Legend

- Serial Communications
- Ethernet Communications
- PPS Communications
- Optical Communications
- Dry-Mate Connector
- Wet-Mate Connector
- 4-way U/W mateable connector
- 12-way U/W mateable connector
- 7-way U/W mateable connector
- 8-O way ODI Flying Plug
- Hybrid 2e-4o U/W mate connector
- Manufacturer supplied connector
- Penetrator Hybrid 4o2e
- 136 VLAN (PVID;Q-tagged)
- Device disconnected
- Device to be connected
- Power (Ground)
- Power / Rubber
- Moulded Cable
- PBOF Cable
- Hybrid Long Extension Cable
- Seawater Reference (Isolation between power supplies and seawater)
- Hybrid 2e 4o Port Interface O-3.2 (long-haul)
- Hybrid 2e 4o Port Interface O-3.1 (short-haul)
- R Receptacle connector (female)
- P Plug connector (male)
- PP Connector end with parking position

Colors bands designating direction on cable (left color is upstream, right color is downstream)

Last Release Date	2024.01.25	Last update to Page	2021.09.02

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University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Grant Francis	Page 1

Instructions on how to report errors

In situations where an error is found in this diagram, please create a NEPDATA ticket with a description of the issue, and assign it to Triage.

Version: MarineNetworkConfig_2023-01-17
(NEPDATA-22228) add a cover page to the Marine Configuration Diagram

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Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Observatory	NEPTUNE	Location	Northeast Pacific

NEPTUNE Recent Updates

Version: MarineNetworkConfig_2024-10-23
(DSO-1941) Update marine config for post-expedition 2024-10 CanPac cruise
Barkley Upper Slope
pgs- 18 - Barkley Canyon – Upper Slope South and Barkley Canyon – Upper Slope South
* Camera system (DIs 86492, 85392, 86232, 86252, 23077) and cable extid 1118 recovered and disconnected from J10 of JB 03 per [recovery annotation|https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=4801&time=2024-10-11T17:32:18.496Z&annotationId=6579201]: Falmat extID 1118 recovered to ship. Oily extID 1416 left on sea floor
Formerly pg- 19- Deleted - Barkley Canyon – Upper Slope South Camera
* Moved the recovered ONC CIB02 over to the Small Obs diagram under MTC section pg-79 ONC-CIB02
Clayoquot Slope Node
pg 24 - Clayoquot Slope Node
* Removed the replacement JB-09 as it didn't end up being swapped
* Removed the red note regarding recovery of two ocean bottom pressure sensors (OBP-01 and OBP-06) for JAMSTEC/NRCan
Clayoquot Bullseye/Whale-fall
pg- 26 - Clayoquot Slope - Bullseye
* Recovery of CableID: 119 (103.EX.0010) did not happen- removed the red note
Clayoquot Slope:
pg- 28 - Clayoquot Slope – ODP 1364A
* Recobvery of JB-08 DI 10110 did not happen - red note removed
Formerly pg- 29-Deleted - Clayoquot Slope – ODP 1364A (planned)
* Removed this page as JB swap did not happen - JB09 already exists in Small Obs diagram under MTC section
pg- 29 - Clayoquot Slope – ODP 1364A
* Removed the red not and red crosses as recovery of JB-08 did not happen
Formerly pg- 30-Deleted - Clayoquot Slope – ODP 1364A (planned)
* removed this entire page since JB 09 ended up not being swapped with JB-08
Clayoquot Deformation (Front East)
pg 30 - Autonomous Site - Clayoquot Deformation Front East (NCSZO)
* RBR, Cervata DI 67640 replaced DI 67620
Clayoquot Deformation (Front West)
pg 32 - Autonomous Site - Clayoquot Deformation Front West (NCSZO)
* RBR, Cervata, DI 67641 replaced DI 67600 and old RBRfermata also deleted to be in line with this note from Hanoffnotes: 'we should also remove the accompanying Fermata of the old platform (old cervata DI 67600) that has no SN from Marine Config" - CAN006 dive
Folger Deep
pg - 52 - Folger Deep IP
* CTD/O2 swapped and new optode DIs 23841,23284,63960 deployed on J4 of JB-02 - per In position annotation https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=4401&time=2024-10-07T23:01:00.806Z&annotationId=6522201 and confirm osition annotation https://data.oceannetworks.ca/app/dive-logs/4501?annotationId=6534601 in Dive CAN003 and Dive CAN004

Version: MarineNetworkConfig_2024-10-21
DSO-1808 Marine Config Fall 2024 Minor Updates
* pg 18 Barkley Canyon – Upper Slope South
** colour coding added to extid 1416 (DSO-1702)
* pg 27 Clayoquot Slope - Bullseye
** extid 685 labeled (DSO-1691)
** duplicate RDI ADCP (DI: 12108) removed (DSO-1690)
* pg 36 Endeavour Node
** media converters added to boths ends of extid 398 (DSO-1006)
** DIs (51240, 51300) & device names added to mud mats on extid 398 (DSO-1006)

Version: MarineNetworkConfig_2024-09-20
(DSO-1823) Marine configuration diagram post-expedition update for 2024-09 Folger Pinnacle Maintenance
* pg 59 - Folger Pinnacle IP
** New UV system DI 88012 deployed on J5 of JB-01

Version: MarineNetworkConfig_2024-09-20
(DSO-1822) Marine configuration diagram pre-expedition update for 2024-09 Folger Pinnacle Maintenance
* pg 59 - Folger Pinnacle IP
** New UV system DI 88012 to be deployed on J5 of JB-01 - EN-7518 and DSO-1625

Version: MarineNetworkConfig_2024-09-19
(DSO-1736) Update marine config for pre-expedition 2024-10 CanPac cruise
* pgs- 18 - Barkley Canyon – Upper Slope South
** Camera recovery (full platform) DI 86492, 85392, 86232, 86252, 23077 - INSTR-2575
* pg 19 - Barkley Canyon – Upper Slope South
** Camera recovery (full platform) DI 86492, 85392, 86232, 86252, 23077
* pg 25 - Clayoquot Slope Node
** I added a red note: "There are plans to recover two ocean bottom pressure sensors (OBP-01 and OBP-06)
** swapp JB-08 for JB-09
* pg- 27 - Clayoquot Slope - Bullseye
** Potential Recovery of 553m cable, CableID: 119 (103.EX.0010) - Expedition Planning Gsheet
* pg- 29 - Clayoquot Slope – ODP 1364A
** Recobvery of JB-08 DI 10110
* pg- 30 - Clayoquot Slope – ODP 1364A (planned)
** moved JB-09 DI 10102 from Small Obs diagram pg 57 over to this page
* pg- 31 - Clayoquot Slope – ODP 1364A
** marked instruments to be disconnected and moved to replacement JB-09
* pg- 32 - Clayoquot Slope – ODP 1364A (planned)
**Added JB-09 bulkhead, updated J8-J10 port voltages, and noted downstream instruments to deploy
** Titan DI 24432 to be deployed on J1 from JB-09
** RBR TiltMeter/APT DI 27179 to be deployed on J2 - EN-8118
** The serial server/CORK to be deployed on J3 per jb-09-config.pdf in EN-8070
** Hydrophone array to be deployed on J10
* pg 33 - Autonomous Site - Clayoquot Deformation Front East (NCSZO)
** Data Logger, RBR, Cervata DI 67640 replacing DI 67620 - EN-7812
* pg 35 - Autonomous Site - Clayoquot Deformation Front West (NCSZO)
** Data Logger, RBR, Cervata, DI 67641 replacing DI 67600 - EN-7810
* pg - 55 - Folger Deep IP
** CTD swap DI 23355, 24004 for new CTD DI 23841, 23284, 63960 on J4 from JB-02 (for Optode; Oxygen - V0, Temp - V1)- EN-7398 , INSTR-2582, INSTR-2587

Last Release Date	2024.10.24	Last update to Page	2024.10.23

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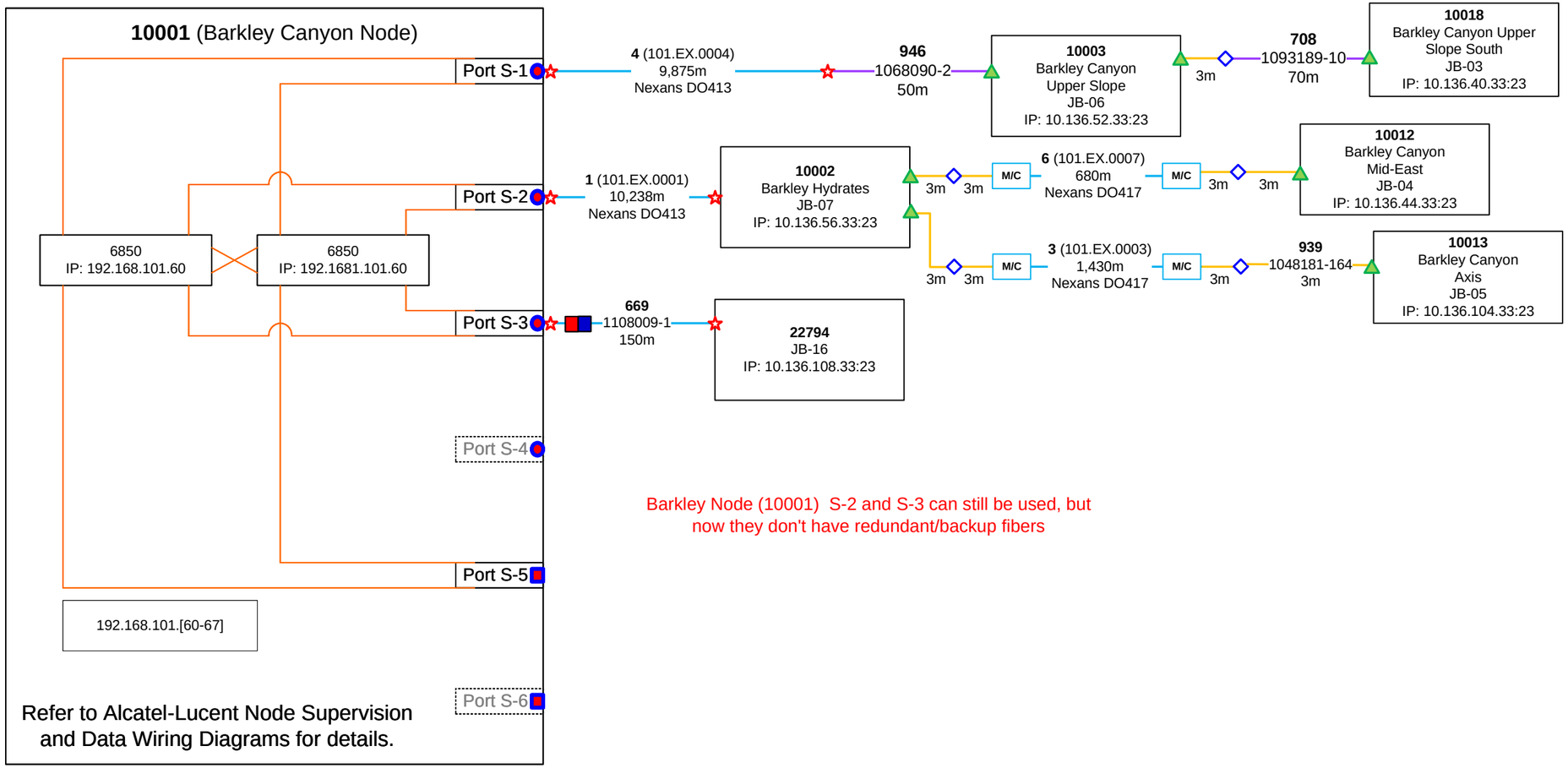
University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Bahar Torabi	Page 3

Observatory	NEPTUNE	Location	Barkley Canyon Node



Barkley Node (10001) S-2 and S-3 can still be used, but now they don't have redundant/backup fibers

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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
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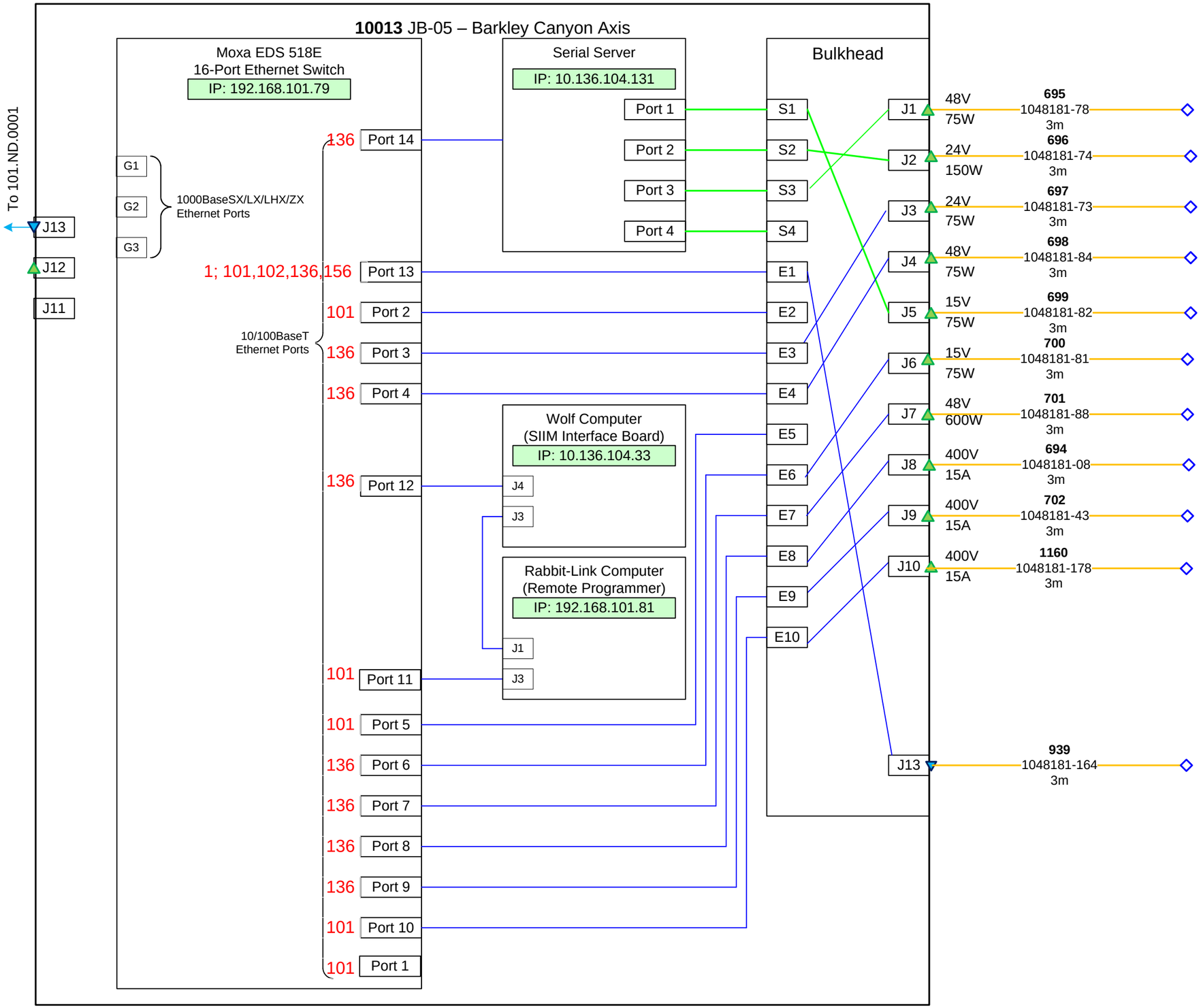
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 4

Observatory	NEPTUNE	Location	Barkley Canyon – Axis



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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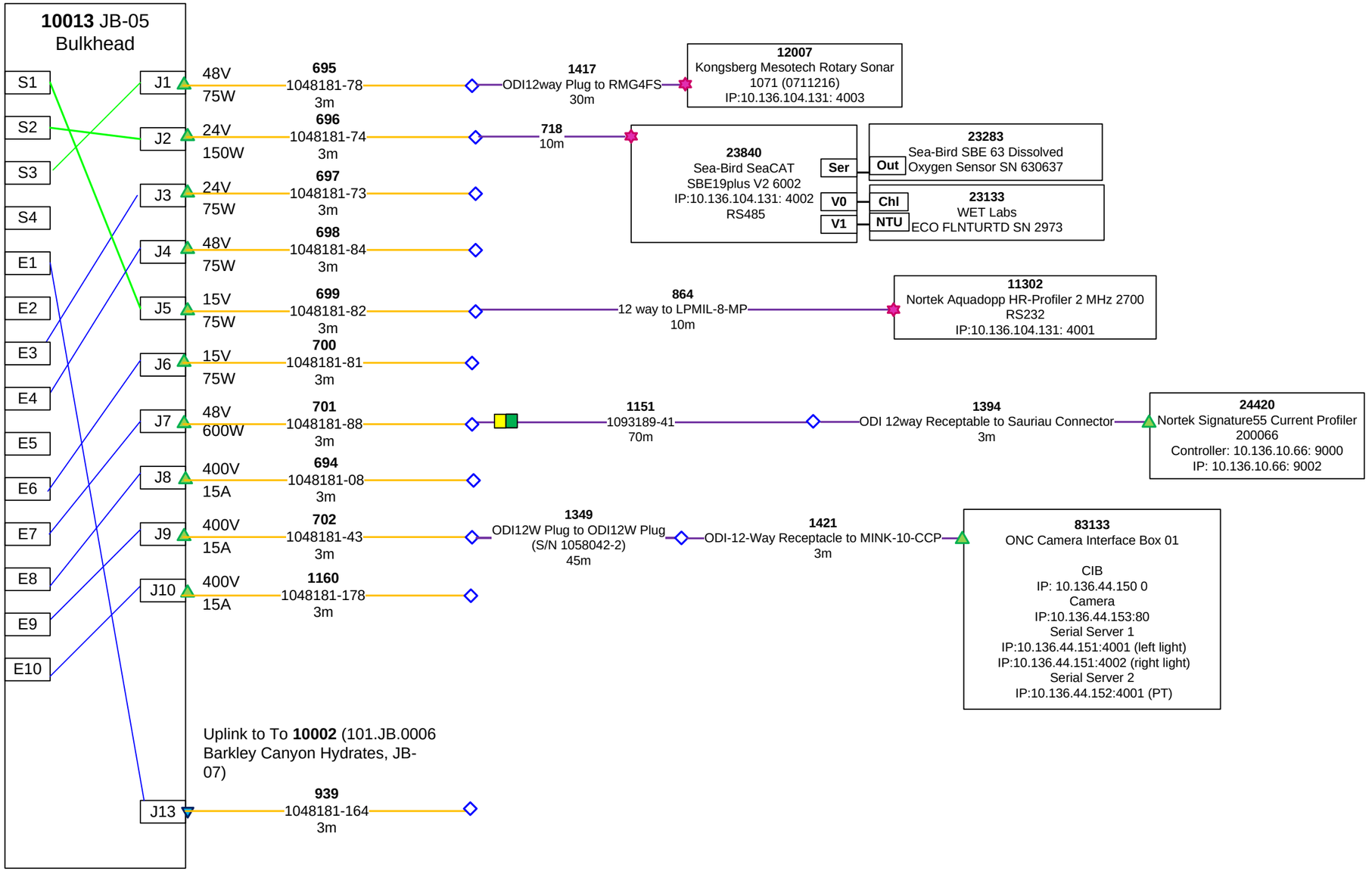
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 5

Observatory	NEPTUNE	Location	Barkley Canyon – Axis



Last Release Date	2024.10.24	Last update to Page	2024.07.12

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 6

Observatory	NEPTUNE	Location	Barkley Canyon – Axis

83133
ONC Camera Interface Box 01

1421
3m
Out Port

SwitchBlox Rugged -40°C to +105°C Ethernet Switch
Port 1
Port 2
Port 3
Port 4
Port 5
Power

MOXA NPort 5232 Serial device server (lights)
SN: 8007
MAC:00:90:E8:9F:B4:2E
IP:10.136.44.151
Ethernet
RS-485
Power

MOXA NPort 5232 Serial device server (camera and pan/tilt)
SN: 8023
MAC:00:90:E8:9F:B4:3E
IP:10.136.44.152:4001
Ethernet
RS-485
Power

12Vout

ONC PCB Board
IP:10.136.44.150
12 VDC Output
CIB Microcontroller

VICOR URAM 2C21 Filter
SN: TBD
28Vin
28V input
28V output

28Vout

VICOR V375A28C600BL DC/DC 375V to 28V 600W
SN: TBD
375Vin
375V input
24V output

Port 0
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
DC Fan

Camera
1418
MINK-10-CCP to MINK-10-CCP
3m
Camera Out
71920
Axis P1378 Camera SN B8A44F720E0D
IP:10.136.44.153:80
In
1423
MCIL-2-M to IL-2-FS Y-Splice
1.5m
Deepsea Power / Light Laser SN 275
Deepsea Power / Light Laser SN 280

Lights
1420
MCIL-5-M to MCIL-5-FS
3m
Out
85112
Aquorea Mk3 LED Light
SN23764 (left)
IP:10.136.44.151:4001

Lights
1419
MCIL-5-M to MCIL-5-FS
3m
Out
85132
Aquorea Mk3 LED Light
SN23765 (right)
IP:10.136.44.151:4002

