

1.0 Reference and Address			
Report Number	101786065LAX-001	Original Issued: 25-Nov-2014	Revised: 27-Feb-2020
Standard(s)	Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels [UL 2703:2015 Ed.1]		
Applicant	<u>Quick Mount PV</u>	Manufacturer 1	<b>Quick Mount PV</b>
Address	2700 Mitchell Dr. Walnut Creek, CA 94598	Address	2700 Mitchell Dr. Walnut Creek, CA 94598
Country	USA	Country	USA
Contact	Duane Menton	Contact	Duane Menton
Phone	(925) 478-8847	Phone	(925) 478-8847
FAX	(925) 478-8765	FAX	(925) 478-8765
Email	duane.menton@quickmountpv.com	Email	duane.menton@quickmountpv.com
Legal Name	Wencon Development, Inc		
Manufacturer 2	<b>Jiaying Pacific Solar Tech Inc</b>		
Address	No.8 Haiwan road, Hangzhou Bay Bridge Economic Development Zone Haiyan Zhejiang 314304		
Country	P.R. China		
Contact	Feihao Shen Jieqing Zeng		
Phone	86-13157339665 86-13221331269		
FAX	NA		
Email	shenfeihao@pacificbusinesco.com jieqingz@pacificbusinesco.com		

<b>2.0 Product Description</b>	
Product	Photovoltaic Racking System QRail - Installed Using Quick Mount PV's QRail Series Installation Manual, "Jan-2020, Rev 8"
Brand name	Quick Mount PV
Description	<p>The product covered by this report is a photovoltaic roof racking system. This system is designed to be installed on low and steep-slope roofs. QRail Series consists of aluminum support rails and top-down clamping hardware. It allows for both portrait and landscape installation of the modules. This model is intended to be used with four top-down clamps to secure a UL 1703 Listed framed PV module and the required electrical bond between the anodized PV module frame and the QRail is accomplished by the use of QClick Technology PV mid clamps with bonding plates and by the use of QClick Technology End Clamps are available with and without Ground Clip to address bonding when necessary.</p> <p>This system is in compliance with the bonding, grounding, and mechanical load portions of UL 2703. Fire testing was performed on this system and the ratings are shown below.</p> <p>The grounding of the entire system is intended to be in accordance with the latest edition of the National Electrical Code, including NEC 250: Grounding and Bonding, and NEC 690: Solar Photovoltaic Systems. Any local electrical codes must be adhered in addition to the national electrical codes. An entire array, regardless of size, is grounded via one ground lug (QMR-GLQ or QMR-GLO) placed on the QRail of this roof system.</p> <p>This product investigation was performed only with respect to specific properties, a limited range of hazards, or suitability for use under limited or special conditions. The following risks and other properties of this product have not been evaluated: electric shock, Ultraviolet and light exposure.</p>

