



NATIONAL OPTICAL  
ASTRONOMY  
OBSERVATORY

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**MONSOON**  
**Bill of Materials**  
**12 Slot Chassis (2x 6 Slot Backplanes)**

**Dwg No.: MNSN-EL-02-0002 Rev: --**  
**Next Assembly:**

LTR	DESCRIPTION	ECR	DATE	BY	APPRVD

ITEM	QTY	Part/Dwg Number	MFR	Serial No.	Description	COMMENT		
1	1	20827 091	Schroff		6U CPCI Subrack Chassis, Kit			
2	1	24571 539	Schroff		RatioPacPro Case			
3	2	23006 866	Schroff		6U 6 Slot CPCI Backplane, Right Justified			
4	72	20817 501	Schroff		Keying Plugs			
5	1	MNSN-AD-02-0005	NOAO		SDN, Board Keying Assignment	REFERENCE		
6	4	21100 276	Schroff		Locking Screw, For Threaded Inserts			
7	24	21100 148	Schroff		M2.5 x 12mm Cheese Head Screw, For Backplane			
8	1	20838-276	Schroff		Front Panel 84HP Hinged			
9	1	30818-598	Schroff		Rear Panel 84HP Solid			
10	1	MNSN-EL-05-	NOAO		Supply Power Wiring, Schematic	REFERENCE		
11	1	MNSN-EL-02-	NOAO		Horizontal Rail Threaded Insert Modifications, 12 Slot Card Cage	REFERENCE		
12	1	MNSN-EL-02-	NOAO		Horizontal Rail Guide Insert Modifications, 12 Slot Card Cage	REFERENCE		
13	1	MNSN-EL-02-1009	NOAO		Horizontal Rail "A" Modifications, 12 Slot Card Cage	REFERENCE		
14	1	MNSN-EL-02-	NOAO		Horizontal Rail "B" Modifications, 12 Slot Card Cage	REFERENCE		
15	1	MNSN-EL-02-	NOAO		Horizontal Rail "C" Modifications, 12 Slot Card Cage	REFERENCE		
16	2	MNSN-EL-02-1002	NOAO		G10 Card Cage Holder, 12 Slot Card Cage			
17	1	MNSN-EL-02-1001	NOAO		Fan Exhaust Hose Attachment 12 Slot Chassis			
18	2	MNSN-EL-02-1004	NOAO		Power Supply Mounting Rails, 12 Slot Chassis			
19	1	MNSN-EL-02-1005	NOAO		Power Supply Filters Mounting Plate, 12 Slot Chassis			
20	1	MNSN-EL-02-	NOAO		Rear Panel, 12 Slot Chassis	REFERENCE		
21	1	MNSN-EL-02-	NOAO		Front Panel, 12 Slot Chassis	REFERENCE		
22	1	MNSN-EL-02-1006	NOAO		Side Panel Inner, 12 Slot Chassis W/Fan Cutout	REFERENCE		
23	1	MNSN-EL-02-1007	NOAO		Side Panel Outer, 12 Slot Chassis W/Fan Cutout	REFERENCE		
24	1	MNSN-EL-02-	NOAO		Power Supply Mounting Plate, 12 Slot Chassis			
25	16	92095A190	McMaster-Carr		M4 x 10mm Button Head Cap Socket SS			
26	12	92125A192	McMaster-Carr		M4 x 12mm Flat Head socket SS			
27	11	92196A144	McMaster-Carr		6-32 x .25" Socket Head Cap SS			
28	2	92196A148	McMaster-Carr		6-32 x .50" Socket Head Cap SS			
29	26	92196A106	McMaster-Carr		4-40 x .25" Socket Head Cap SS			
30	1	4-140	Cinch		4 Terminal Barrier Block			
31	6	36152	AMP/Tyco		#6 Ring Terminal Red			
32	9	31890	AMP/Tyco		#8 Ring Terminal Red			
33	2	320565	AMP/Tyco		#8 Ring Terminal Blue			
34	2	35108	AMP/Tyco		#8 Ring Terminal Yellow			
35	18	046310	Weidmuller		16 Awg ferrule			
36	2	EDZ1550/16	On Shore Technology		TERM BLOCK PLUG 3.81MM 16POS			
37	2	102387-4	AMP/Tyco		CONN HOUSING 20POS .100 POL DUAL			
38	24	87046-3	AMP/Tyco		CONN SOCKET 20-24AWG GOLD CRIMP			
39	24	TYE-19/32-BLK	Pacer		20 AWG Wire, Teflon Insulated Black			
40	4	TYE-22/19-RED	Pacer		22 AWG Wire, Teflon Insulated Red			
41	4	TYE-22/19-WHT/RED	Pacer		22 AWG Wire, Teflon Insulated White/red			
42	4	TYE-22/19-ORG	Pacer		22 AWG Wire, Teflon Insulated Orange			
43	4	TYE-22/19-WHT/ORG	Pacer		22 AWG Wire, Teflon Insulated White/Orange			
44	8	TYE-22/19-YEL	Pacer		22 AWG Wire, Teflon Insulated Yellow			