Pan/Tilt
1422
MINK-10-CCP to MCOM-4-FS
3m
23074
ROS PT-25FB 10294
IP:10.136.44.152:4001

Last Release Date	2024.10.24	Last update to Page	2024.07.12

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University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
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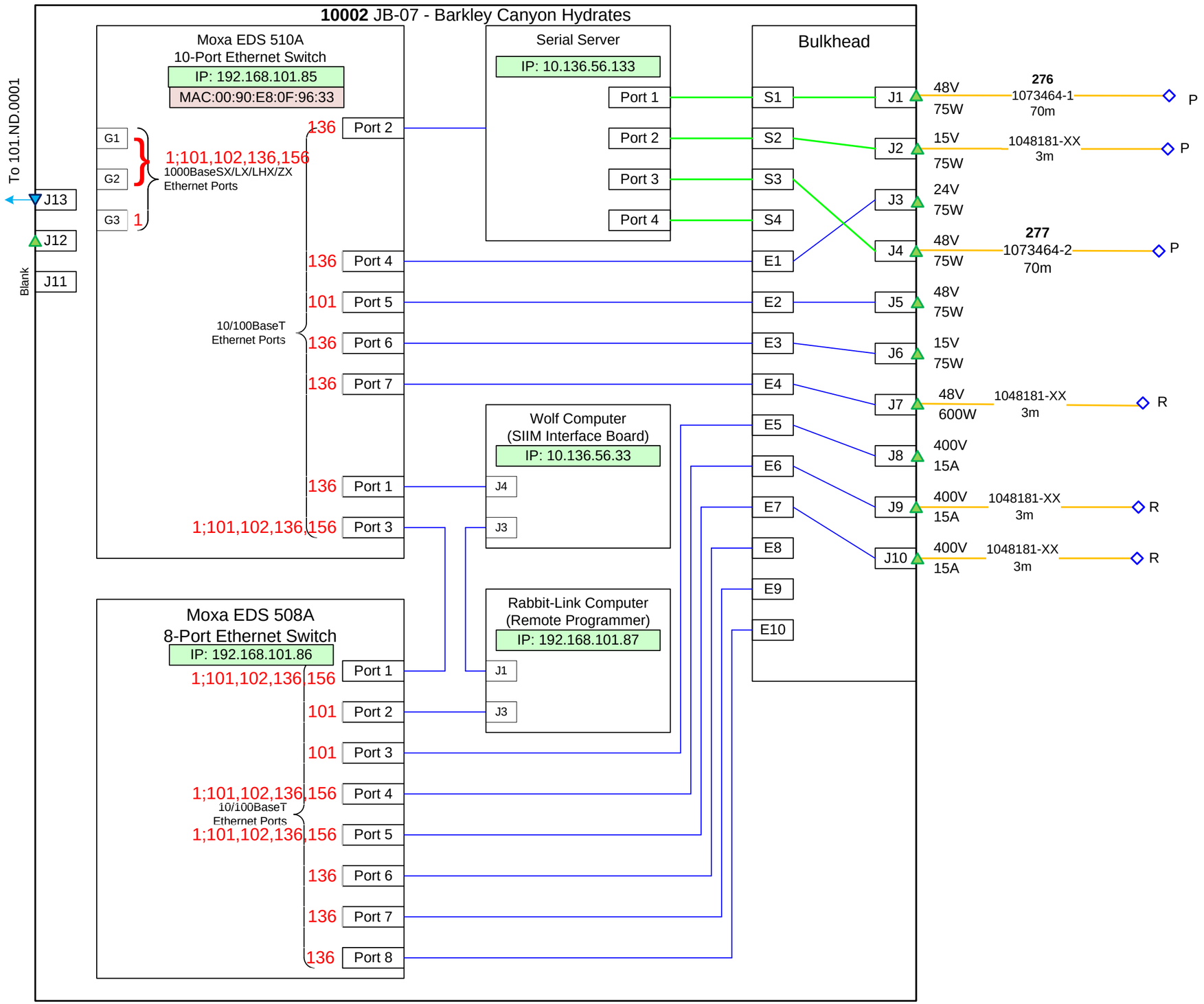
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 7

Observatory	NEPTUNE	Location	Barkley Canyon - Hydrates



Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2021.03.18

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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 8

Observatory	NEPTUNE	Location	Barkley Canyon - Hydrates

10002 JB-07 Bulkhead

S1 — J1 48V 75W — **276** 1073464-1 70m — P R — **1113** 12-W to RMG-4-FS 5m — **23107** Kongsberg Mesotech Rotary Sonar 1171 (1206085) IP:10.136.56.133:4001, RS485

S2 — J2 15V 75W — 1048181-XX 3m — **197** 1069117-3 10m — **23582** Sea-Bird SeaCAT SBE19plus V2 7029 IP:10.136.56.133:4002 [Ser] — [O2] **85432** Sea-Bird SBE 63 Dissolved Oxygen Sensor (S/N 3706)

S3 — J3 24V 75W

S4

E1 — J4 48V 75W — **277** 1073464-2 70m — P — **1114** ODI 12-W to SeaCon RMG-4-FS 5 m — **23108** Kongsberg Mesotech Rotary Sonar 1171 (1206086) IP:10.136.56.133:4003, RS485

E2 — J5 48V 75W

E3 — J6 15V 75W

E4 — J7 48V 600W — 1048181-XX 3m — R P — 12-Way ROV CE PLUG to 12-Way ROV CE PLUG PN: 1093189-48 70m — **1384** — **1428** ODI 12Way Receptacle to MCIL-6-FS, Falmat-10 1m — **22100** Imagenex Delta-T 837B Sonar 4772 [Azimuth] IP: 10.136.164.129:4040 (instrument) [Multibeam] IP: 10.136.164.131:4040 (controller) *(Azimuth and Multibeam ports should both be connected to the same upstream port in topology)*

E5

E6 — J8 400V 15A

E7 — J9 400V 15A — 1048181-XX 3m — R P — 3m — 101.EX.0007-U Media Converter IP: 192.168.101.125 — 3m — R P — **6** (101.EX.0007) 680m Nexans DO417 — R P — 3m — 101.EX.0007-D Media Converter IP: 192.168.101.126 — 3m — R P — 3m — **10012** Barkley Canyon Mid-East JB-04 IP: 10.136.44.33:23

E8 — J10 400V 15A — 1048181-XX 3m — R P — 3m — 101.EX.0003-U Media Converter IP: 192.168.101.123 — 3m — R P — **3** (101.EX.0003) 1,430m Nexans DO417 — R P — 3m — 101.EX.0003-D Media Converter IP: 192.168.101.124 — 3m — R P — **939** 1048181-164 3m — **10013** Barkley Canyon Axis JB-05 IP: 10.136.104.33:23

E9

E10

Last Release Date	2024.10.24	Last update to Page	2024.07.12

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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
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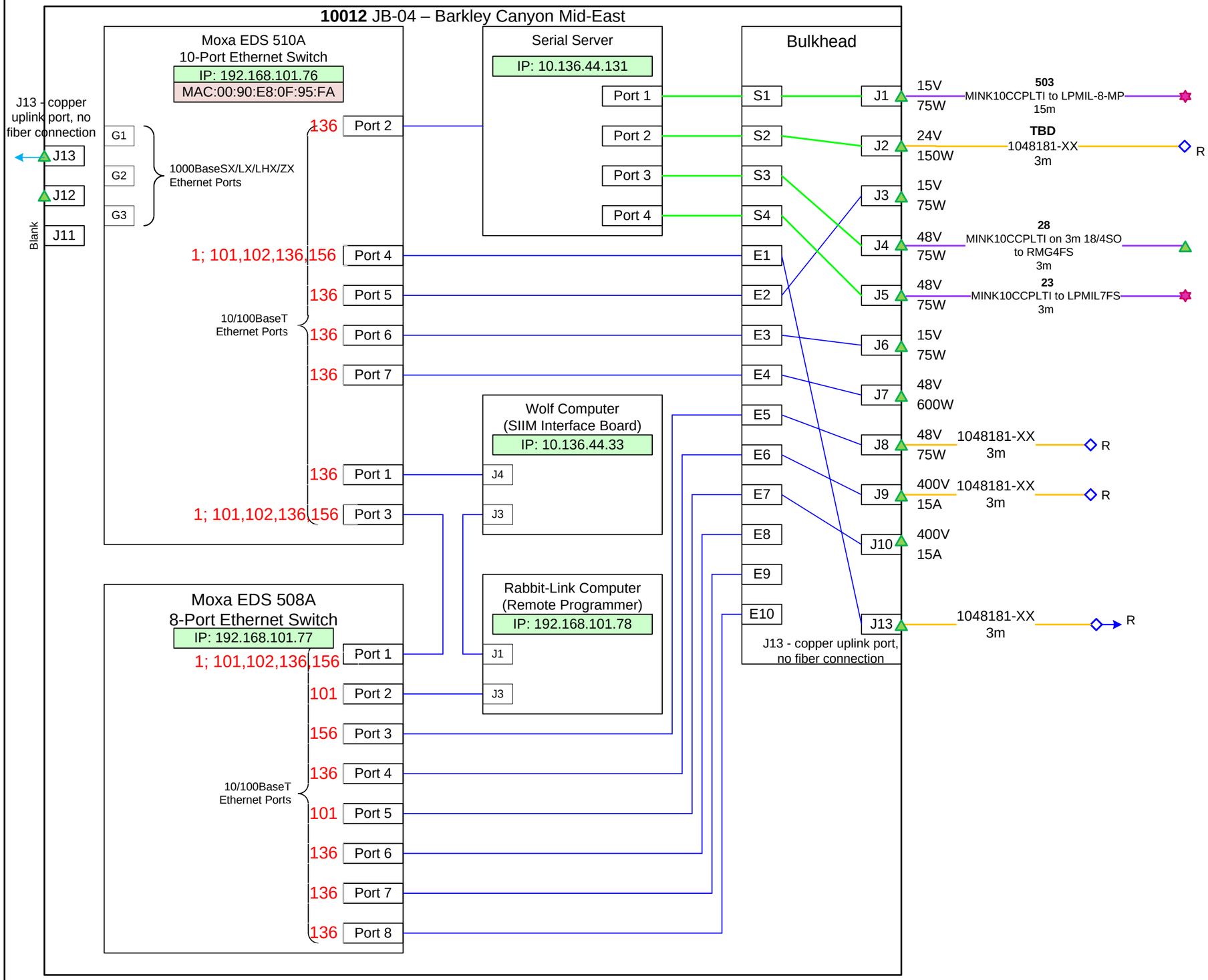
Fax (250) 472-5370

Marine Configuration Diagram

Observatory	NEPTUNE	Location	Barkley Canyon – Mid-East



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2022.03.17

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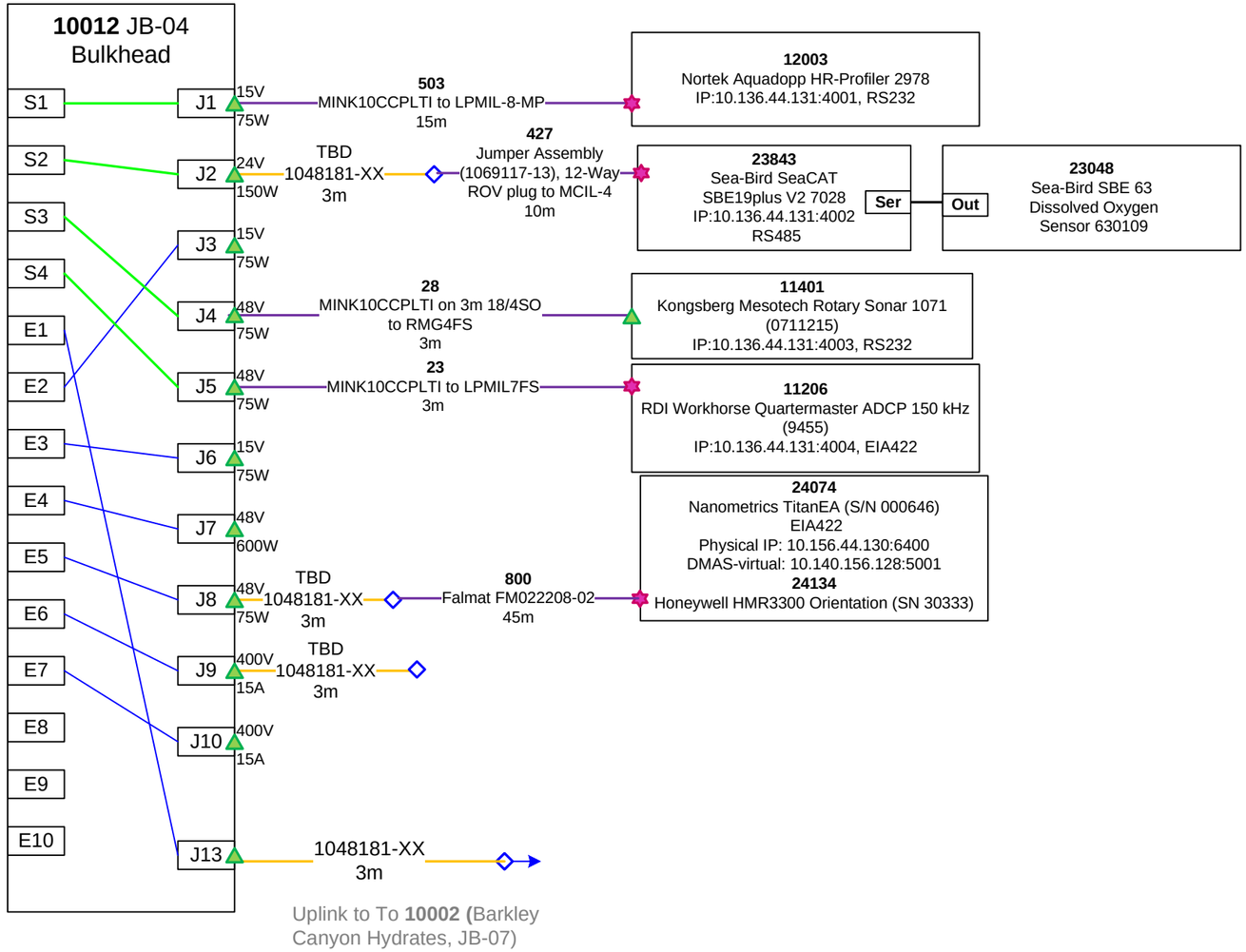
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 10

Observatory	NEPTUNE	Location	Barkley Canyon – Mid-East



Last Release Date	2024.10.24	Last update to Page	2024.07.12

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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 11

Observatory	NEPTUNE	Location	Barkley Node

To 102.ND.0001 SP3

22794 [(Serial Number JB-16)]

Moxa EDS 518A
16-Port Ethernet Switch
IP: 192.168.101.212

J13 — G1, G2, G3
1; 101,102,136,156
1000BaseSX/LX/LHX/ZX Ethernet Ports

136	Port 1	
156	Port 2	
101	Port 3	
101	Port 4	
136	Port 5	
136	Port 6	
136	Port 7	
156	Port 8	
156	Port 9	
101	Port 10	
136	Port 11	n/c
101	Port 12	
101	Port 13	
136	Port 14	
136	Port 15	
101	Port 16	

Alarm Relay 1

Serial Server
IP: 10.136.108.131
J4
Port 1
Port 2
Port 7
Port 8 — n/c

PPS Server
IP: 192.168.101.215
J201

CAN Bridge
IP: 192.168.101.213
ETH

Rabbit-Link Computer
(Remote Programmer)
IP: 192.168.101.214
PWR
J3
J1

Wolf Computer
(SIIM Interface Board)
IP: 10.136.108.33
J4
J3

Communications Selection Board

E1	J1	48V 1.6A	TBD 1048181-24 3m	R
E2	J2	15V 1.6A	845 1048181-130 3m	R
S3	J3	15V 1.6A	TBD 1048181-XX 3m	R
S4	J4	48V 1.6A	956 1048181-26 3m	R
E5	J5	48V 1.6A	271 1048181-64 3m	R
E6	J6	15V 1.6A	TBD 1048181-XX 3m	R
E7	J7	48V 8.3A	TBD 1048181-56 3m	R
E8	J8	400V 5A	941 1048181-166 3m	R
E9	J9	400V 5A	859 1048181-129 3m	R
E10	J10	400V 15A	TBD 1048181-XX 3m	R

J13 — TBD 1048181-XX 3m → R
Uplink to Endeavour Node (102.ND.0001)

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
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Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Bahar Torabi	Page 12

Observatory	NEPTUNE	Location	Barkley Node

22794 JB-16
Bulkhead

Communications
Selection Board

E1 — J1 — 48V 1.6A — **TBD** 1048181-24 3m — R

E2 — J2 — 15V 1.6A — **845** 1048181-130 3m — R — **819** FM022208-10 ODI 12-W plug to MINK10CCP 30m — **24154** RBRconcerto Tilt Meter ACC.BPR 63056 Physical IP: 10.156.50.130 DMAS-virtual: 10.140.156.128:10056

S3 — J3 — 15V 1.6A — **TBD** 1048181-XX 3m — R — **198** ODI 12W to MCBH 1069117-4 (101.EX.0198) 10m — **23842** Sea-Bird SeaCAT SBE19plus V2 6813 IP:10.136.108.131:4001 RS-485 — Ser — O2 — **23285** Sea-Bird SBE 63 Dissolved Oxygen Sensor 630639

S4 — J4 — 48V 1.6A — **956** 1048181-26 3m — R

E5 — J5 — 48V 1.6A — **271** 1048181-64 3m — R

E6 — J6 — 15V 1.6A — **TBD** 1048181-XX 3m — R

E7 — J7 — 48V 8.3A — **TBD** 1048181-56 3m — R — **1246** 12W ROV to 12W ROV on PBOF 1093189-44 70m

E8 — J8 — 400V 5A — **941** 1048181-166 3m — R

E9 — J9 — 400V 5A — **859** 1048181-129 3m — R — **832** 1093189-24 70m — **1126** ODI 12way receptacle to XSL-8-CCP 3m — **375V to 24V filtered PWR Supply Can SN 03** — **1127** XSL-12-CCP to MCOM-8-FS 3m — **Out**

E10 — J10 — 400V 15A — **TBD** 1048181-XX 3m — R

J13 — **TBD** 1048181-XX 3m

Uplink to Endeavour Node
(102.ND.0001)

48941 Ocean Sonics icLink SN 4043 Physical IP: 10.156.50.151

2 — **1128** MCOM-8-M to MCOM-8-FS 4m — **50381** Ocean Sonics icListen HF Hydrophone 6095 Physical IP: 10.156.50.155

3 — **1130** MCOM-8-M to MCOM-8-FS 3m — **50420** Ocean Sonics icListen HF Hydrophone 6093 Physical IP:10.156.50.153

4 — **1129** MCOM-8-M to MCOM-8-FS 3m — **50440** Ocean Sonics icListen HF Hydrophone 6094 Physical IP:10.156.50.154

5 — **1131** MCOM-8-M to MCOM-8-FS 3m — **50361** Ocean Sonics icListen HF Hydrophone 6092 Physical IP: 10.156.50.152

35155 Ocean Networks Canada Orientation SN01

Last Release Date	2024.10.24	Last update to Page	2023.11.30

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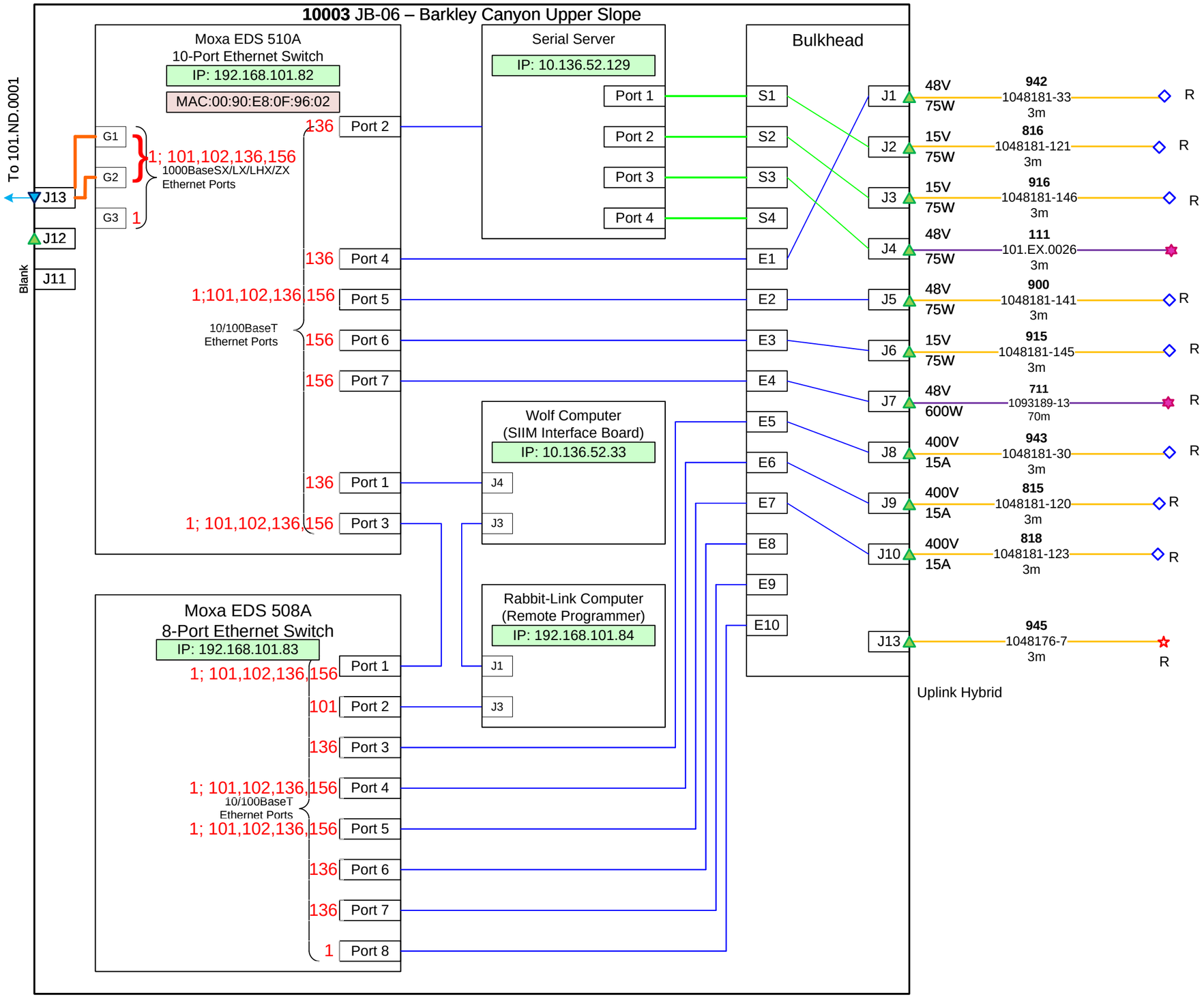
University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Bahar Torabi	Page 13