<b>2.0 Product Description</b>	
Models	QRail
Model Similarity	NA
Ratings	<p>Fuse rating: 20A</p> <p>Fire Class Resistance Rating without skirt:                      - Class A for Flush Mounted Steep and Low Slope Applications when using Type 1 or Type 2, Listed Photovoltaic Modules.                      - Class A for 5° and above Tilt Mounted Low Slope Applications when using Type 1 or Type 2, Listed Photovoltaic Modules.</p> <p>Fire Class Resistance Rating with skirt:                      - Class A for Flush Mounted Steep and Low Slope Applications when using Type 1 or Type 2, Listed Photovoltaic Modules.                      - Class A for 5° and above Tilt Mounted Low Slope Applications when using Type 1 or Type 2, Listed Photovoltaic Modules.</p> <p>Mechanical Load ratings:                      Downward Pressures – 10 psf                      Upward Pressure – 5 psf                      Down-Slope Load – 5 psf</p> <p>UL 2703 Design Load Rating: Maximum Module Size: 17.55 ft<sup>2</sup>                      **Hyundai HiS-S270RG(BK) (270W) used for Mechanical Load Test"                      Mechanical Load ratings: To add QRail Light</p> <p>Downward Pressures – 10 psf                      Upward Pressure – 5 psf                      Down-Slope Load – 5 psf</p> <p>UL2703 Design Load Rating: Maximum Module Size: 20.9 ft<sup>2</sup>                      **Solarworld 72 cells** used for Mechanical Load Test"                      Downward Pressures – 10 psf                      Upward Pressure – 5 psf                      Down-Slope Load – 5 psf</p> <p>UL2703 Design Load Rating: Maximum Module Size: 22.31 ft<sup>2</sup>                      **LG400N2W-A5** used for Mechanical Load Test"                      Downward Pressures – 10 psf                      Upward Pressure – 5 psf                      Down-Slope Load – 5 psf</p> <p>UL2703 Design Load Rating: Maximum Module Size: 21.59 ft<sup>2</sup>                      **REC330TP2SB 72 XV** used for Mechanical Load Test"                      Downward Pressures – 10 psf                      Upward Pressure – 5 psf                      Down-Slope Load – 5 psf</p> <p>See section 7.0 illustration # 1 to 1ba for a complete list of PV modules evaluated with this racking system.</p>
Other Ratings	NA

