage range can be extended deviand nominal directioned by the stillty
 Limits may vary. Refer to local requirements to define the number of micromyetters per pranch in your area.





Roof Mount System



Built for solar's toughest roofs.

IronRidge builds the strongest roof mounting system in solar. Every component has been tested to the limit and proven in extreme environments.

Our rigorous approach has led to unique structural features, such as curved rails and reinforced flashings, and is also why our products are fully certified, code compliant and backed by a 20-year warranty.



Strength Tested

All components evaluated for superior structural performance.



PE Certified

Pre-stamped engineering letters available in most states.



Class A Fire Rating

Certified to maintain the fire resistance rating of the existing roof.



Design Software

Online tool generates a complete bill of materials in minutes.



Integrated Grounding

UL 2703 system eliminates separate module grounding components.



20 Year Warranty

Twice the protection offered by competitors.

XR Rails

XR10 Rail



A low-profile mounting rail for regions with light snow.

- · 6' spanning capability
- Moderate load capability
- · Clear & black anod, finish

XR100 Rail



The ultimate residential solar mounting rail.

- · 8' spanning capability
- · Heavy load capability
- · Clear & black anod, finish

XR1000 Rail



A heavyweight mounting rail for commercial projects.

- · 12' spanning capability
- Extreme load capability
- · Clear anodized finish

Internal Splices 💮



All rails use internal splices for seamless connections.

- Self-tapping screws
- · Varying versions for rails
- · Grounding Straps offered

Attachments

FlashFoot



Anchor, flash, and mount with all-in-one attachments.

- · Ships with all hardware
- · IBC & IRC compliant
- · Certified with XR Rails

Slotted L-Feet



Drop-in design for rapid rail attachment.

- · High-friction serrated face
- · Heavy-duty profile shape
- Clear & black anod, finish

Standoffs



Raise flush or tilted systems to various heights.

- · Works with vent flashing
- · Ships pre-assembled
- · 4" and 7" Lengths

Tilt Legs



Tilt assembly to desired angle, up to 45 degrees.

- · Attaches directly to rail
- · Ships with all hardware
- Fixed and adjustable

Clamps & Grounding

End Clamps



Slide in clamps and secure modules at ends of rails.

- · Mill finish & black anod.
- Sizes from 1.22" to 2.3"
- · Optional Under Clamps

Grounding Mid Clamps



Attach and ground modules in the middle of the rail.

- · Parallel bonding T-bolt
- · Reusable up to 10 times
- · Mill & black stainless

T-Bolt Grounding Lugs



Ground system using the rail's top slot.

- Easy top-slot mounting
- · Eliminates pre-drilling
- · Swivels in any direction

Accessories



Provide a finished and organized look for rails.

- Snap-in Wire Clips
- · Perfected End Caps
- · UV-protected polymer

Free Resources



Design Assistant

Go from rough layout to fully engineered system. For free.

Go to IronRidge.com/rm

NABCEP Certified Training

Earn free continuing education credits, while learning more about our systems

Go to IronRidge.com/training