Observatory	NEPTUNE	Location	Barkley Canyon – Upper Slope



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

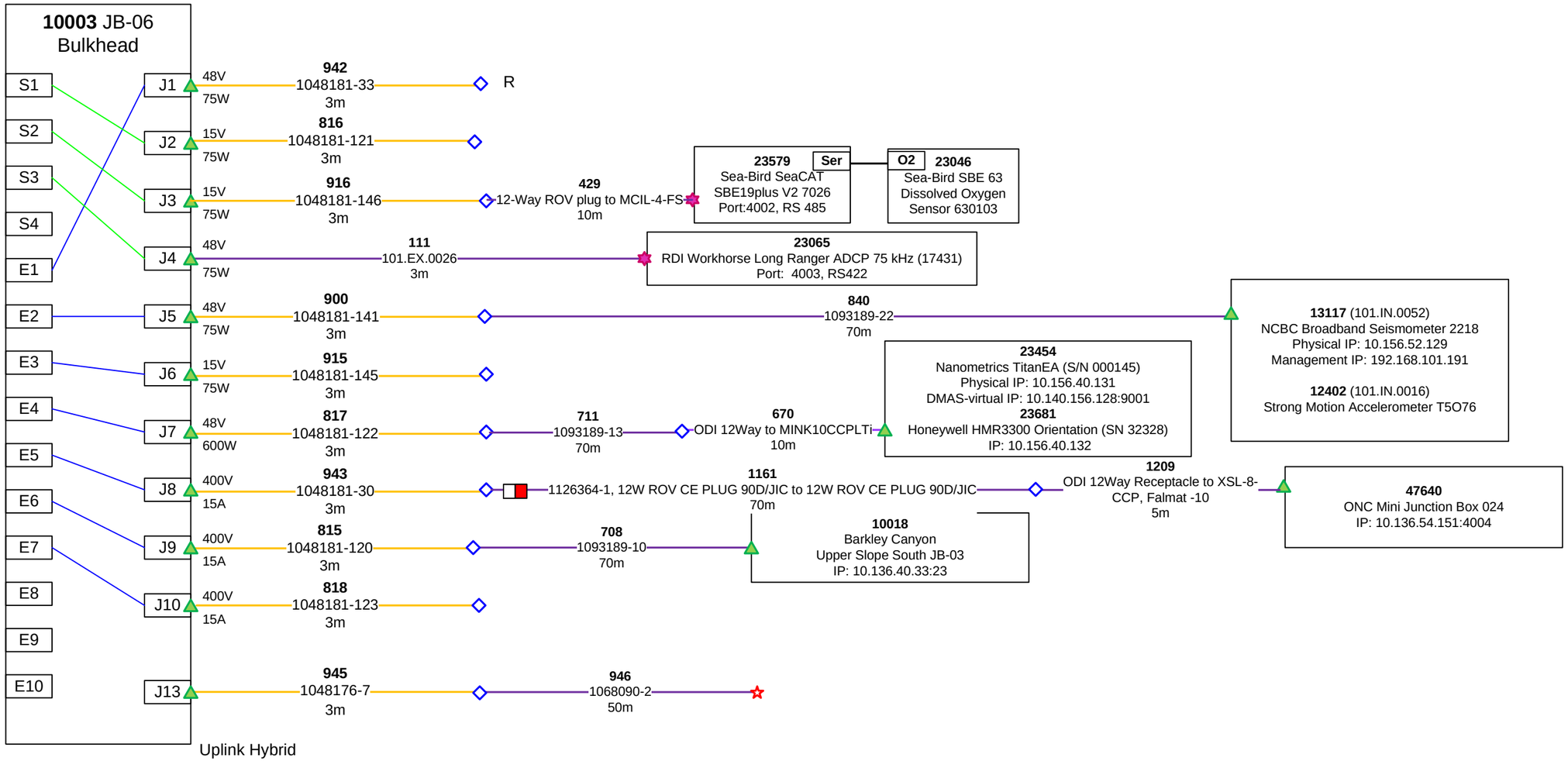
Last Release Date	2024.10.24	Last update to Page	2023.01.23

University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Bahar Torabi	Page 14

Observatory	NEPTUNE	Location	Barkley Canyon – Upper Slope



Last Release Date	2024.10.24	Last update to Page	2023.11.30

OCEAN NETWORKS CANADA INNOVATION

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 15

Observatory		Location	Barkley – Upper Slope

47640
ONC Mini Junction Box 024

1209
5m
Uplink Port

MOXA EDS 405A-PN-T
Nport Switch
SN: TAGID1018562
MAC:00:90:E8:67:41:AD
IP: 10.136.54.150

10/100 Base T (x) Ports (Ethernet)
Port 1
Port 2
Port 3

Port 4
10/100/1000 Base T (x) Ports (Ethernet)

48V

48Vout

NPort 5450I-T
Serial device server
SN: TAIFE1004748
MAC: 00:90:E8:7C:C6:B5
IP: 10.136.54.151

RS-485, 9600
Port 4001
Port 4002
Port 4003
RS-422, 115200
Port 4004

Ethernet Out

48Vhotel

VICOR
375V input
48V output

375Vin

Port Controller J1
SN: TBD
ADD: 81
48Vout
48Vin
J1

Port Controller J2
SN: TBD
ADD: 82
48Vout
48Vin
J2

Port Controller J3
SN: TBD
ADD: 83
48Vout
48Vin
J3

1206
Falmat -10
5m

1205
Falmat -02K12
450m

64160
Sonardyne Fetch 8306-9926 SN 329742-002
10.136.54.151:4001
RS485/2W

1207
Falmat -10
5m

1203
Falmat -02K12
450m

64120
Sonardyne Fetch 8306-9925 SN 329744-001
10.136.54.151:4002
RS485/2W

1208
Falmat -10
5m

1204
Falmat -02K12
450m

64140
Sonardyne Fetch 8306-9926 SN 329742-001
10.136.54.151:4003
RS485/2W

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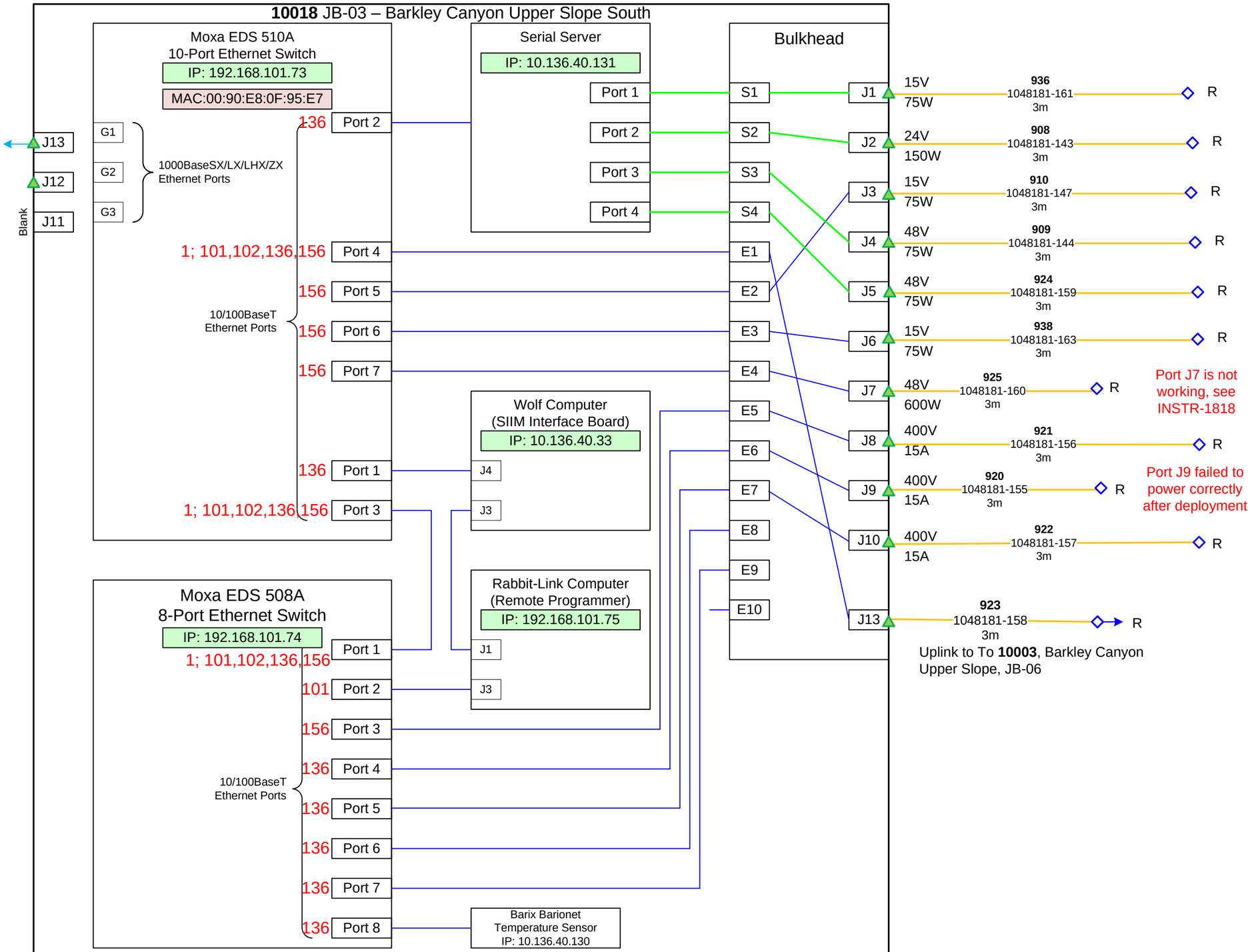
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 16

Observatory	NEPTUNE	Location	Barkley Canyon – Upper Slope South



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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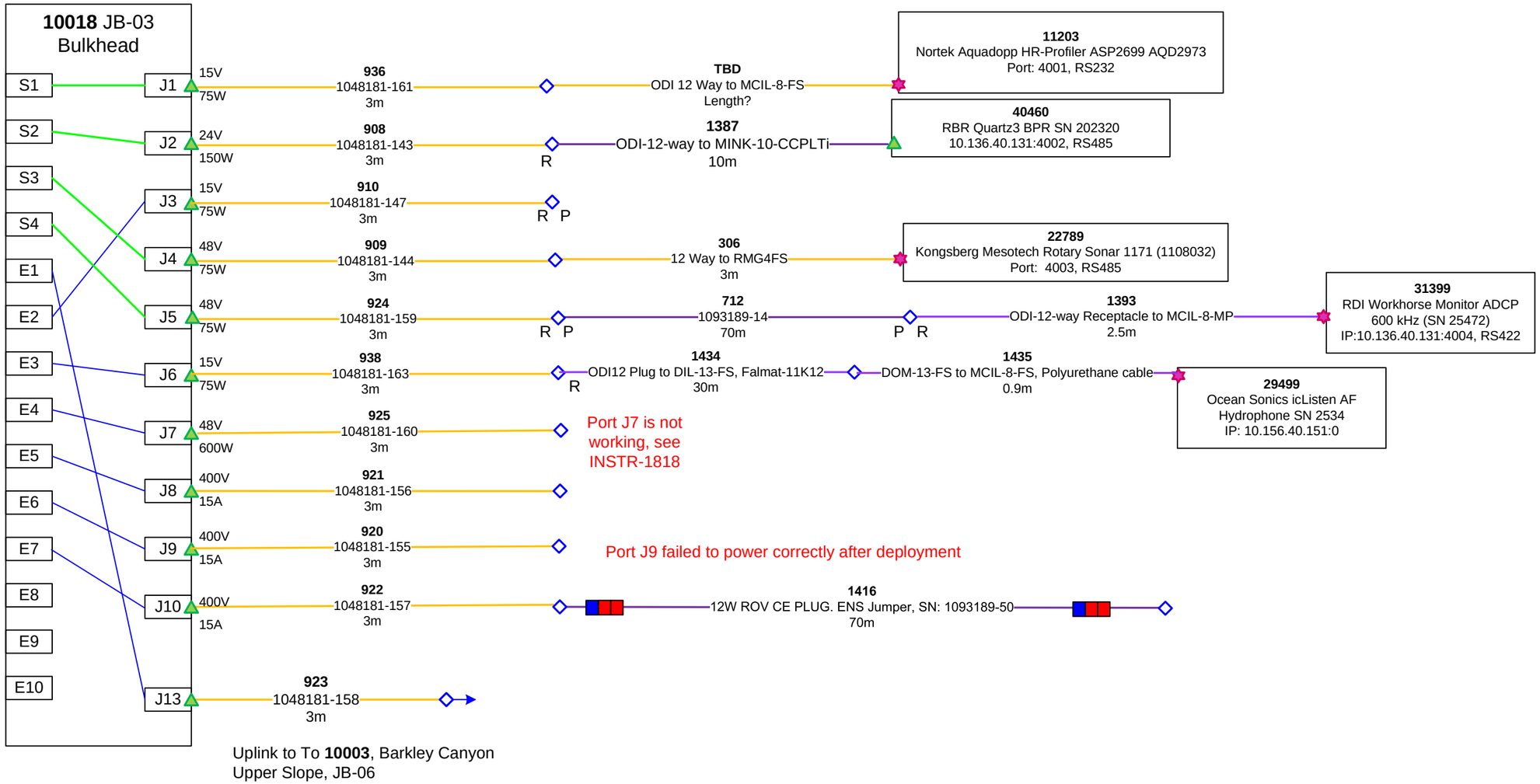
Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Barkley Canyon – Upper Slope South



Last Release Date	2024.10.24	Last update to Page	2024.10.23

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 18

Observatory	NEPTUNE	Location	Cascadia Basin Node

10401 (Node 5 - 105.ND.0001 (Cascadia Basin)

Port 1

Port 2

6850
IP: 192.168.101.50

6850
IP: 192.168.101.50

Port 3

Port 4

Port 5

192.168.101.[50-57]

Port 6

Refer to Alcatel-Lucent Node Supervision and Data Wiring Diagrams for details.

65 (105.EX.0001)
3,430m
Nexans DO417 (flat cable)

10513 (105.JB.0001)
JB-13
IP: 10.136.68.33:23

393
TE Subcom
1798m

24056
OceanWorks Junction Box
JB-18
IP: 10.136.116.33:23

989
ODI 1120946-2
50m

45000
SUBCOM ONC
WMC Mud Mat
DP12
Not included in topology

672
3,112m

45020
SUBCOM ONC
WMC Mud Mat
DP13
Not included in topology

990
ODI 1120946-4
50m

Cable 672 laid which will replace EXTID 65 in the future

Ext 990 on seafloor disconnected from mudmat DI 45020

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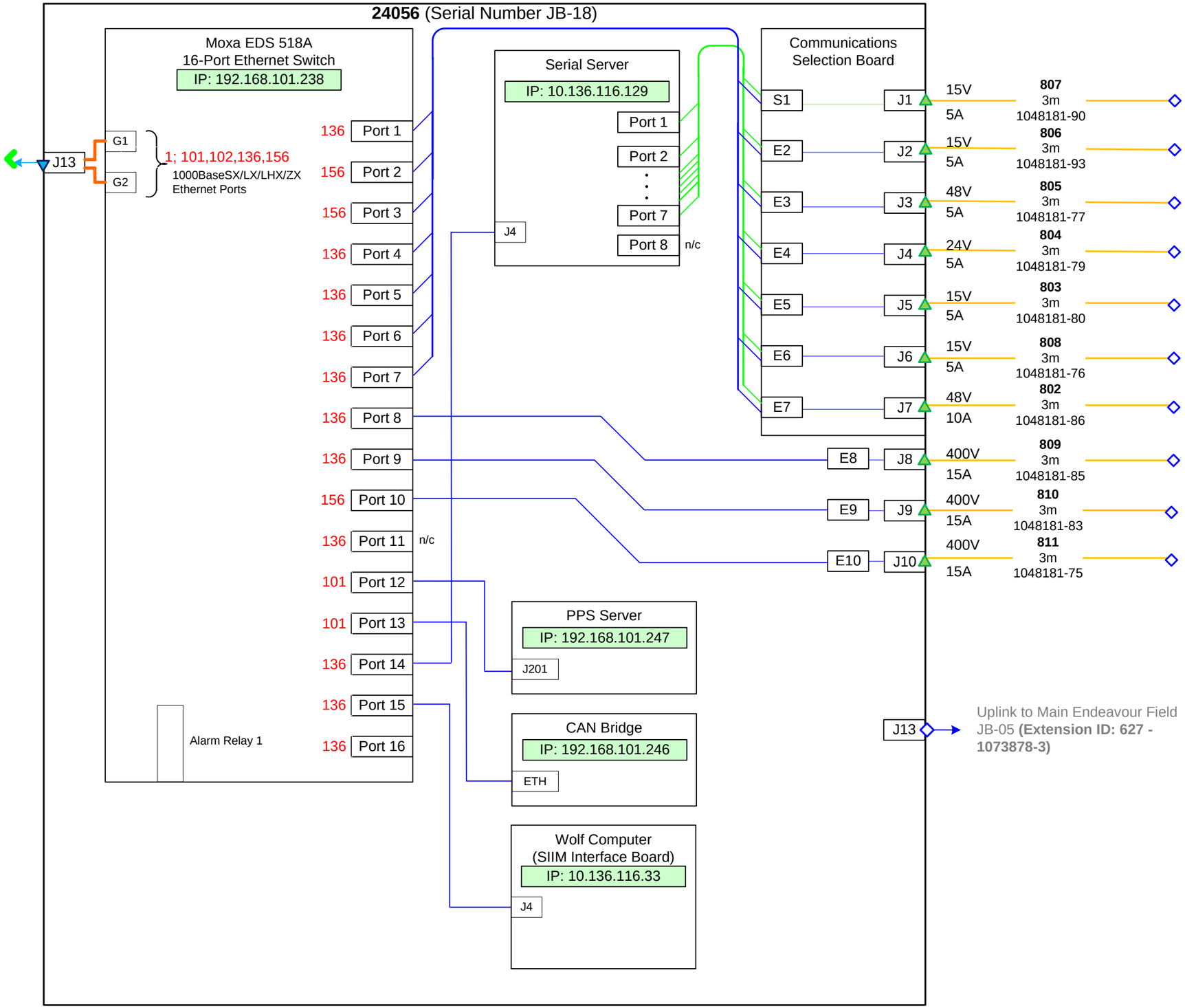
Marine Configuration Diagram

Observatory	NEPTUNE	Location	Cascadia Basin – East



Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 20

Observatory	NEPTUNE	Location	Cascadia Basin – East (1027C)

24056 JB-18
Bulkhead

Communications
Selection Board

S1 — J1 — 15V 5A — **807** 3m 1048181-90 — R P — **664** 1093189-04 70m — **23150** CORK P (1027C) RS-422, 10.136.116.129:4001

E2 — J2 — 15V 5A — **806** 3m 1048181-93 — R P — **837** FM022208-10 25m — **24155** RBRconcerto Tilt Meter ACC.BPR 63057 Physical IP:10.156.68.140 DMAS-virtual IP: 10.140.156.128:10057

E3 — J3 — 48V 5A — **805** 3m 1048181-77 — R P — TBD — **24433** Nanometrics TitanEA (S/N 000788) Physical IP: 10.156.116.135 DMAS-virtual IP: 10.140.156.128:10001