**7.0 Illustrations**

**Illustration 1- Other Ratings**

Evaluated Module List- xxx= Power output

Manufacturer	Model Number
Axitec	AC-xxxA/60B(S), AC-xxxA/72B, AC-xxxMH/120S, AC-xxxMH/144S, AC-xxxMH/120V, AC-xxxMH/144V Note: A = P, M; B = X, V, XV, MX
Boviet	BVM6610P-xxx, BVM6610M-xxx, BVM6612P-xxx, BVM6612M-xxx
Canadian Solar	CS6P-xxx, CS3U-P, CS3U-MS, CS3K-P, CS3K-MS, CS3K-MS, CS6K-xxxMS, All-BLACK CS6K-xxxMS, CS6U-xxxM, 1500V CS6U-xxxM, CS6U-xxxP, 1500V CS6U-xxxP, CS6X-xxxP, ALL-BLACK CS6K-xxxM, CS6K-xxxM, 1500V CS6K-xxxM, CS6K-xxxP, 1500V CS6K-xxxP, CS6P-xxxP, CS3K-XXX-P, CS3K-XXX-MS, CS1K-XXX-MS, CS3U-XXX-P, CS3U-XXX-MS, CS3U-XXX-AG, CS6K-XXX-AG, CS6U-XXX-AG, CS1H-MS, CS3W-xxxMS, CS3W-xxxP, CS3L-xxxP, CS3L-xxxMS, CS3U-xxxPB-AG, CS3U-xxxMB-AG, CS3W-xxxPB-AG, CS3W-xxxMB-AG, CS1U-xxxMS
Certainteed	CTxxxMXX-02, CTxxxMXX-03
Conergy	PowerPlus xxx
ET Solar	ET-M660xxxBB, ET-M660xxxWW/WB, ET-P660xxxBB, ET-P660xxxWW/WB, ET-M672xxxBB, ET-M672xxxWW/WB, ET-P672xxxBB, ET-P672xxxWW/WB
Gigawatt Inc.	GW-xxxPB, GW-xxxMB
Hanwha Q Cell	60 Cell: Q.PEAK DUO-G5 xxx, Q.PEAK DUO BLK-G5 xxx, Q.PEAK G4.1 xxx, Q.PEAK BLK-G4.1 xxx, Q.PEAK-G4.1/MAX xxx, Q.PEAK-G4.1/TAA xxx, Q.PEAK BLK G4.1/TAA xxx, Q.PLUS G4 xxx, Q.PLUS BFR G4.1 xxx, Q.PLUS BFR G4.1/MAX xxx, Q.PLUS BFR G4.1/TAA xxx, Q.PRO G4 xxx, Q.PRO BFR G4 xxx, Q.PRO BFR 4.1 xxx, Q.PRO BFR 4.3 xxx, Q.PRO EC-G4.4 xxx, B.LINE PLUS BFR G4.1 xxx, B.LINE PRO BFR G4.1 xxx Q.PLUS DUO-G5 xxx, Q.PEAK DUO BLK-G6 xxx, Q.PEAK DUO-G6 xxx, Q.PEAK DUO BLK-G6+ xxx, Q.PEAK DUO-G6+ xxx, Q.PEAK DUO G7.2 xxx, Q.PEAK DUO BLK-G7 xxx, Q.PEAK DUO-G7 xxx, Q.PEAK DUO BLK-G8 xxx, Q.PEAK DUO-G8 xxx, Q.PEAK DUO BLK-G8+ xxx, Q.PEAK DUO-G8+ xxx, " 72 Cell: Q.PEAK DUO L-G5.2, Q.PEAK L G4.2 xxx, Q.PLUS L G4.2 xxx, Q.PLUS L G4.1 xxx, Q.PLUS L G4 xxx, Q.PRO L G4 xxx, Q.PRO L G4.1 xxx, Q.PRO L G4.2 xxx, B.LINE PLUS L G4.2 xxx, B.LINE PRO L G4.1 xxx, B.LINE PRO L G4.2 xxx, Q.PLUS L G4.2 xxx Q.PLUS L-G4.2/TZZ xxx, Q.PEAK L G4.1 xxx, Q.PEAK DUO L-G5.3 xxx, Q.PEAK DUO L-G5.2 xxx, Q.PLUS DUO L-G5.3 xxx, Q.PLUS DUO L-G5.2 xxx, Q.PLUS DUO L-G5.1 xxx, Q.PLUS DUO L-G5 xxx, Q.PEAK DUO L-G6.3 xxx, Q.PEAK DUO L-G6.2 xxx, Q.PEAK DUO L-G6 xxx, Q.PEAK DUO L-G5.3/BF xxx, Q.PEAK DUO L-G7 xxx, Q.PEAK DUO L-G7.1 xxx, Q.PEAK DUO L-G7.2 xxx, Q.PEAK DUO L-G7.3 xxx, Q.PEAK DUO L-G8 xxx, Q.PEAK DUO L-G8.1 xxx, Q.PEAK DUO L-G8.2 xxx, Q.PEAK DUO L-G8.3 xxx"
Heliene	60P, 60M(-BLK), 72P, 72M
Hyundai	HIS-AxxxB, HIS-AxxxB (BK), HIS-AxxxC, HIA-xxxxRG/TG/KG (silver or black), HIA-xxxx-RI/TI/KI (silver), HiA-SxxxHI (silver) Note: A = S, M; B = RG, TG, KG; C = RI, TI, KI "
Itek	IT-xxx-SE, IT-xxx-SE-72