ITEM	QTY	Part/Dwg Number	MFR	Serial No.	Description	COMMENT		
45	8	TYE-22/19-VIO	Pacer		22 AWG Wire, Teflon Insulated Violet			
46	8	TYE-22/19-GRY	Pacer		22 AWG Wire, Teflon Insulated Gray			
47	8	TYE-22/19-WHT/GRY	Pacer		22 AWG Wire, Teflon Insulated White/Gray			
48	24	TYE-16/19-BLK	Pacer		16 AWG Wire, Teflon Insulated Black			
49	4	TYE-16/19-RED	Pacer		16 AWG Wire, Teflon Insulated Red			
50	4	TYE-16/19-WHT/RED	Pacer		16 AWG Wire, Teflon Insulated White/Red			
51	4	TYE-16/19-ORG	Pacer		16 AWG Wire, Teflon Insulated Orange			
52	4	TYE-16/19-WHT/ORG	Pacer		16 AWG Wire, Teflon Insulated White/Orange			
53	8	TYE-16/19-YEL	Pacer		16 AWG Wire, Teflon Insulated Yellow			
54	8	TYE-16/19-VIO	Pacer		16 AWG Wire, Teflon Insulated Violet			
55	8	TYE-16/19-GRY	Pacer		16 AWG Wire, Teflon Insulated Gray			
56	8	TYE-16/19-WHT/GRY	Pacer		16 AWG Wire, Teflon Insulated White/Gray			
57	1	FIT 221 3/32	Alpha		3/32" Heat Shrink Tube			
58	6	FIT 221 1/2	Alpha		1/2" Heat Shrink Tube			
59	1	880-06/006	Qualterk		Power Entry Module, Fused, and Switched			
60	1	TYE-18/19-BLK	Pacer		18 AWG Wire, Teflon Insulated Black			
61	1	TYE-18/19-WHT	Pacer		18 AWG Wire, Teflon Insulated White			
62	6	TYE-18/19-GRN	Pacer		18 AWG Wire, Teflon Insulated Green			
63	2	91793A146	McMaster-Carr		6-32 x .375" Binding Head Socket SS			
64	2	96278A007	McMaster-Carr		6-32 Kep Nut			
65	3	DNF 14-250 FIB	Panduit		.250 Fast On Connector			
66	2	MNSN-EL-04-006	NOAO		Power Fanout Board Right Justified			
67	2	MNSN-EL-10-0400-001	NOAO		MCB, Master Control Board			
68	2	MNSN-EL-10-0300-001	NOAO		Clk & Bias Board			
69	2	MNSN-EL-	NOAO		NEWFIRM CLOCK & BIAS TRANSITION			
70	8	MNSN-EL-	NOAO		IR_ACQ Board			
71	8	MNSN-EL-	NOAO		NEWFIRM IR ACQ TRANSITION			
72	1	MNSN-EL-02-0001	NOAO		Assembly Drawing	REFERENCE		
73	1	MM6-16591	VICOR		Mini MegaPac P/S Spec ID 10026106			
74	1	19-130040	VICOR		Interface Connector Kit			
75	1	19-130042	VICOR		Dual Output Connector Kit			
76	1	URAM2C21	VICOR		3-30 vdc Ripple Attenuation Module uRam			
77	5	VI-RAM-C1	VICOR		5-50 vdc Ripple Attenuation Module VI-Ram			
78	4	91292A107	McMaster-Carr		M4 x 6mm Socket Head Cap SS			
79	4	92148A160	McMaster-Carr		M4 Lock Washer SS			
80	4	1/2 T/C Braid	Alpha		Wire Braid 1/2" Tined Copper			
81	24	914	Keystone Electronics		Ring Lugs #6			
82	1	031659	Comair Rotron		6" 115vac Fan			
83	1	07190-36	Qualtek		Fan power Cord			
84	3	92196A192	McMaster-Carr		8-32 x .375 Socket Head Cap SS			
85								

**Part Number 20827-091      6U CPCI SUBRACK KIT**

**NOTES:**

1. Cut horizontal 84 HP rails to 250mm.

Part number	Description	Quantity Per
34579031	SIDE PANEL 6UX275 (160/	2
34560384	HOR RAIL 84 HP FRT TYP	4
34560584	REAR RAIL TYP H-ST 84HP	2
34579040	MIDDLE RAIL W/ NOTCH	2
34561384	THRD INSERT M2.5X84HP E	6
30845253	PERF ALIGNMENT STRIP 84	4
64560011	SCREW TORX PANHD M4X14	28
34560497	MNTG ANGLE 6U W/O HNDL	2
60817061	INSULATING STRIP 84HP	2
64560090	GUIDE RAIL 160MM GRAY I	14
64560089	GUIDE RAIL 160MM RED IE	2
64560086	GUIDE RAIL 80MM GRAY IE	14
64560085	GUIDE RAIL 80MM RED IEE	2
D20827091	INSTR SHEET	1
60897161	BOX CORR 17X10.5X1.5	1