26679 Honeywell HMR3300 Orientation (SN 5877) (Moxa NPort: 10.156.116.136)

E4 — J4 — 24V 5A — **804** 3m 1048181-79 — R

E5 — J5 — 15V 5A — **803** 3m 1048181-80 — R

E6 — J6 — 15V 5A — **808** 3m 1048181-76 — R

E7 — J7 — 48V 10A — **802** 3m 1048181-86 — R

R

E8 — J8 — 400V 15A — **809** 3m 1048181-85

E9 — J9 — 400V 15A — **810** 3m 1048181-83 — R P

E10 — J10 — 400V 15A — **811** 3m 1048181-75 — R — **1031** 70m 1093189-35 — **1226** ODI 12way receptacle to XSL-8-CCP 3m — **375V to 24V filtered PWR Supply Can SN 06** — **1227** XSL-12-CCP to MCOM-8-FS 1.8m — **Out**

Uplink to Main Endeavour Field JB-05 **(Extension ID: 627 - 1073878-3)**

J13

46820 Ocean Sonics icLink SN 4041 IP: 10.156.116.151:0

- 3 — **1228** MCOM-8-MP to MCOM-8-FS 1.2m — **26239** Ocean Sonics icListen HF Hydrophone 1822 IP: 10.156.116.152:0
- 4 — **1229** MCOM-8-MP to MCOM-8-FS 1.4m — **26259** Ocean Sonics icListen HF Hydrophone 1823 IP:10.156.116.153:0
- 5 — **1230** MCOM-8-MP to MCOM-8-FS 2.3m — **47241** Ocean Sonics icListen HF Hydrophone 1952 IP:10.156.116.154:0
- 2 — **1231** MCOM-8-MP to MCOM-8-FS 3.4m — **47260** Ocean Sonics icListen HF Hydrophone 1953 IP: 10.156.116.155:0

81992 Ocean Networks Canada Orientation SN07 IP:10.156.116.156:0

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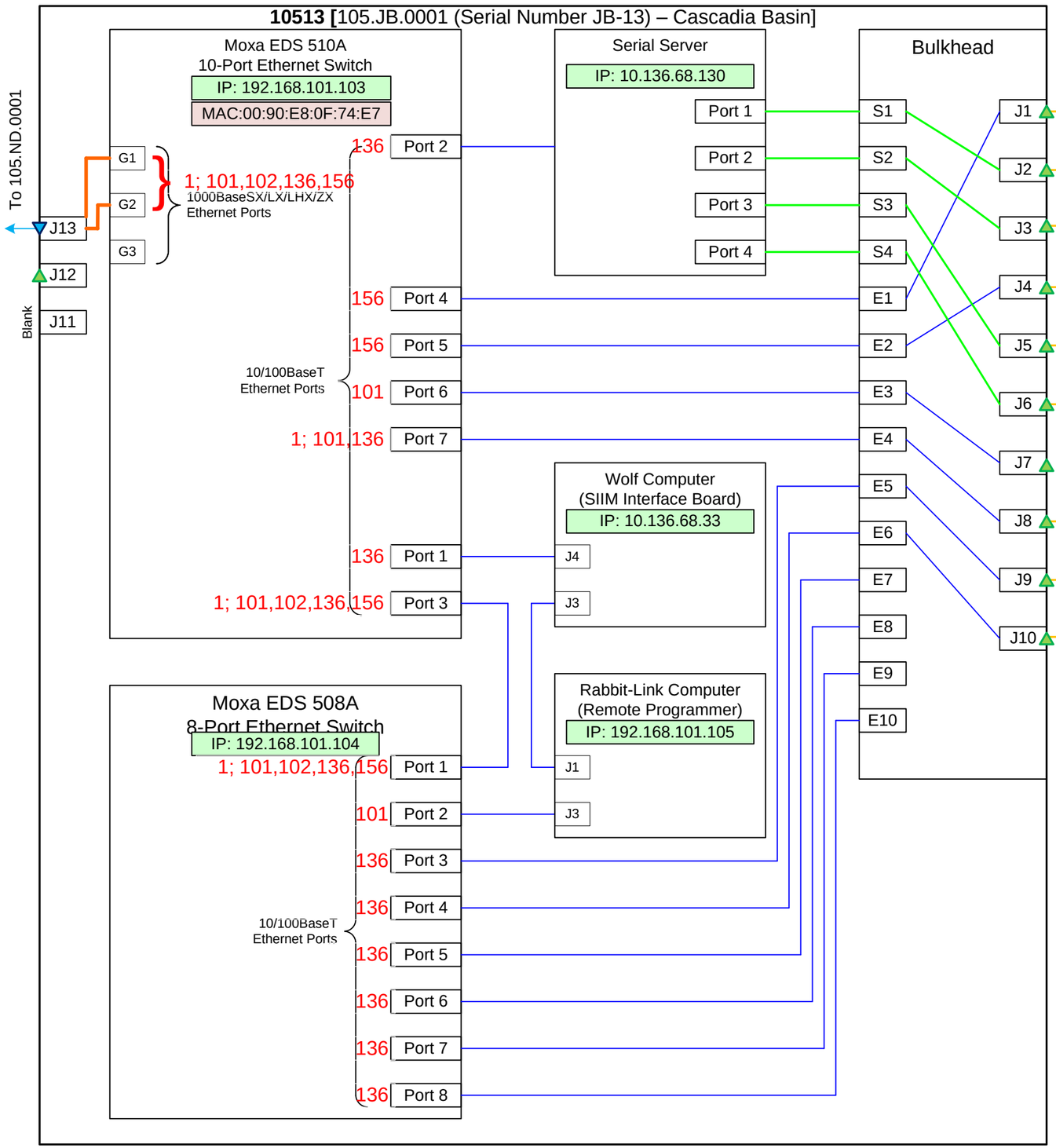
Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Cascadia Basin – West



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 22

Observatory	NEPTUNE	Location	Cascadia Basin – West (1026B)

10513 JB-13 Bulkhead

S1 S2 S3 S4 E1 E2 E3 E4 E5 E6 E7 E8 E9 E10

J1 48V 75W — **73** (105.EX.0019) PBOF 1056233 50m — Jxn at fletcher plate on Aux Platform — **486 (green)** 1080081-2, P0082564, 12W ROV CE RCPT/ 12W ROV FXD RCPT/3R 70m — MINM-25 FCR/CCP

80732 Guralp Orcus Broadband Seismometer SN T311164 Physical IP: 10.156.68.131

81972 Guralp Strong Motion Accelerometer TF504

DSS-4 FSS-2 FSS-2 — **486 (white wrapped)** — Jxn at fletcher plate on Aux Platform

DSS-4: **TBD** — 6 kWh Lithium Battery

FSS-2: **TBD** — **21012** Nortek Aquadopp Current Meter 2886 DMAS-virtual IP: 10.140.156.64:10031

FSS-2: **TBD** — **22791** NRCan Bottom Pressure Recorder 52 DMAS-virtual IP: 10.140.156.64:10030

J2 15V 75W — **121 (**105.EX.0008) 1053068-2 30m — **21301 (**105.IN.0003) CORK P 1026B Port 4001, RS422

J3 15V 75W — 1048181-XX 3m — **1361** ODI-12 Plug to MCIL-4-FS 10m — **51780** Sea-Bird SeaCAT SBE19plus V2 8062 Port: 4002 RS485 **Ser** — **Out** **51820** Sea-Bird SBE 63 Dissolved Oxygen Sensor 632576

J4 48V 75W — 1048181-XX 3m — R

J5 48V 75W — 1048181-XX 3m — **1033** 1093189-37 70m — **1051** ODI-12-Receptacle to XSL-10-CCP 3m — **23006** RDI Workhorse Long Ranger ADCP 75 kHz (16511) Port: 4003 RS422

J6 15V 75W — **69 (**105.EX.0007) 1052723 40m

122 (105.EX.0122) 100m 3m — **22627 (**105.IN.0021) Ifremer Piezometer Port 4003, RS422 — Piezometer (already disconnected) recover postponed

J7 48V 600W

Port J8 reserved for Running Tide Kelp camera sys

J8 400V 15A — 1048181-XX 3m — **861** 1048181-19 — 3m — **219** Media Converter IP: 10.136.168.132 — 3m — R P mudmat — **137** 19,715M Tyco/Rochester DL07142 — mudmat R P — 3m — **COP** ID:220 1065029-2 IP:10.136.68.132 — 3m — **12501** NRCan Bottom Pressure Recorder 78 (NE) 10.136.68.132 IP Port: 4001

J9 400V 15A — 1048181-XX 3m — **861** — 3m — **221** Media Converter IP: 10.136.68.133 — 3m — R P mudmat — **138** 25,000m Tyco/Rochester DL07142 — mudmat R P — **903(?)** 1065029-1(?) 3m — **COP** ID:222 1065029-? IP:10.136.68.133 — **903(?)** 1065029-1(?) 3m — **21501** NRCan Bottom Pressure Recorder 85 (W) 10.136.68.133 IP: 4001

J10 400V 15A — 1048181-XX 3m — P — PBOF 3m — **PLC Can** — **1134** PBOF 10m — R P — Falmat 50m — **Termination** — **1132** 19500m Tyco/Rochester DL07142 — **Termination** — Falmat 5m — R P — **1133** PBOF 10m — **PLC Can** — PBOF 3m — **1119** Y-cable 0.8m — **Paroscientific Pressure Sensor SN 120248**

21502 NRCan Bottom Pressure Recorder 87 (SE) IP:10.136.68.133 (logger and battery)

Last Release Date	2024.10.24	Last update to Page	2023.12.01

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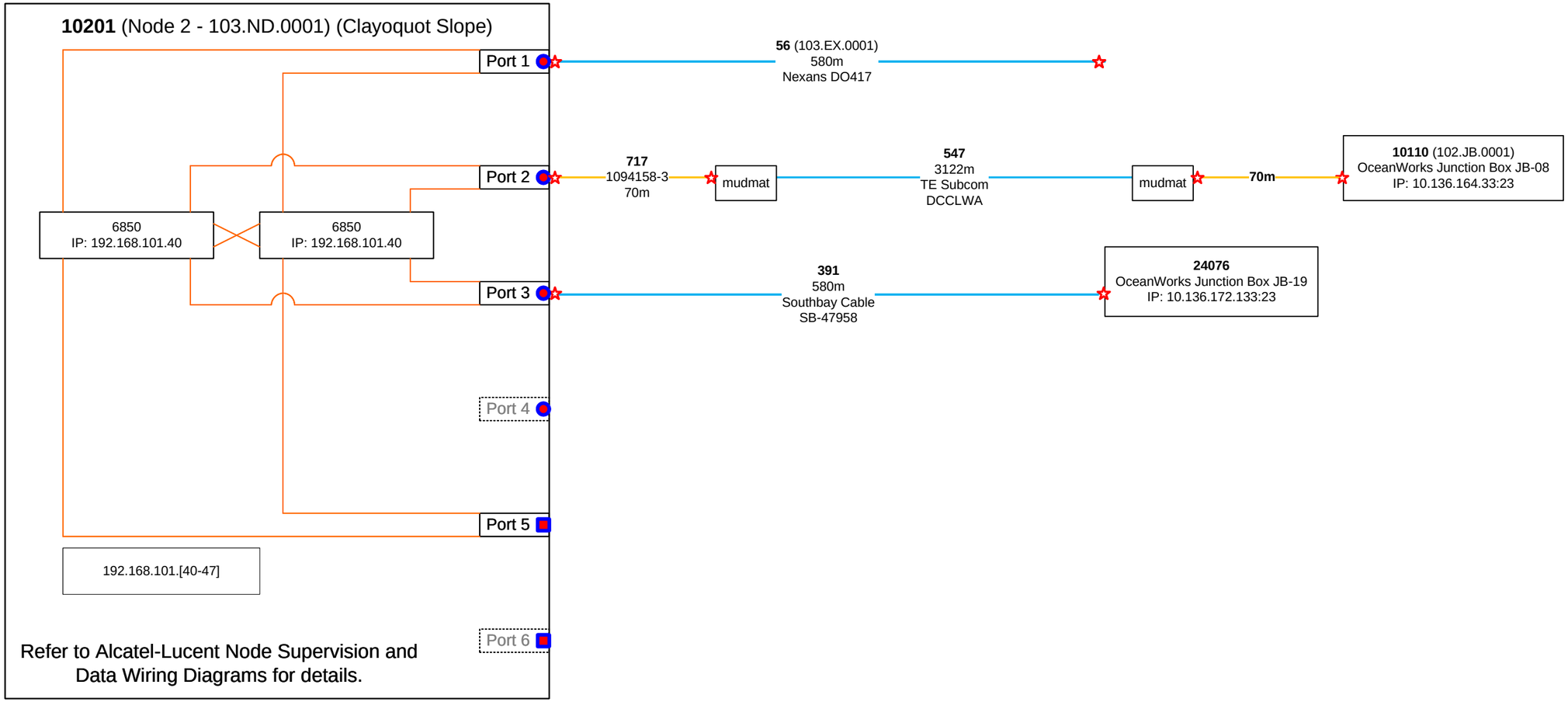
Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Clayoquot Slope Node



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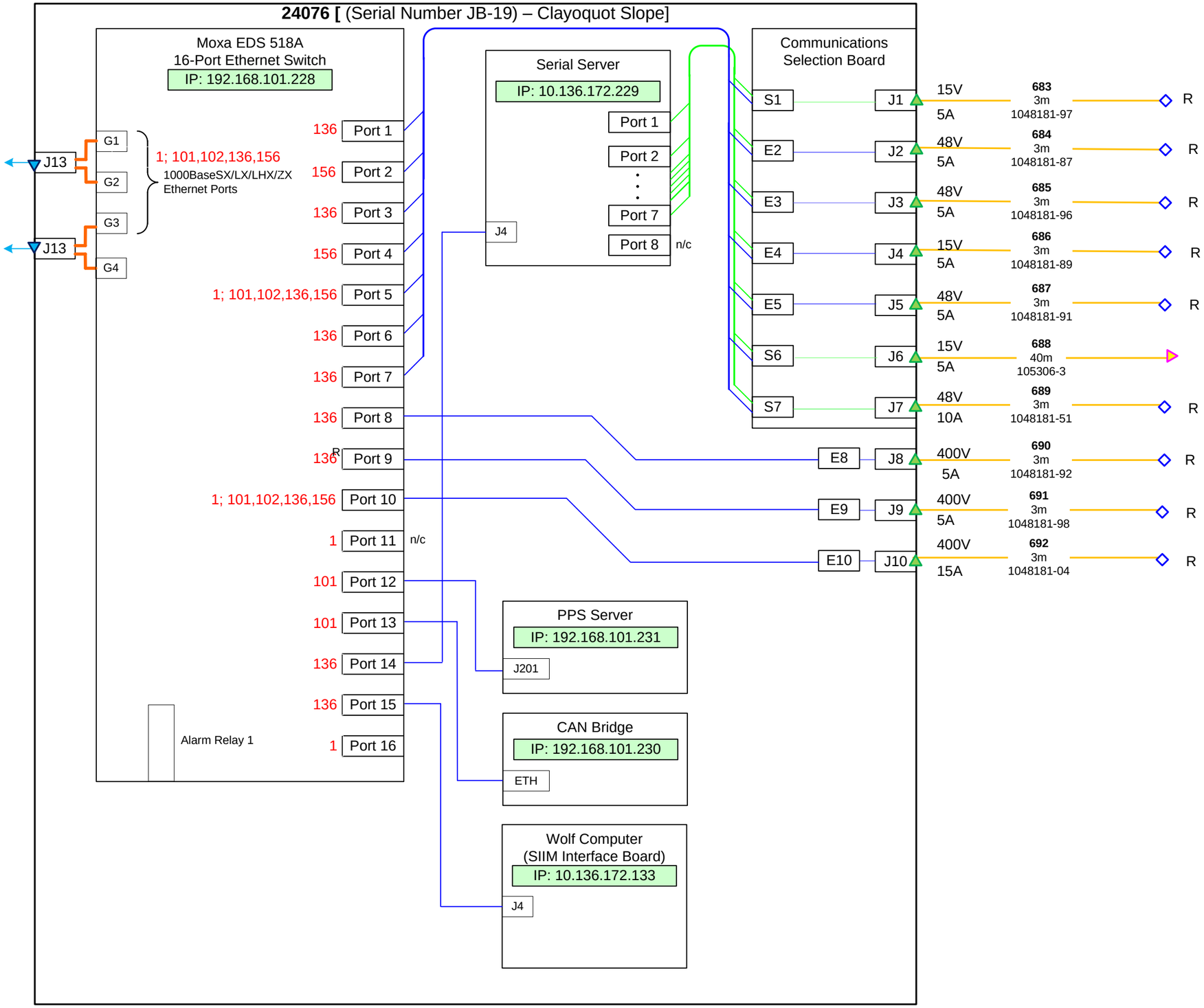
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 24

Observatory	NEPTUNE	Location	Clayoquot Slope - Bullseye



Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 25

Observatory	NEPTUNE	Location	Clayoquot Slope - Bullseye

24076 JB-19

Communications Selection Board

S1 → J1: 15V, 75W — **683** 3m 1048181-97 — **1437** ODI-12-way Plug to MCIL-4-FS 20m → **23580** Sea-Bird SeaCAT SBE19plus V2 7033 IP:10.136.172.229:4001 RS485 (Ser) (Out) → **23052** Sea-Bird SBE 63 Dissolved Oxygen Sensor 630282

E2 → J2: 48V, 75W — **684** 3m 1048181-87 — **693** 1076540-9 45m → **24075** Nanometrics TitanEA (S/N 000647) Physical IP: 10.156.164.135 DMAS-virtual: 10.140.156.128:8001; **24135** Honeywell HMR3300 Orientation (SN 31009) Physical IP: 10.156.164.136:4001

E3 → J3: 48V, 75W — **685** 3m 1048181-96

E4 → J4: 15V, 75W — **686** 3m 1048181-89 — **715** ODI 12W to MINK10CCP 35 m → **24150** RBRconcerto Tilt Meter ACC.BPR 63055 Physical IP: 10.156.172.130:23

E5 → J5: 48V, 75W — **687** 3m 1048181-91 — **667** 1093189-7 70m → FM022208-xx → MINM-25 FCR/CCP

S6 → J6: 15V, 75W — **688** 40m 1053068-3 — **671** ODI 7W to MINK10CCPLTi 1.5m → **49180** RBR Quartz3 BPR SN 203659 IP:10.136.172.229:4006, RS 485/4W

Jxn at fletcher plate on Aux Platform

S7 → J7: 48V, 75W — **689** 3m 1048181-51 — **1032** 1093189-36 70m → **1052** ODI-12-Receptacle to XSL-10-CCP, falmat 3m → **12108** RDI Workhorse Long Ranger ADCP 75 kHz (9202) IP:10.136.172.229:4007

E8 → J8: 400V, 5A — **690** 3m 1048181-92 — R — **432** 1093189-1 70m → **1368** ODI12 Receptacle to MINK10CCPLTi 3m → **82612** Camera Interface Box 11 IP:10.136.172.162:0 *(see next page for more details)*

Serial Server 1 IP: 10.136.172.161
Serial Server 2 IP: 10.136.172.162

E9 → J9: 400V, 5A — **691** 3m 1048181-98 — R

E10 → J10: 400V, 15A — **692** 3m 1048181-04 — R

MINM-25 FCR/CCP:

22057 (103.IN.0007) NC89 Broadband Seismometer 2217 Physical IP: 10.156.164.130 Management IP: 192.168.101.193

22402 (103.IN.0009) Strong Motion Accelerometer T5075

DSS-4
FSS-2
FSS-2

424 ODI 1080081-1, 20m (octopus cables connected to MINM-25 FCR/CCP)

Jxn at fletcher plate on Aux Platform

Old Imagenex cables Disconnected and left on seafloor. Location of extId 110 is unknown

110 1048184-12 → Ethernet Extender?