**7.0 Illustrations**

**Illustration 1aa - Other Ratings Continue**

JA Solar	JAM6(K)-60-xxx/4BB, JAP6(K)-60-xxx/4BB, JAM6(K)-60-xxx/PR, JAM6(L)-60-xxx/PR, JAP6-60-xxx/4BB/RE, JAP6(K)-60-xxx/4BB(1500), JAP60S01-xxx/SC, JAMP6(K)-60/PR(1500), JAMP60201-xxx/PR, JAM6(K)-72-xxx/4BB, JAM6(L)-72-xxx/4BB, JAP6(K)-72-xxx/4BB, JAM6(K)-72-xxx/PR, JAM6(L)-72-xxx/PR, JAP6-72-xxx/4BB/RE, JAM60S09-xxx/PR, JAP60S09-xxx/SC, JAM72S09-xxx/PR, JAP72S09-xxx/SC, JAM60S10-xxx/PR, JAP60S10-xxx/PR, JAM72S10-xxx/PR, JAP72S10-xxx/PR
Jinko	JKMxxxP-60, 60 JKMxxx-P-60, 60 JKMxxx-P-60B, 60 JKMxxxPP-60, 60 JKMxxxPP-60B, PERC 60 JKMxxxM-60, Plus JKMxxxPP-60(Plus), JKMxxxP-60-J4, JKMxxxP60B-J4, Black JKMxxxPP-60-J4, JKMxxxPP60B-J4, 1500V 60 JKMxxxPP-60-V, 1500V 60 JKMxxxM-60-V, Jinko MX60 JKMSxxxP, MX JKMSxxxPP-60, JKMxxxM-60B, JK-MxxxM-60-J4, JKMxxxM60B-J4, JKMSxxxP-60, JKMSxxxP-60-J4, JKMSxxxM-60, JKMSxxxM-60-J4, JKMSxxxPP-60-J4, JKMSxxxPP-60, JKMSxxxM-60B-EP, 72 cell modules model: JKMxxxP-72, JKMxxxP-72B, JKMxxxP-72-J4, JKMxxxP-72B-J4, JK-MxxPP-72, JKMxxxPP-72B, JKMxxxPP-72-J4, JKMxxxPP-72B-J4, JKMxxxPP-72(Plus), JKMxxxPP-72-V, JK-MxxxM-72, JKMxxxM-72B, JKMxxxM-72B-J4, JKMxxxM-72-J4, JKMxxxM-72-V, MX JKMSxxxPP-72, JKMxxxM - 60BL, JKMxxxM - 60HBL, JKMxxxM - 72L - V, JKMxxxM - 72HL - V, JKMxxxM-72HL-TV, JKMSxxxM-72HL-V-MX3, JKMSxxxM-60HBL-EP (AC Module) WHERE B = null or B; L = null or L; H = null or H; V= null or V"
LG	LGxxxF1G-A5, LGxxxF2G-A5, LGxxxQ1G-A5, LGxxxF1G-V5, LGxxxF2G-V5, LGxxxQ1G-V5, LGxxxN2T-J5, LGxxxA1C-V5 Note: F = E, N, S; G = any letter in the alphabet "
LONGI	LR6-60A-XXXM, LR6-72A-XXXM, LR4-60A-XXXM, LR4-72A-XXXM Note: A = BK, HV, PB, PE, PH, BP, HPB, HIB, HPH, HIH, HBD, HIBD"
Mission Solar	MSExxxSO5K, MSExxxSO5T, MSExxxSO6J, MSExxxSO4J, MSExxxMM6J, MSExxxSQ5K, MSExxxSQ5T, MSExxxSQ6S, MSExxxSQ4S
Panasonic	VBHNxxxSA17, VBHNxxxSA11, VBHNxxxSA16(B), VBHNxxxSA15, VBHNxxxSA15B, VBHNxxxKA01, VBHNxxxKA03, VBHNxxxSA17, VBHNxxxKA03/04, VBHNxxxSA17/18, VBHNxxxSA17E, VBHNxxxSA16, VBHxxxRA18N, VBHxxxRA03K, VBHxxxRA18E, VBHxxxRA03F, VBHxxxRA18G
Piemar	SGXXXA-B Note: A = P or M; B = (BF) or (FB);"
REC	60 cell module: REC TwinPeak 2 Series (BLK), RC TwinPeak 2 BLK2 Series, REC N-Peak, 72 cell module: REC TwinPeak 2S 72 Series, REC TwinPeak 2S 72XV Series, REC TwinPeak 2S 72 BXV Series, REC N-PEAK"
RECOM	RCMxxx6MA-5, RCMxxx6MB-5, RCMxxx6ME-5, RCMxxx6MF-5, 60Mxxx, 72Mxxx
Risen Energy	RSM144-6-xxxM, RSM144-6-xxxP, RSM132-6-xxxM, RSM120-6-xxxM, RSM120-6-xxxP, RSM72-6-xxxM, RSM72-6-xxxP, RSM60-6xxxM, RSM60-6xxxP
S-Energy	SNXXXA-B Note: A = P or M; B = 10 or 10(B)"