685 3m → **103.EX.0010-U** Ethernet Extender IP: 192.168.101.183 (IP: 10.136.164.65) → **119 (103.EX.0010)** 553m

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Marine Configuration Diagram

Observatory	NEPTUNE	Location	Clayoquot Slope – Bullseye Camera System (Running Tide)

82612
Camera Interface Box 11

1368
3m
Out Port

SwitchBlox Rugged -40°C to +105°C Ethernet Switch
SN: TBD
MAC:TBD
Port 1
Port 2
Port 3
Port 4
Port 5
Power

Teradek 755 Media Converter
SN: TBD
MAC:TBD
IP:10.136.172.163
Ethernet
Power
Video

USB to Ethernet Server
SN: TBD
MAC:TBD
IP:10.136.172.164
Ethernet
Power
USB

MOXA NPort 5232 Serial device server (lights)
SN: TBD
MAC:TBD
IP:10.136.172.161
Ethernet
Power
RS-485

MOXA NPort 5232 Serial device server (camera and pan/tilt)
SN: TBD
MAC:TBD
IP:10.136.172.162
Ethernet
Power
RS-485

24Vout
VICOR URAM 2C21 Filter
SN: TBD
24V input
24V output
24Vin

24Vout
VICOR V375A24C600BL DC/DC 375V to 24V 600W
SN: TBD
375V input
24V output
375Vin

Camera
1404
CRE6CCP to CRE6CCP
3m
Camera Out
In
74260
SubC Imaging 1Cam
Mk6 HDC SN 17690
IP:10.136.172.162:4001
Mantaray Parallel Laser SN 21067
Mantaray Parallel Laser SN 21066

USB Download
1403
MCOM8MP to MCOM8FS
3m

Lights
1402
MCIL5MP to MCIL5FS
3m
Out
82052
Aquorea Mk3 LED Light
SN22534 (left)
IP:10.136.172.161:4001

Lights
1401
MCIL5MP to MCIL5FS
3m
Out
82032
Aquorea Mk3 LED Light
SN22533 (right)
IP:10.136.172.161:4002

Pan/Tilt
1400
MINK10CCPLTi to MCIL4FS
3m
74320
ROS PT-25 Ti SN 10537
IP:10.136.172.162:4002

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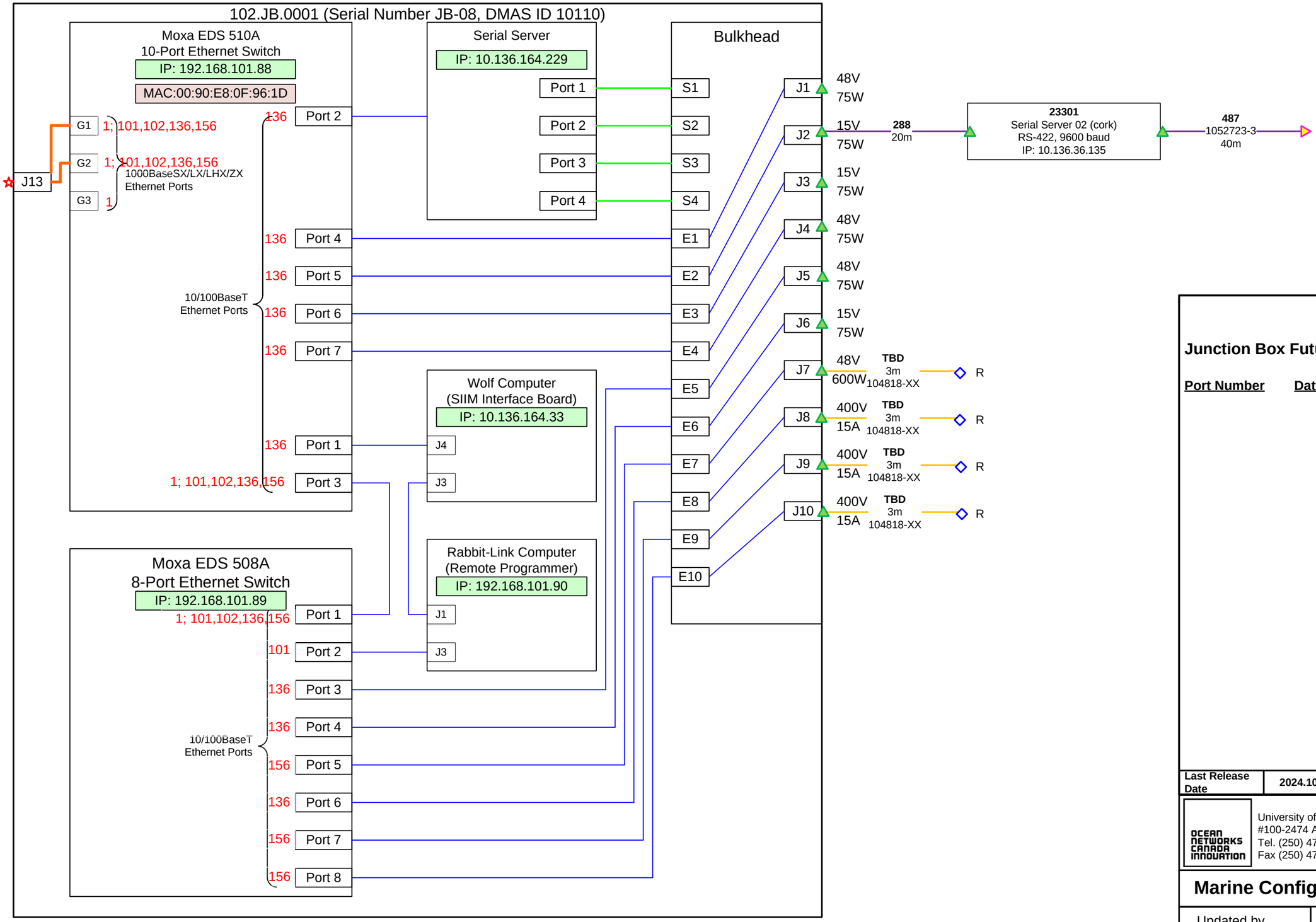
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 27

Observatory	NEPTUNE	Location	Clayoquot Slope – ODP 1364A



Junction Box Future Planning

Port Number	Date	Description

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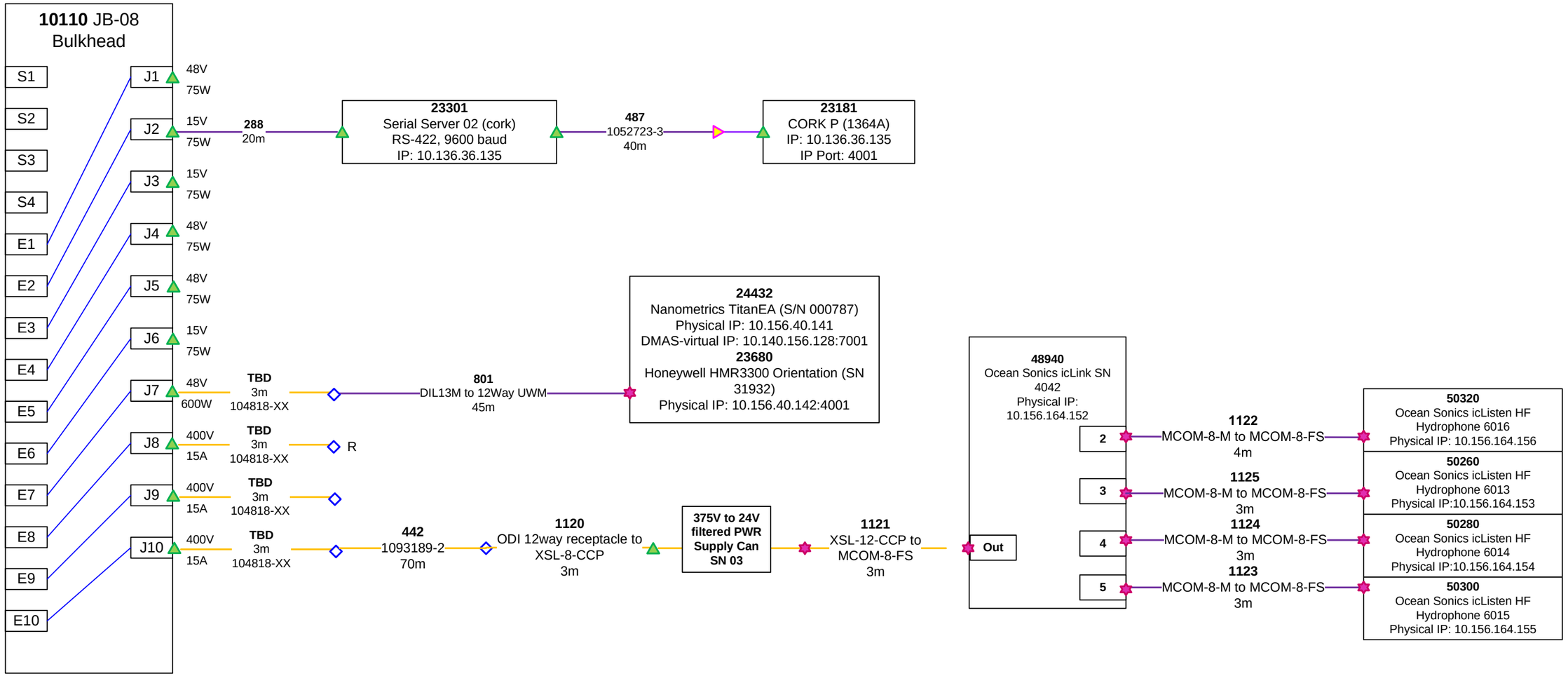
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 28

Observatory	NEPTUNE	Location	Clayoquot Slope – ODP 1364A



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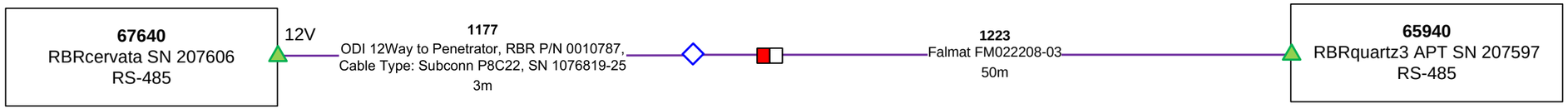
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 29

Observatory	NEPTUNE	Location	Autonomous Site - Clayoquot Deformation Front East (NCSZO)



Last Release Date	2024.10.24	Last update to Page	2024.10.23

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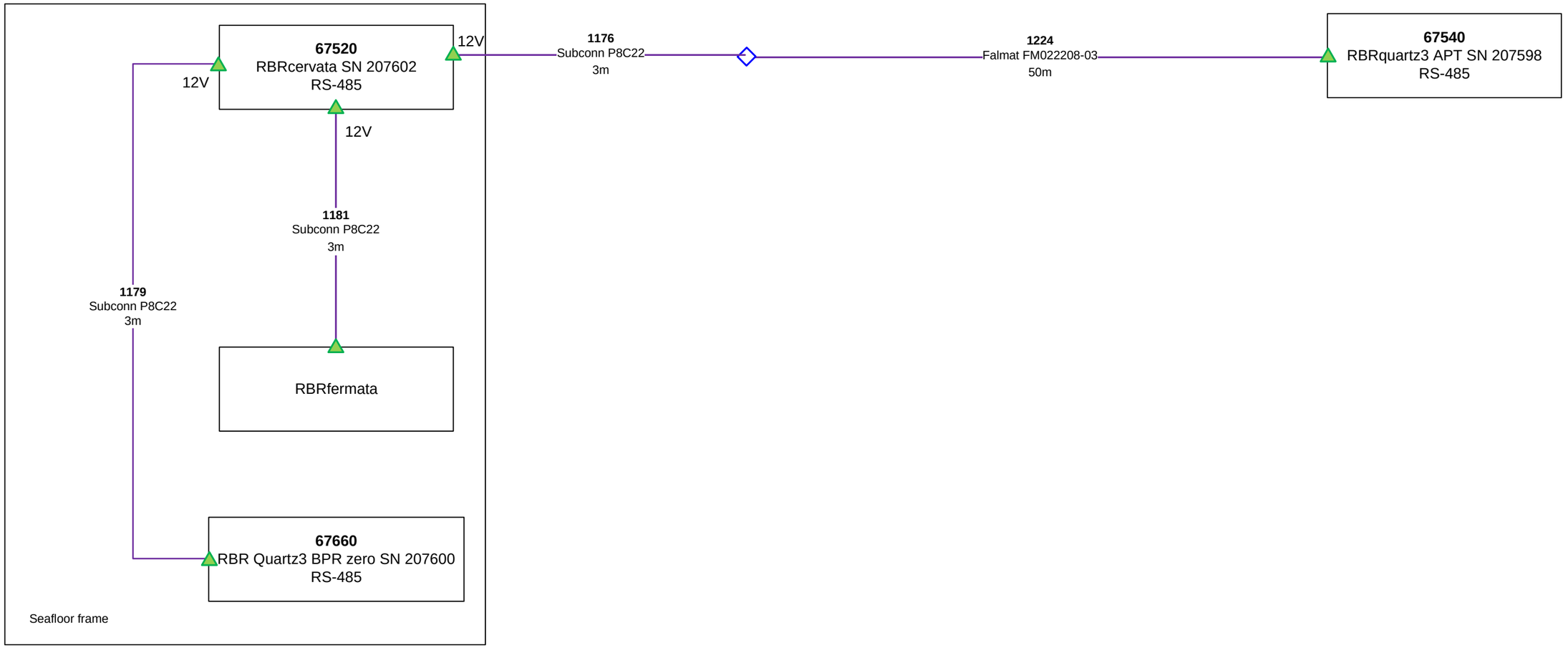
Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Autonomous Site - Clayoquot Deformation Front Mid (NCSZO)



Last Release Date	2024.10.24	Last update to Page	2023.08.03

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 31

Observatory	NEPTUNE	Location	Autonomous Site - Clayoquot Deformation Front West (NCSZO)

Last Release Date	2024.10.24	Last update to Page	2024.10.23

OCEAN NETWORKS CANADA INNOVATION

University of Victoria Queenswood Campus
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Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Endeavour Node

10101 (Node 4 - 102.ND.0001 (Endeavour))

6850
IP: 192.168.101.20

6850
IP: 192.168.101.20

192.168.101.[20-27]

Port 1 — 70m — mudmat — **397** 4600m TE Subcom — mudmat — 70m — 1048181-XX 3m — **24057** JB-17 (RC North) IP: 10.136.100.133:23

Ext 992, 399, 991 and Mudmats disconnected and left on seafloor. To be connected to Endeavour Node in the future with a new extension cable

Port 2 — **49** (102.EX.0016) 250m Tyco/Rochester A307678 — **140** (102.EX.0140) 6185 m Tyco 18mm A307637 — **10514** JB-12 (MEF North) IP: 10.136.136.33:23 — **879** ODI 1117113-1 151 m — **10103** JB-10 (MEF South) IP: 10.136.102.33:23 — **992** ODI 1120946-1 50m — **44840** SUBCOM ONC WMC Mud Mat DP10 *Not included in topology* — **399** TE Subcom 5185m — **44980** SUBCOM ONC WMC Mud Mat DP11 (MEF North) *Not included in topology* — **991** 1120946-3 50m

Port 3 — 70m — Media Converter — **51240** SUBCOM ONC WMC Mud Mat DP03 *Not included in topology* — **398** 7960m TE Subcom — **51300** SUBCOM ONC WMC Mud Mat DP08 *Not included in topology* — Media Converter — 70m — **22793** JB-15 (Mothra) IP: 10.136.100.33

3m — Media Converter 1103113-1 — mudmat — **394** 1,560m South Bay Cable SB-47958 — mudmat — Media Converter — 3m — 3m — **10116** (102.JB.0004) JB-11 (RC South) IP: 10.136.112.33:23

Port 4 — **185** (102.EX.0185) 3500m Nexans DO417

Extension ID: 185 was partially recovered from the seafloor, broke during recovery

Port 5 — **828** 4o-2e Dual End ROV receptacle hybrid connector, 1115126-1 10m — **1152** 1113810-3 7m — **10512** JB-14 (Node IP) IP: 10.136.42.33:23

Port 6

Refer to Alcatel-Lucent Node Supervision and Data Wiring Diagrams for details.

Last Release Date	2024.10.24	Last update to Page	2024.10.18

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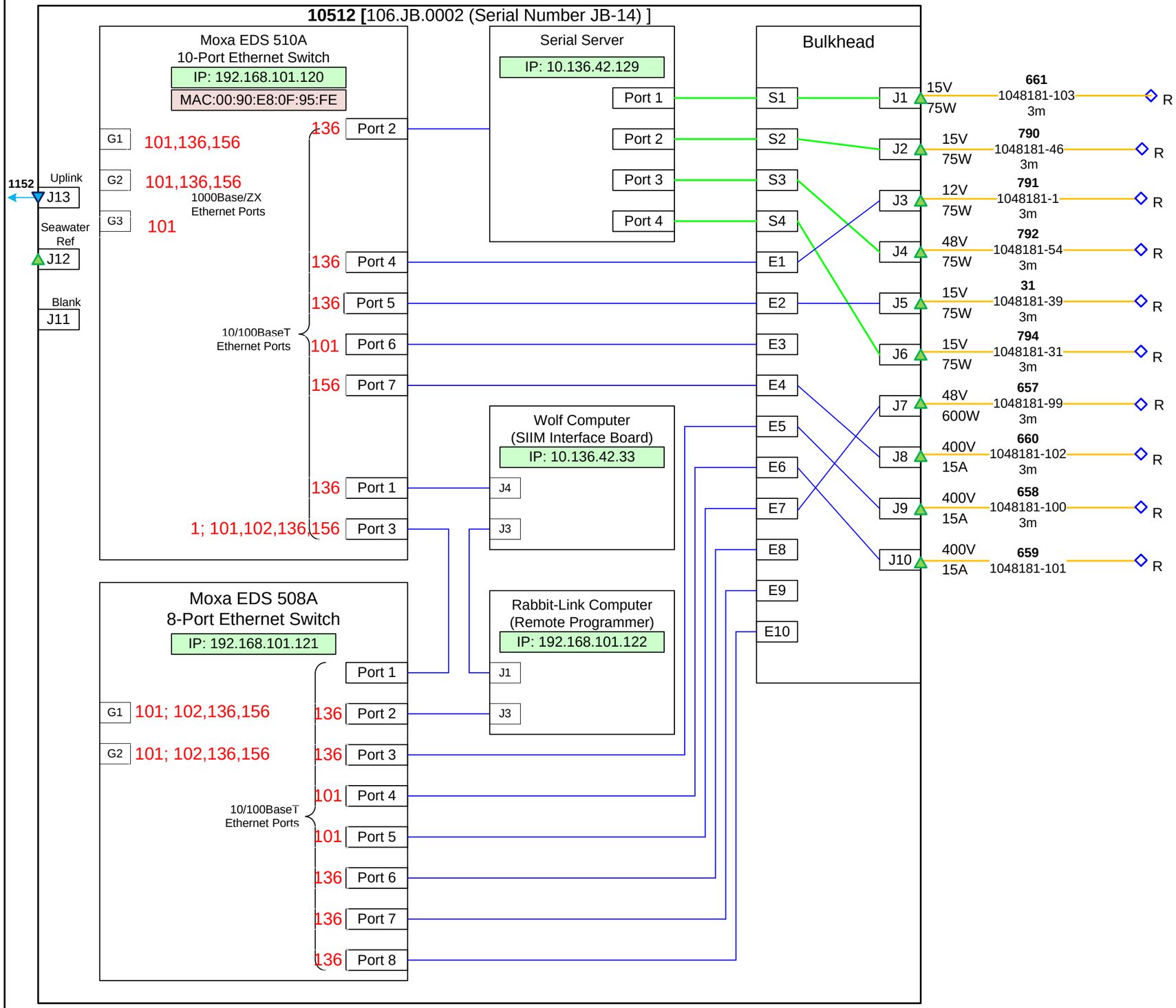
Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Endeavour Node JB



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

G1, G2 with 1550nm SFP 80km and 12 dBm attenuator – current configuration (2022-05-11) of JB-14 can connect long haul port only, it will NOT work for any NODE science port or NEPTUNE hybrid port

G1, G2 trunk ID 101, without aggregation

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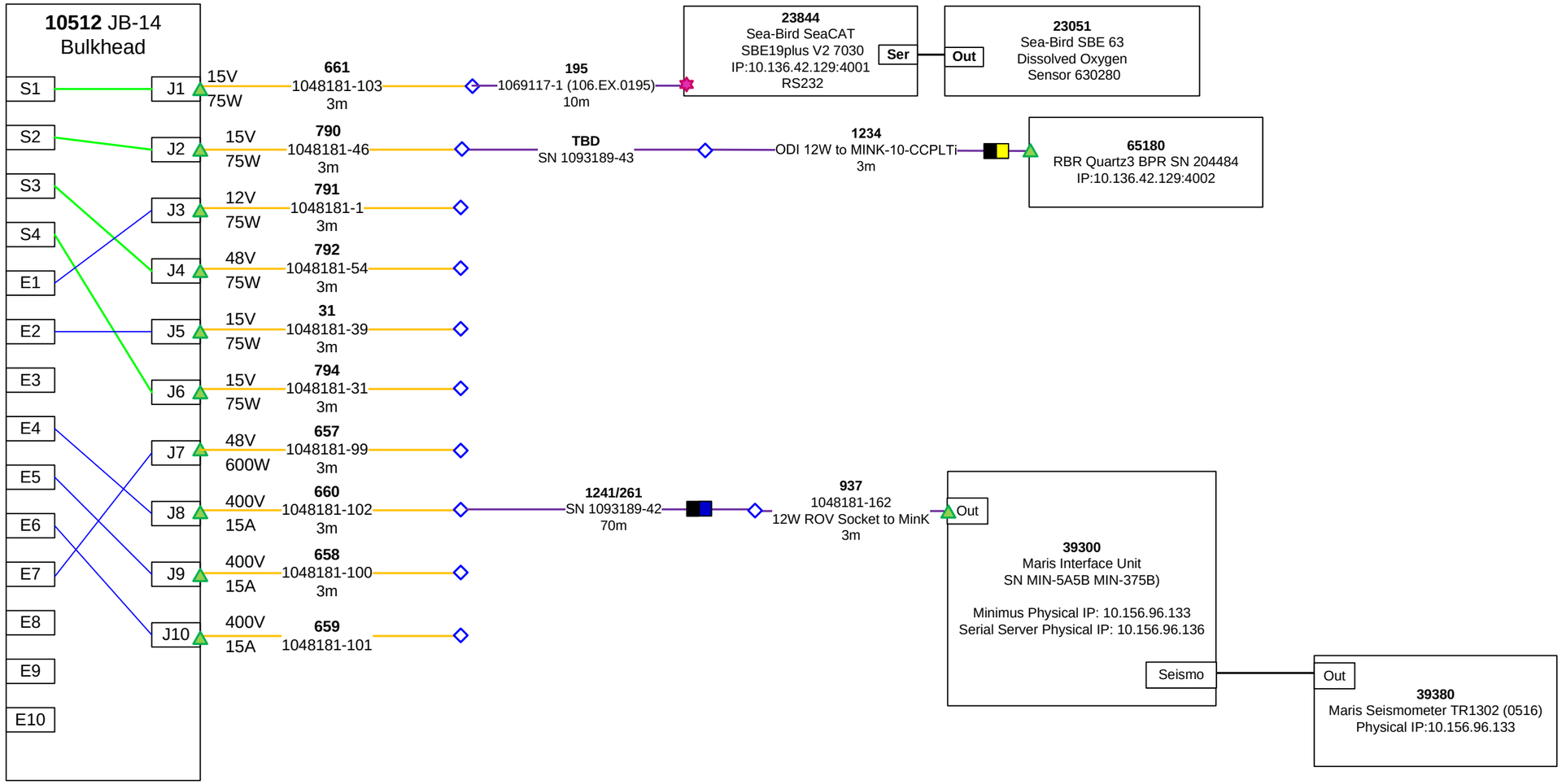
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 34

Observatory	NEPTUNE	Location	Endeavour Node Instrument Platform



Note that the 70m cable SN 1093189-42 has EXTID 1241 but is physically labelled as EXTID 261, which was decommissioned. This cable should be re-labelled upon recovery.

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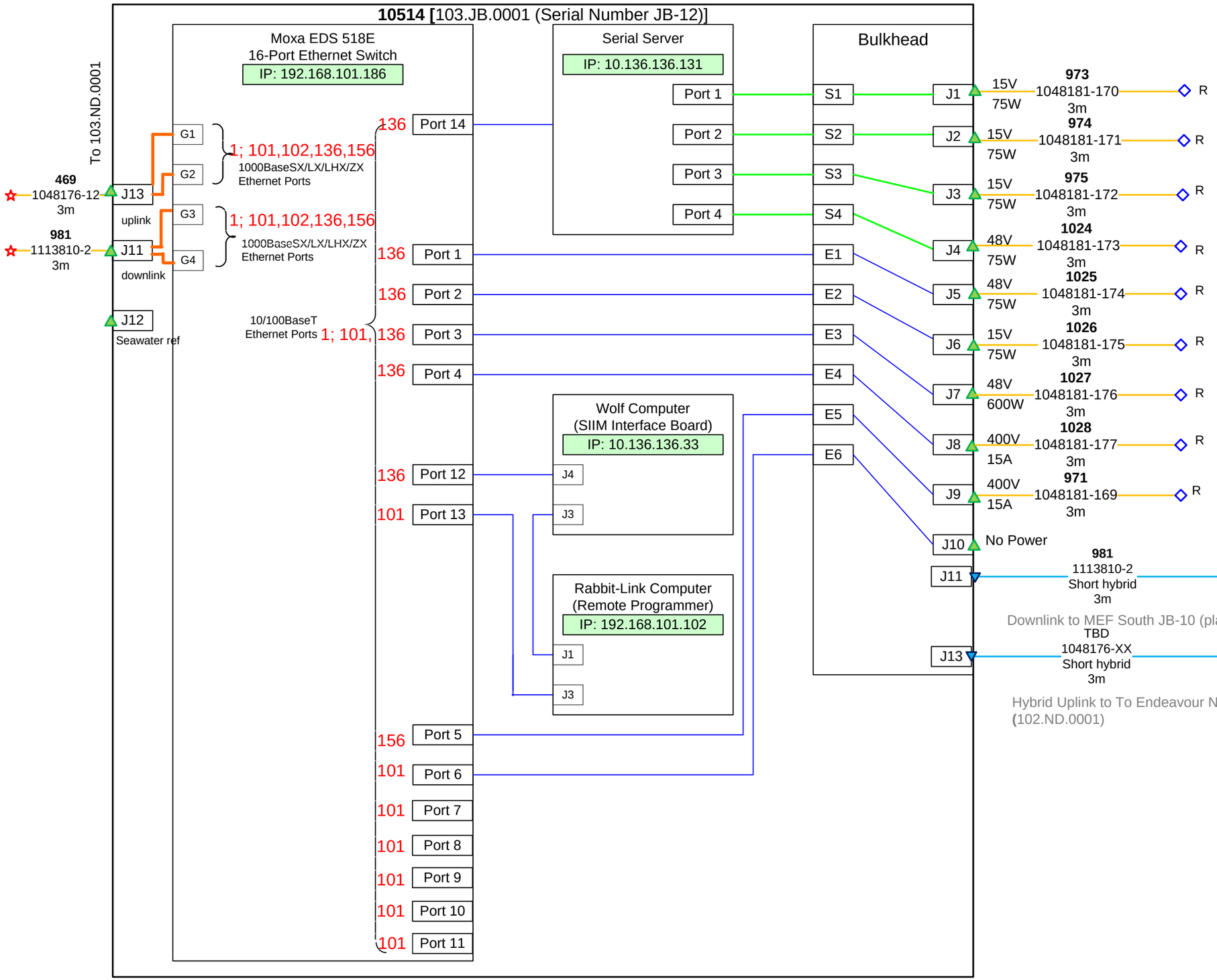
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 35

Observatory	NEPTUNE	Location	Endeavour – MEF North



Breaker Number to 'J' Number

Breaker	J Number
P1	1
P2	2
P3	3
P4	8
P5	9
P6	6
P7	4
P8	5
P9	11
P10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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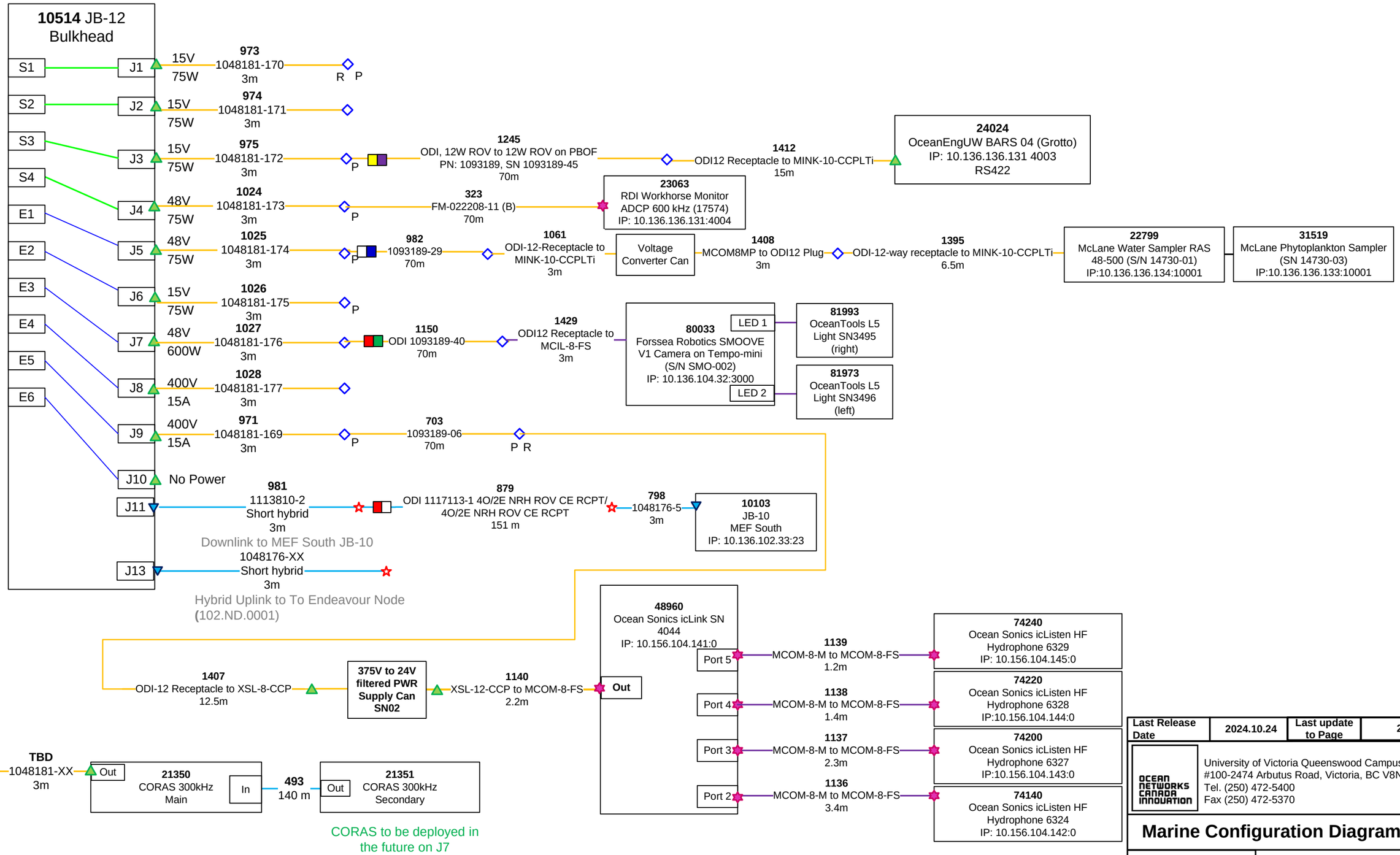
Marine Configuration Diagram

Observatory	NEPTUNE	Location	Endeavour - MEF North



Last Release Date	2024.10.24	Last update to Page	2024.07.12

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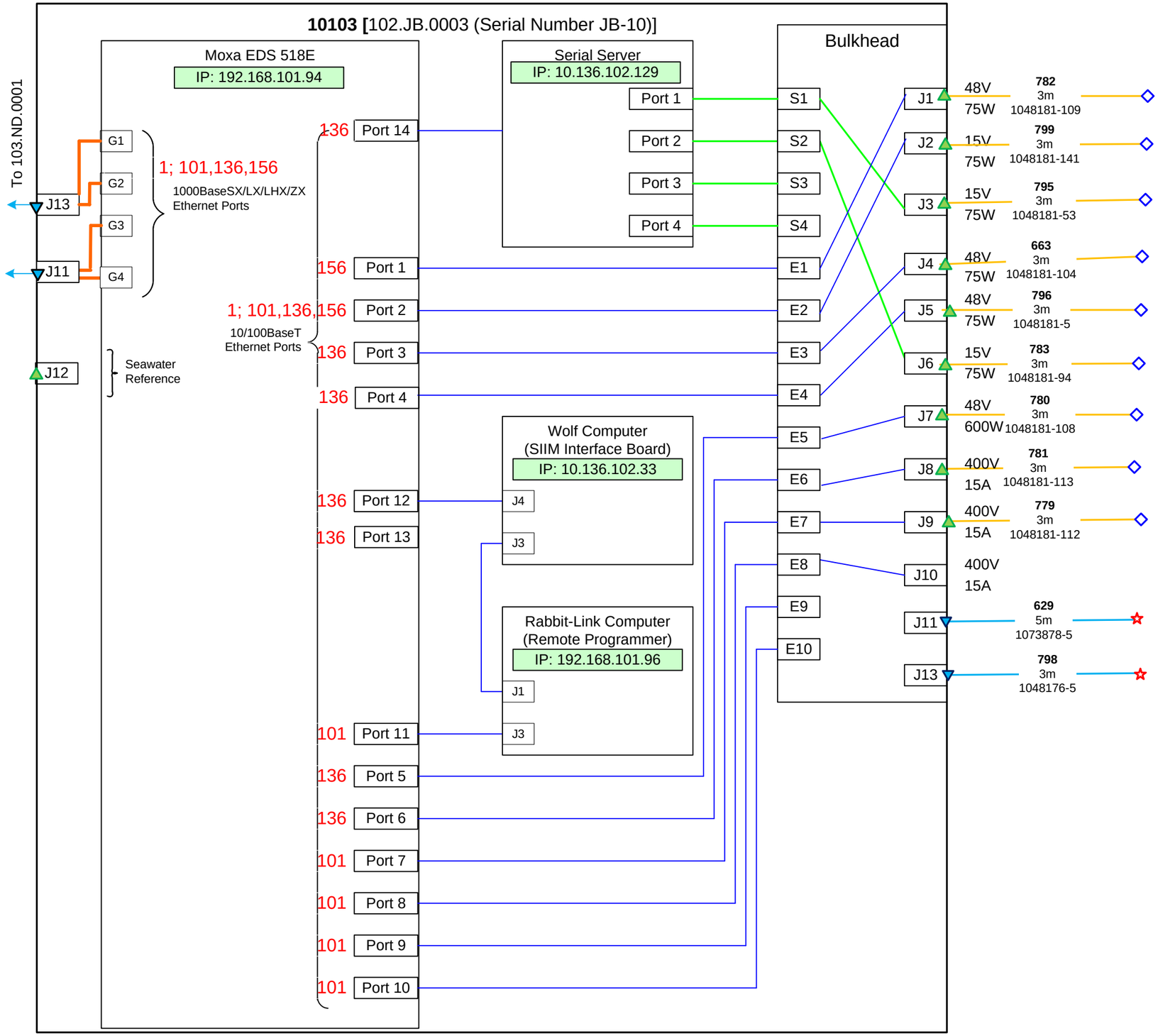
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 37

Observatory	NEPTUNE	Location	Endeavour – MEF South



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10/11, breaker 9 is shared
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

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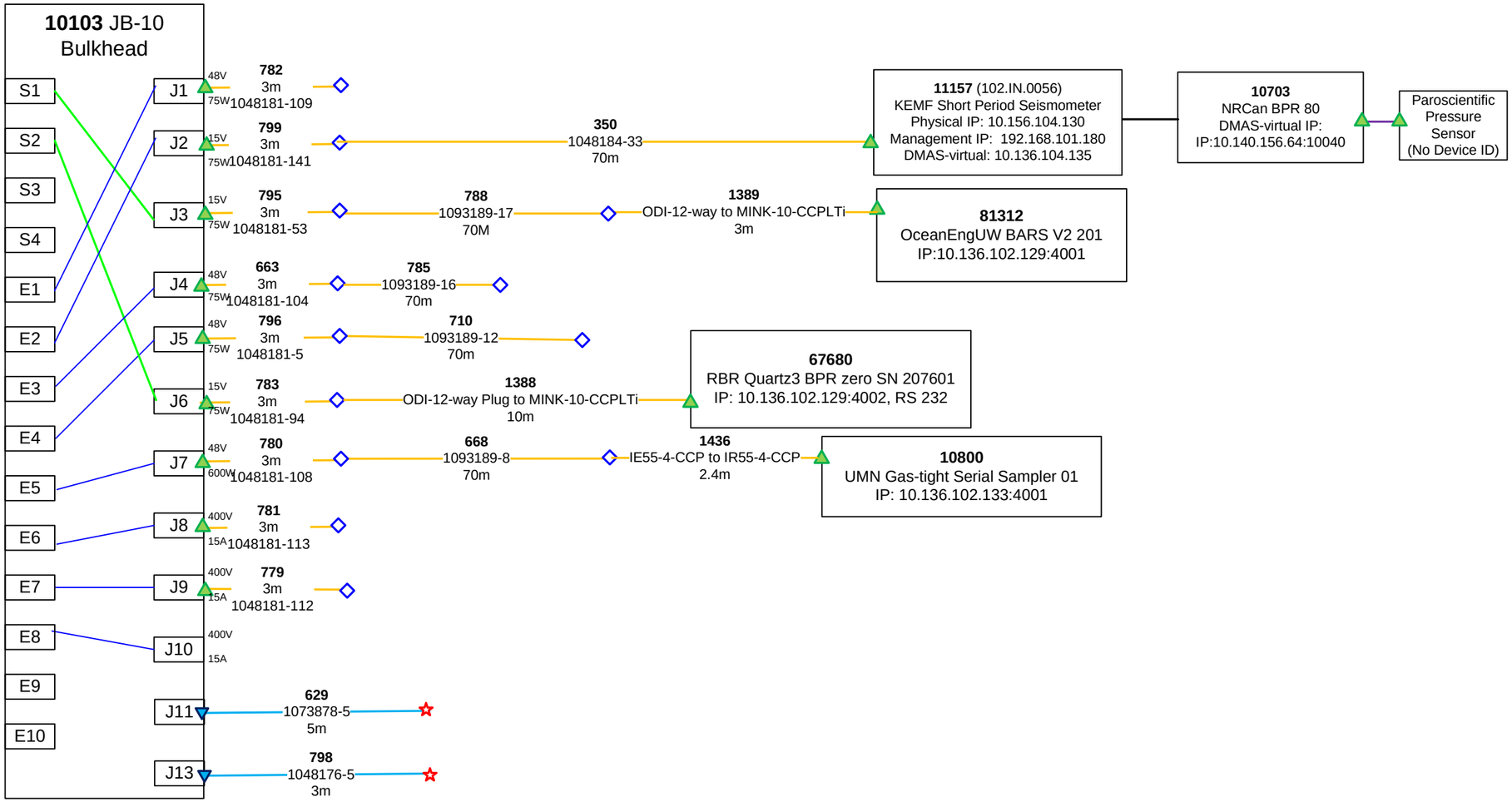
Observatory	NEPTUNE	Location	Endeavour – MEF South



Last Release Date	2024.10.24	Last update to Page	2024.07.12

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 39

Observatory	NEPTUNE	Location	Endeavour Mothra

To 102.ND.0001 SP3

22793 [(Serial Number JB-15) **]**

Moxa EDS 518A
16-Port Ethernet Switch
IP: 192.168.101.216

J13
400V
Input

G1
G2
G3

1000BaseSX/LX/LHX/ZX
Ethernet Ports
1; 101,102,136,156

156	Port 1
136	Port 2
136	Port 3
136	Port 4
101	Port 5
136	Port 6
136	Port 7
136	Port 8
101	Port 9
1; 101,102,136,156	Port 10
136	Port 11
101	Port 12
101	Port 13
136	Port 14
136	Port 15
101	Port 16

n/c

Alarm Relay 1

Serial Server
IP: 10.136.100.129

J4

Port 1
Port 2
Port 7
Port 8 n/c

Communications
Selection Board

E1	J1	48V 5A	**949** 1048181-11 3m	
E2	J2	48V 5A	**464** 1048181-34 3m	
E3	J3	15V 5A	**463** 1048181-32 3m	
E4	J4	48V 5A	**466** 1048181-36 3m	
E5	J5	24V 5A	**948** 1048181-57 3m	
E6	J6	15V 5A	**272** 1048181-65 3m	
E7	J7	48V 10A	**273** 1048181-66 3m	
E8	J8	400V 5A	**329** 1048181-67 3m	J7 Likely compromised/Faulty port
E9	J9	400V 5A	**330** 1048181-68 3m	
E10	J10	400V 15A	**264** 1048181-69 3m	

PPS Server
IP: 192.168.101.219
J201

CAN Bridge
IP: 192.168.101.217
ETH

Rabbit-Link Computer
(Remote Programmer)
IP: 192.168.101.218
PWR
J3
J1

Wolf Computer
(SIIM Interface Board)
IP: 10.136.100.33
J4
J3

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

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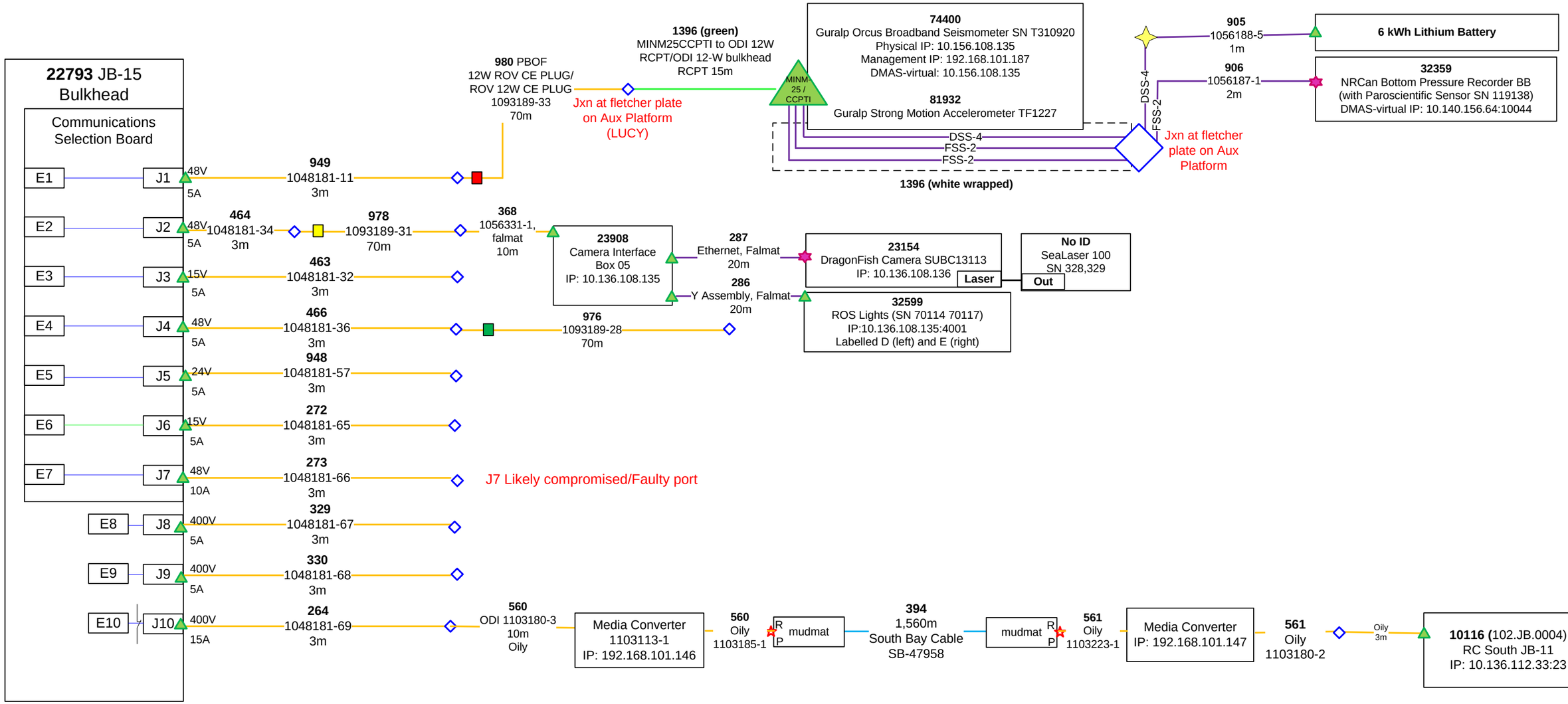
Observatory	NEPTUNE	Location	Endeavour Mothra