**7.0 Illustrations**

**Illustration 1ba - Other Ratings Continue**

Seraphim Solar	SRP-xxx-6MA, SRP-xxx-6PA, SRP-xxx-6MB, SRP-xxx-6MB-BB, SRP-xxx-6PB, SRP-xxx-6PB-HV, SRP-xxx-6MB-HV, SRP-xxx-6PA-HV, SRP-xxx-6MA-HV, SEG-6MB-xxxWW/WB, SEG-6MB-xxxBB, SEG-6PB-xxxWW/WB, SEG-6PB-xxxBB, SEG-6PA-xxxWW, SEG-6MA-xxxWW, SEG-6MA-xxxBB, SEG-xxx-6MA, SEG-xxx-6MB-BB, SEG-xxx-6MB, SEG-xxx-6PA, SEG-xxx-6PB, SEG-xxx-BMA, SEG-xxx-BMA-BG
Silfab	SLA X, SLA-M-xxx, SLA-P-xxx, SLG-P-xxx, SLG-M-xxx/SLG-X-xxx, SSA-M-xxx/SSA-P-xxx, SSG-M-xxx/SSG-P-xxx; All silver frame, All black frames: SLA-M-xxx, SLG-M-xxx, SLA-X-xxx, SLG-X-xxx, SLA-P-xxx, SLG-P-xxx, SSA-M-xxx, SSG-M-xxx, SSA-P-xxx, SSG-P-xxx
Solar Tech Universal	STU-xxx-PERC, STU-xxx-HJT, PERCB-C-xxx, HJTb-C-xxx (C = W, B),EPIQ xxx f40, EPIQ BLACK xxx f40, EPIQ xxx H f40, EPIQ BLACK xxx H f40"
Solar World	Sunmodule Plus SWxxx, Sunmodule Plus SWA xxx poly (black/clear), Sunmodule Plus SWA xxx SolarWorld mono (black/clear), Sunmodule SWA xxx XL mono (black/clear), Sunmodule SWA xxx XL poly (black/clear), Sunmodule Bisun SWA xxx XL duo (black/clear), Protect SWA mono xxx (black), Bisun SWA xxx duo (black/clear)
Solaria	PowerXT-xxxR-A Note: A = AC, PD, BD, PX, BX "
Sonali Solar	SS 230W to 265W-280W to 320W
Suniva	OPTxxx-60-4-1B0
SunPower	SPR-X21-xxx (BLK), SPR-E20-xxx, SPR-E19-xxx, SPR-X21-xxx, SPR-E20-xxx(BLK), SPR-P17-xxx-COM, SPR-X21-xxx, SPR-E20-xxx(BLK), SPR-X22-xxx-D-AC, SPR-Axxx-G-AC
SunSpark Technology	SMX-xxxw, SST-xxxw
Tesla	SCxxx, SCxxxB, SCxxxB1, SCxxxB2
Trina	60 cell module: TSM-PD05.08-xxx, 72 cell module: TSM-PD14-xxx, ALLMAX-PD05.05, ALLMAX M Plus-DD05A.05 (II)-, ALL- MAX-PD05A.08, TSM-DD14A(II)-, TSM-DE14A(II)-, TSM-DE15H(II)-xxx, TSM-DE15M(II) -xxx, TSM-DD06M.05(II)-xxx, TSM-DD06H.08(II)-xxx, TSM-DD06H.05(II)-xxx, TSM-DEG15MC.20(II)-xxx, TSM-DEG15HC.20(II)-xxx
Yingli	YL-xxx-35B, YL-xxx-29B, YLxxxP29b, YLxxxP-35b, YLxxxD-35B, YLxxxD-36B, YLxxxD-30B