Last Release Date	2024.10.24	Last update to Page	2024.07.12

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Marine Configuration Diagram

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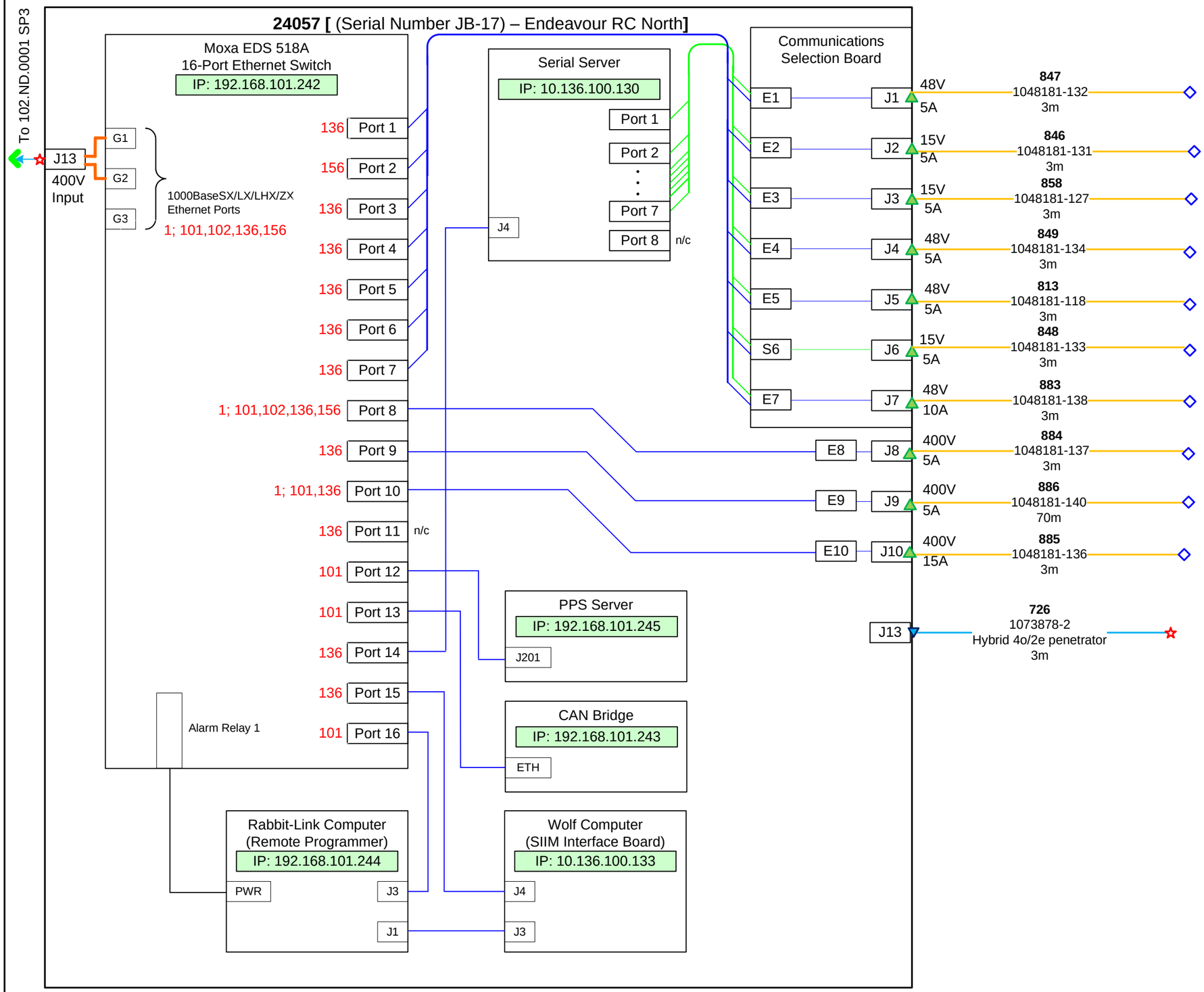
Observatory	NEPTUNE	Location	Endeavour – RC North



Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

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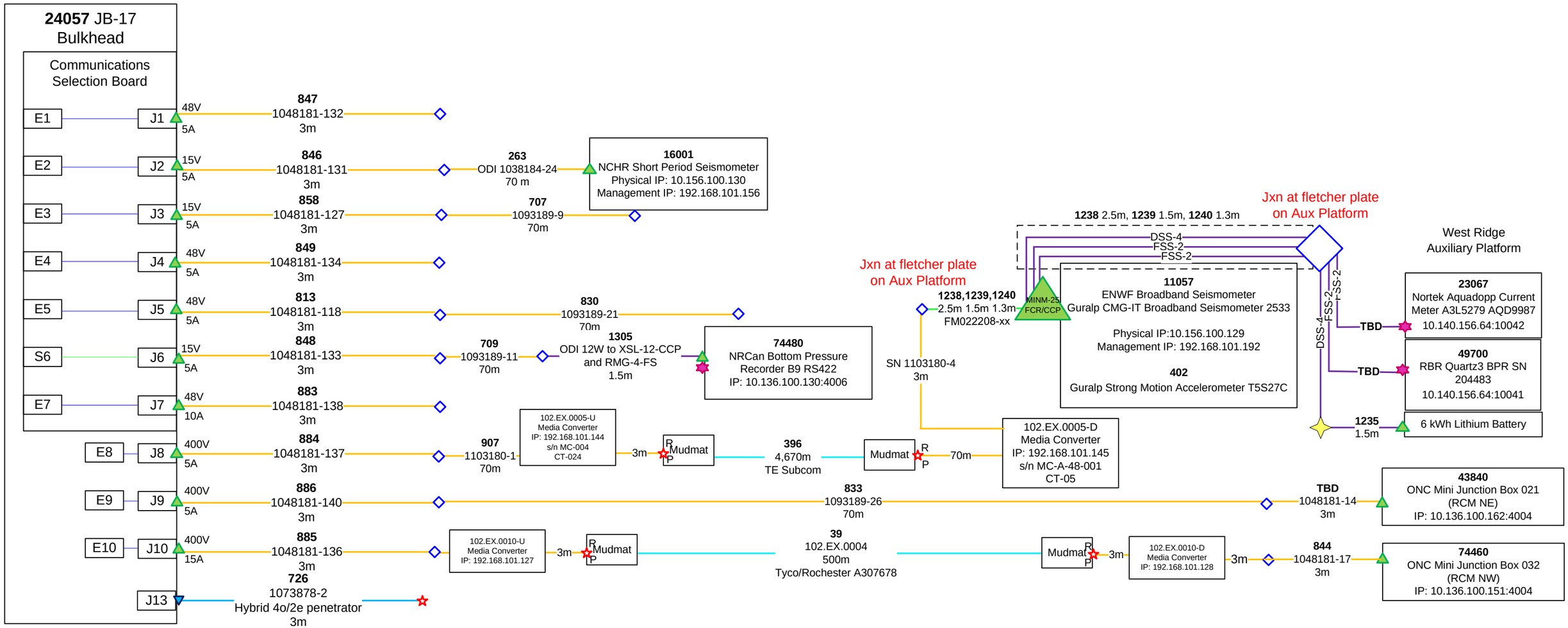
Observatory	NEPTUNE	Location	Endeavour – RC North



Last Release Date	2024.10.24	Last update to Page	2024.07.12

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 43

Observatory	NEPTUNE	Location	Endeavour – RC North NE Mooring

43840
ONC Mini Junction Box 021

MINK10
Out Port

MOXA EDS 205A 5 port Ethernet Switch
SN: TAHJB1077024
IP:TBD
Ethernet Out
1
2
3
4
5

MOXA 5450I 4-Port Serial Server
SN:TAHDE1065844
IP:10.136.100.160
MAC:00:90:E8:6E:6E:9B
Ethernet
Serial Port 4001
Serial Port 4002
Serial Port 4003
Serial Port 4004

MOXA 5450I 4-Port Serial Server
SN:TAHBE1037580
IP:10.136.100.161
MAC:00:90:E8:6B:9C:C0
Ethernet
Serial Port 4001
Serial Port 4002
Serial Port 4003
Serial Port 4004

MOXA 5450I 4-Port Serial Server
SN:TAZE01107361
IP:10.136.100.162
MAC:00:90:E8:1F:44:27
Ethernet
Serial Port 4001
Serial Port 4002
Serial Port 4003
Serial Port 4004

Port Controller 1
SN: TBD
ADD:41

Port Controller 2
SN: TBD
ADD:42

Port Controller 3
SN: TBD
ADD:43

Port Controller 4
SN: TBD
ADD:44

Port Controller 5
SN: TBD
ADD:45

Port Controller 6
SN: TBD
ADD:46

Port Controller 7
SN: TBD
ADD:47

Port Controller 8
SN: TBD
ADD:48

Port Controller 9
SN: TBD
ADD:81

Port Controller 10
SN: TBD
ADD:82

XSL1
XSL2
XSL3
XSL4
XSL5
XSL6

1041 24V 5m 5m
1042 24V 50m 50m
1043 24V 125m 125m
1044 24V 200m 200m
1045 48V 250m
48V

J1 **10602**
Sea-Bird Microcat SBE37SIP 8425
IP: 10.136.100.160: 4001

J2 **522**
Nortek Aquadopp Current Meter A2L5379 AQD8389
IP: 10.136.100.160: 4002

J3 **13105**
Sea-Bird Microcat SBE37SIP 5680
IP: 10.136.100.160: 4003

J4 **14056**
Nortek Aquadopp Current Meter A2L2558 AQD2334
IP: 10.136.100.160: 4004

J5 **13104**
Sea-Bird Microcat SBE37SIP 5679
IP: 10.136.100.161: 4001

J6 **14055**
Nortek Aquadopp Current Meter A2L2491 AQD2882
IP: 10.136.100.161:4002

J7 **21011**
Sea-Bird Microcat SBE37SIP 5692
IP: 10.136.100.161:4003

J8 **13003**
Nortek Aquadopp Current Meter A2L2498 AQD2760
IP: 10.136.100.161:4004

J9 **13001**
RDI Workhorse Long Ranger ADCP 75 kHz (13429)
IP: 10.136.100.162: 4001

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Marine Configuration Diagram

Observatory	NEPTUNE	Location	Endeavour – RC North NW Mooring

74460
ONC Mini Junction Box 032

844 → Uplink Port

MOXA EDS-405A-T
Nport Switch
SN: TBD
MAC:TBD
IP: 10.136.100.150

10/100 Base T (x) Ports (Ethernet)
Port 1
Port 2
Port 3
Port 4
Port 5

24V
24Vout
24Vhotel

VICOR
400V input
24V output
400Vin

MOXA 5650I-T
Serial device server
SN: TBD
MAC: TBD
IP: 10.136.100.152
Ethernet Out

RS-485	Port 4001
RS-422	Port 4002
RS-485	Port 4003
RS-422	Port 4004
RS-485	Port 4005
RS-422	Port 4006
RS-485	Port 4007
RS-422	Port 4008

Port 4002 dead

NPort 5450I
Serial device server
SN: TBD
MAC: TBD
IP: 10.136.100.151
Ethernet Out

RS-422	Port 4001
RS-422	Port 4002
	Port 4003
RS-422	Port 4004
	Port 4005
	Port 4006
	Port 4007
	Port 4008

Port Controller J1 SN: TBD ADD: 41 — 24Vout / 24Vin → J1 endcap (J1/J2) 24V
Port Controller J2 SN: TBD ADD: 42 — 24Vout / 24Vin → J2 endcap (J3/J4) 24V
Port Controller J3 SN: TBD ADD: 43 — 24Vout / 24Vin → J3 endcap (J5/J6) 24V
Port Controller J4 SN: TBD ADD: 44 — 24Vout / 24Vin → J4 endcap (J7/J8) 24V
Port Controller J5 SN: TBD ADD: 45 — 24Vout / 24Vin → J5 endcap (J9) 48V
Port Controller J6 SN: TBD ADD: 46 — 24Vout / 24Vin → J6 endcap (J10) 48V
Port Controller J7 SN: TBD ADD: 47 — 24Vout / 24Vin
Port Controller J8 SN: TBD ADD: 48 — 24Vout / 24Vin
Port Controller J9 SN: TBD ADD: 81 — 48Vout / 48Vin
Port Controller J10 SN: TBD ADD: 82 — 48Vout / 48Vin

J1 endcap (J1/J2) 24V
- 5m → J1 — **24379** ea-Bird Microcat SBE37SIP SN 16433 IP: 10.136.100.152: 4001
- J2 — **24409** ek Aquadopp Current Meter SN A3L9191 IP: 10.136.100.151: 4003

J2 endcap (J3/J4) 24V
- 50m → J3 — **24380** ea-Bird Microcat SBE37SIP SN 16434 IP:10.136.100.152:4003
- J4 — **31639** rtek Aquadopp Current Meter SN 9773 IP: 10.136.100.152: 4004

J3 endcap (J5/J6) 24V
- 125m → J5 — **24378** ea-Bird Microcat SBE37SIP SN 16432 IP: 10.136.100.152: 4005
- J6 — **13005** ek Aquadopp Current Meter SN A2L2489 IP: 10.136.100.152:4006

J4 endcap (J7/J8) 24V
- J7 — **24382** Sea-Bird Microcat SBE37SIP 16431 IP: 10.136.100.152:4007

J5 endcap (J9) 48V
- 200m → J8 — **13054** ek Aquadopp Current Meter SN A2L2492 IP: 10.136.100.152:4008
- **1438** XSL-12-CCP to XSL-10-CCP 250m → J9 — **14001** l Workhorse Long Ranger ADCP 75 kHz (3867) IP:10.136.100.151:4001

J6 endcap (J10) 48V

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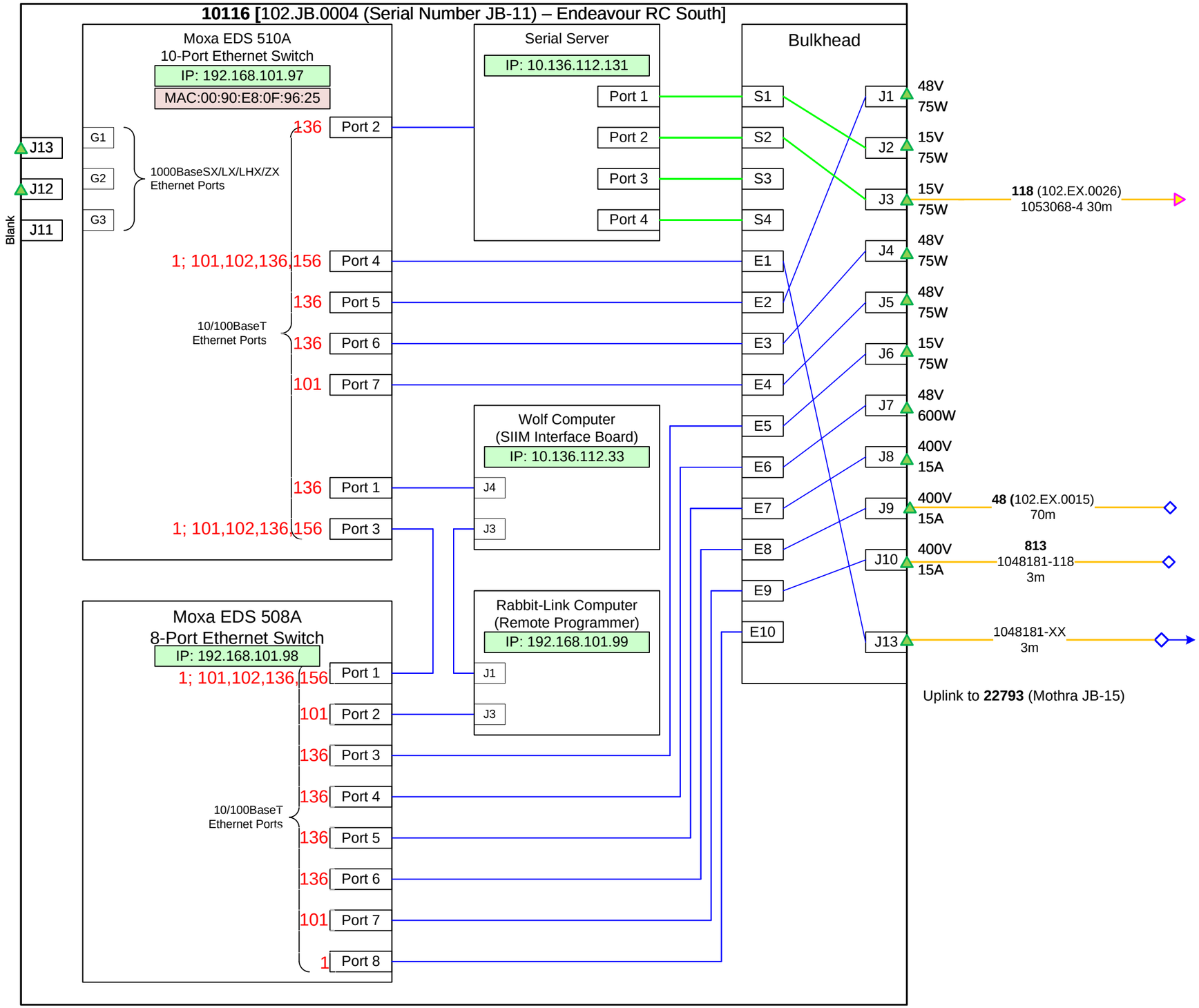
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 45

Observatory	NEPTUNE	Location	Endeavour – RC South



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

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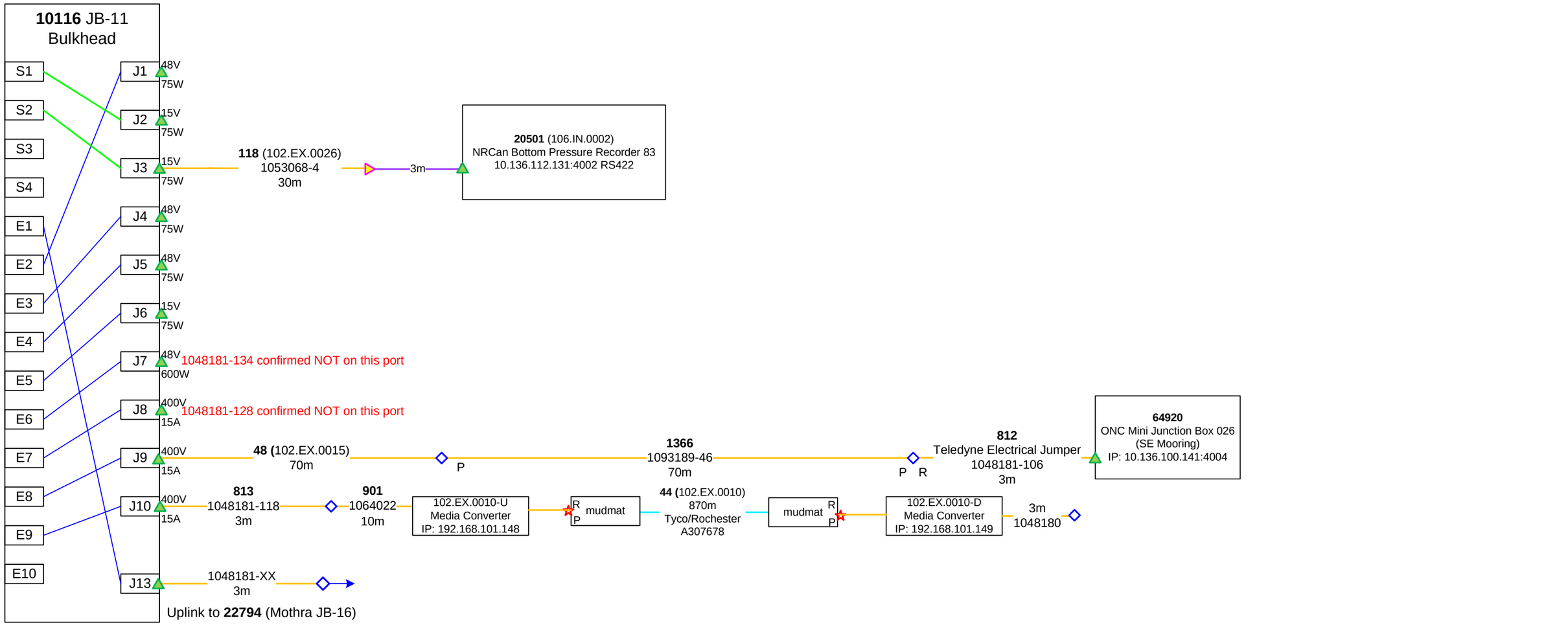
Observatory	NEPTUNE	Location	Endeavour – RC South



Last Release Date	2024.10.24	Last update to Page	2023.12.01

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Marine Configuration Diagram

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Observatory	NEPTUNE	Location	Endeavour - RC South SE Mooring

64920
ONC Mini Junction Box 026

812
3m
Uplink Port

MOXA EDS-405A-T
Nport Switch
SN: TAGID1018323
MAC:00:90:E8:67:40:BE
IP: 10.136.100.140

10/100 Base T (x) Ports (Ethernet)
Port 1
Port 2
Port 3
Port 4
Port 5

24V
24Vout

MOXA 5650I-T
Serial device server
SN: TAHCE1084703
MAC: 00:90:E8:68:FA:CD
IP: 10.136.100.142
Ethernet Out
RS-485 Port 4001
RS-422 Port 4002
RS-485 Port 4003
RS-422 Port 4004
RS-485 Port 4005
RS-422 Port 4006
RS-485 Port 4007
RS-422 Port 4008

24Vhotel

VICOR
400V input
24V output
400Vin

NPort 5450I
Serial device server
SN: TAHBE1037594
MAC: 00:90:E8:6B:9C:CE
IP: 10.136.100.141
Ethernet Out
RS-422 Port 4001
RS-422 Port 4002
Port 4003
RS-422 Port 4004
Port 4005
Port 4006
Port 4007
Port 4008

Port Controller J1
SN: TBD
ADD: 41
24Vout
24Vin

Port Controller J2
SN: TBD
ADD: 42
24Vout
24Vin

Port Controller J3
SN: TBD
ADD: 43
24Vout
24Vin

Port Controller J4
SN: TBD
ADD: 44
24Vout
24Vin

Port Controller J5
SN: TBD
ADD: 45
24Vout
24Vin

Port Controller J6
SN: TBD
ADD: 46
24Vout
24Vin

Port Controller J7
SN: TBD
ADD: 47
24Vout
24Vin

Port Controller J8
SN: TBD
ADD: 48
24Vout
24Vin

Port Controller J9
SN: TBD
ADD: 81
48Vout
48Vin

Port Controller J10
SN: TBD
ADD: 82
48Vout
48Vin

J1 end cap — J1
J2 end cap — J3
J3 end cap — J5
J4 end cap — J7
J5 end cap — J9
J6 end cap — J10

24V
FMO-22208-11K12
48V
1188
XSL-12-CCP to XSL-10-CCP
250m

J1 **13109**
Sea-Bird Microcat SBE37SIP 5684
IP: 10.136.100.142:4001

J2 **1233**
Nortek Aquadopp Current Meter
A3L4883 AQD3082
IP: 10.136.100.142:4002

J3 **13111**
Sea-Bird Microcat SBE37SIP 5686
IP: 10.136.100.142:4003

J4 **24405**
Nortek Aquadopp Current Meter
A3L9187 AQD14215
IP: 10.136.100.142:4004

J5 **13101**
Sea-Bird Microcat SBE37SIP 5676
IP: 10.136.100.142:4005

J6 **24406**
Nortek Aquadopp Current Meter
A3L9188 AQD14218
IP: 10.136.100.142:4006

J7 **22609**
Sea-Bird Microcat SBE37SIP 5694
IP: 10.136.100.142:4007

J8 **14501**
Nortek Aquadopp Current Meter
A2L2497
IP: 10.136.100.142:4008

J9 **62760**
RDI Workhorse Long Ranger
ADCP 75 kHz (24604)
IP: 10.136.100.141:4001

J10 **62780**
RDI Workhorse Long Ranger
ADCP 75 kHz (24605)
IP: 10.136.100.141:4002

Last Release Date	2024.10.24	Last update to Page	2023.08.23

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University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Autonomous Sites - Endeavour

51941
Technicap Sediment Trap PPS 3/3-24S SN 0060
(South Axial Valley 1)

22323
Oceano 2500S Universal Release 1515
(South Axial Valley 1)

27999
Xeos XMA-7500 Argos Beacon 929
(South Axial Valley 1)

79692
Xeos XMF-11K Micro Flasher 1471
(South Axial Valley 1)

51940
Technicap Sediment Trap PPS 3/3-24S SN 0059
(South Axial Valley 2)

24022
Oceano 2500S Universal Release 2267
(South Axial Valley 2)

27359
Xeos XMA-7500 Argos Beacon 927
(South Axial Valley 2)

79672
Xeos XMF-11K Micro Flasher 1470
(South Axial Valley 2)

51920
Technicap Sediment Trap PPS 3/3-24S SN 0058
(South Axial Valley 3)

22322
Oceano 2500S Universal Release 1514
(South Axial Valley 3)

44880
Xeos XMA-11K Argos Beacon 988
(South Axial Valley 3)

79652
Xeos XMF-11K Micro Flasher 1469
(South Axial Valley 3)

32899
McLane Sediment Trap 78H-21 (SN 14753-02)
(Off Axis Far Field)

50600
Oceano 2500T Universal Release 2868
(Off Axis Far Field)

26519
Xeos XMA-11K Argos Beacon 891
(Off Axis Far Field)

23207
McLane Sediment Trap 78H-21 (S/N 13041-01)
(West Flank)

23134
Xeos XMA-7500 Argos Beacon (S/N 403)
(West Flank)

50700
Oceano 2500T Universal Release 2873
(West Flank)

23208
McLane Sediment Trap 78H-21 (S/N 13041-02)
(Main Endeavour Field)

24351
OceanEngUW BARS 06
(High Rise - Godzilla)

86392
Guralp Aquarius Broadband
Seismometer SN AQU-F45F

86432
Guralp Aquarius Broadband
Seismometer SN AQU-A95F

86372
Guralp Aquarius Broadband
Seismometer SN AQU-4E5A

86412
Guralp Aquarius Broadband
Seismometer SN AQU-FB61

86452
Guralp Aquarius Broadband
Seismometer SN AQU-3F5F

Endeavour RC South SW Mooring

23040
Sea-Bird Microcat SBE37SMP-ODO
SN 9535 (5 mab)

31979
Sea-Bird SBE 63 Dissolved Oxygen
Sensor SN 632211 (5 mab)

523
Nortek Aquadopp Current Meter
A3L5390 (5 mab)

23039
Sea-Bird Microcat SBE37SMP-ODO
SN 9534 (50 mab)

23055
Sea-Bird SBE 63 Dissolved Oxygen
Sensor SN 630184 (50 mab)

521
Nortek Aquadopp Current Meter
A3L5380 (50 mab)

24333
Sea-Bird Microcat SBE37SMP-ODO
SN 16251(125 mab)

24335
Sea-Bird SBE 63 Dissolved Oxygen
Sensor SN 631772 (125 mab)

24169
Nortek Aquadopp Current Meter
A3L8798 (125 mab)

27119
Sea-Bird Microcat SBE37SMP-ODO
SN 16834 (200 mab)

27139
Sea-Bird SBE 63 Dissolved Oxygen
Sensor SN 631950 (200 mab)

519
Nortek Aquadopp Current Meter
A2L2494 A3L5377 (200 mab)

50580
Oceano 2500T Universal Release 2867

74981
Sonardyne WMT-6 8190-3111
SN338751-002

32499
Xeos XMA-11K Argos Beacon 963

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University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
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Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Folger Passage Node

10501 (Node 1 - 106.ND.0001) (Folger Passage)

Port 1

Port 2

6850
IP: 192.168.101.10

6850
IP: 192.168.101.10

Port 3

Port 4

Port 5

192.168.101.[10-17]

Port 6

Refer to Alcatel-Lucent Node Supervision and Data Wiring Diagrams for details.

281 (106.EX.0281) 1052662-2
70m
ODI PBOF Hose

10011
OceanWorks Junction Box JB-02
IP: 10.136.36.33:23

244 (106.EX.0244)
700m
Nexans DO417

10515
OceanWorks Junction Box JB-01
IP: 10.136.132.33:23

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Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Folger Deep

10011 JB-02

Moxa EDS 510A
10-Port Ethernet Switch
IP: 192.168.101.70

Serial Server
IP: 10.136.36.130

Bulkhead

Wolf Computer
(SIIM Interface Board)
IP: 10.136.36.33

Rabbit-Link Computer
(Remote Programmer)
IP: 192.168.101.72

Moxa EDS 508A
8-Port Ethernet Switch
IP: 192.168.101.71

Blank	J11							
	J12	G1	1000BaseSX/LX/LHX/ZX Ethernet Ports (G1 G2 Trunk port)					
	J13	G2						
		136	Port 2	Port 2	S2	E2	J2	24V 150W
		101	Port 4		S4	E1	J4	48V 75W
		136	Port 5		S1	E2	J5	48V 75W
		101	Port 6		S3	E3	J3	15V 75W
		136	Port 7			E4	J6	15V 75W
		136	Port 1	J4		E5	J7	48V 600W
		1; 101,102,136,156	Port 3	J3		E6	J8	400V 15A
		1; 101,102,136,156	Port 1	J1		E7	J9	400V 15A
		101	Port 2	J3		E8	J10	400V 15A
		136	Port 3			E9		
		156	Port 4			E10		
		136	Port 5					
		136	Port 6					
		136	Port 7					
		101	Port 8					

10/100BaseT Ethernet Ports

J1	15V 75W	899 1048181-139 3m	839 1111039-2 12 way ROV plug to 7 way ROV plug 70m → P
J2	24V 150W	856 1048181-124 3m	R
J3	15V 75W		
J4	48V 75W	465 1048181-35 3m	R
J5	48V 75W	972 1048181-167 3m	R
J6	15V 75W		
J7	48V 600W	853 1048181-128 3m	R
J8	400V 15A	852 1048181-126 3m	R
J9	400V 15A	467 1048181-52 3m	708 1093189-10 70m
J10	400V 15A	86 103.EX.0011 3m	
J13		950 1073878-1 Hybrid 4o/2e penetrator 5m	

J2 port is likely compromised.
See INSTR-2097

Breaker Number to 'J' Number

Breaker	J Number
Brkr 1	1
Brkr 2	2
Brkr 3	3
Brkr 4	8
Brkr 5	9
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	10
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

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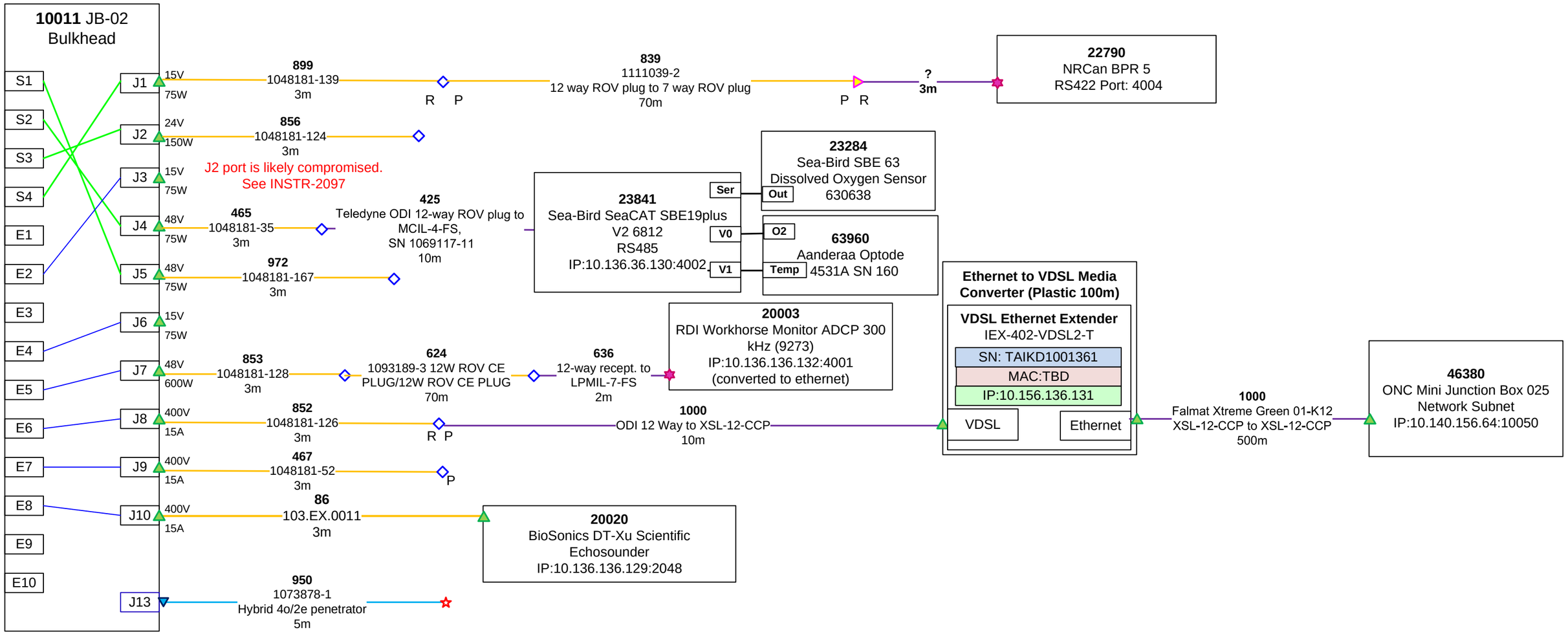
University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Observatory	NEPTUNE	Location	Folger Deep



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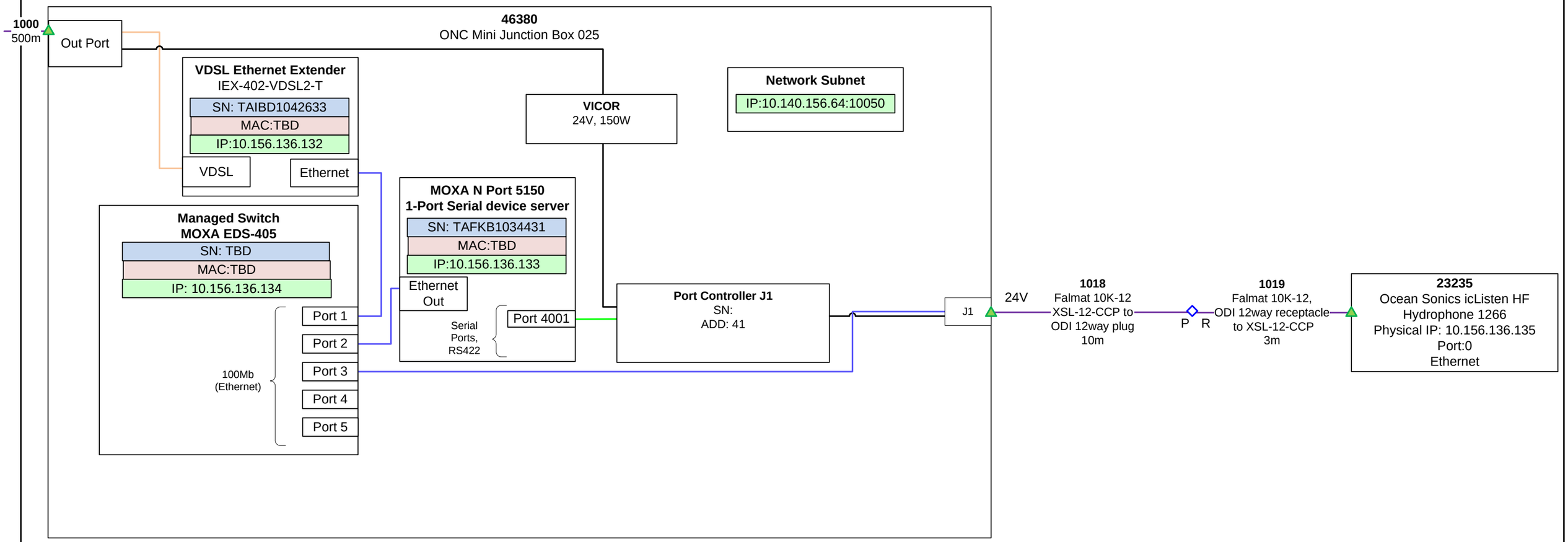
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 52

Observatory	NEPTUNE	Location	Folger Deep



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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 53

Observatory	NEPTUNE	Location	Autonomous Sites – Folger Deep

Last Release Date	2024.10.24	Last update to Page	2023.07.25

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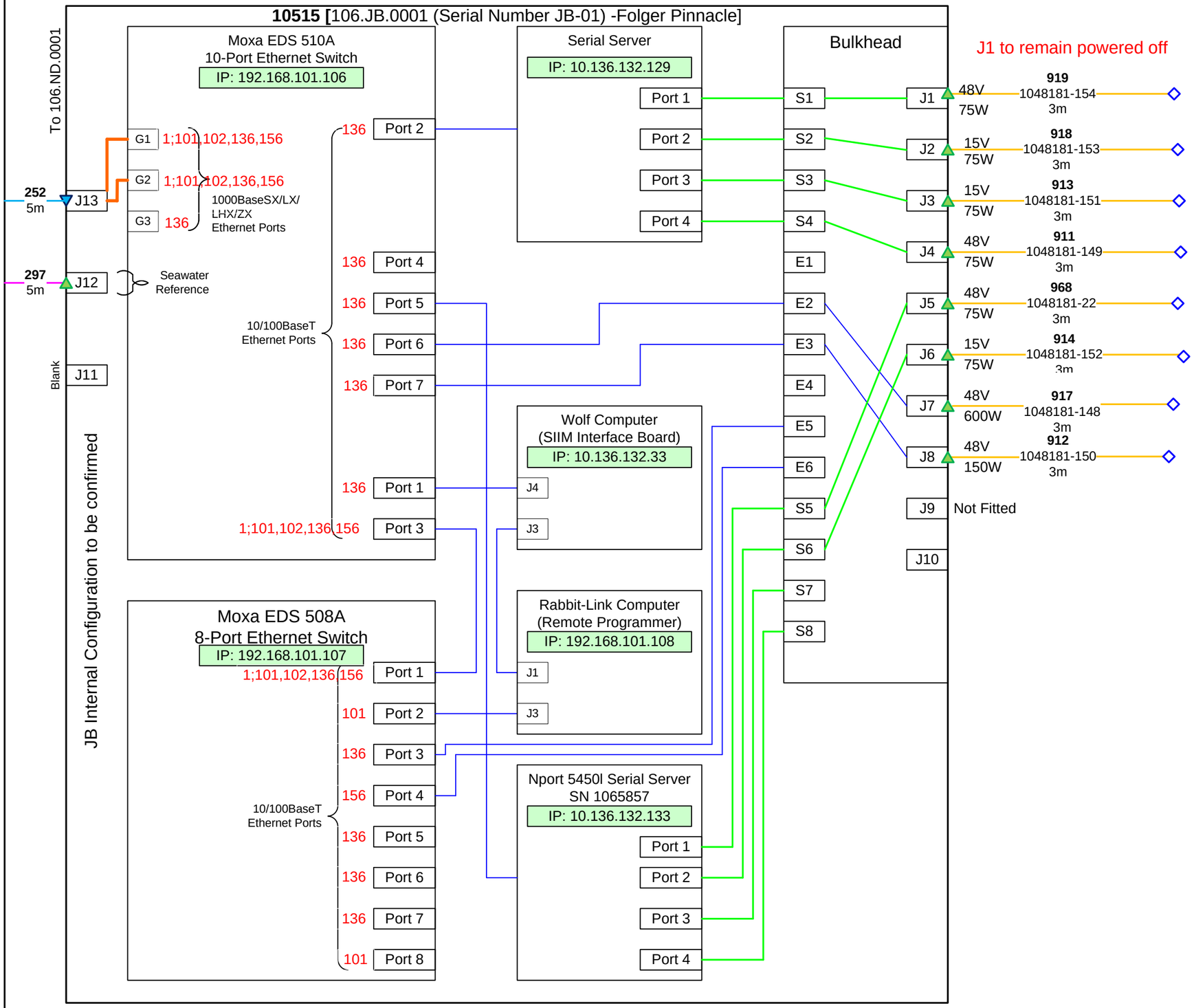
Marine Configuration Diagram

Observatory	NEPTUNE	Location	Folger Pinnacle



Breaker Number to 'J' Number

Breaker	J Number
Brkr 1 not fitted	-
Brkr 2 not fitted	-
Brkr 3	3
Brkr 4	1
Brkr 5	2
Brkr 6	6
Brkr 7	4
Brkr 8	5
Brkr 9	8
Brkr 10	7

Junction Box Future Planning

Port Number	Date	Description

Last Release Date	2024.10.24	Last update to Page	2024.07.03

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Marine Configuration Diagram

Updated by	Bahar Torabi	Page 55

Observatory	NEPTUNE	Location	Folger Pinnacle

10515 JB-01
Bulkhead

S1 S2 S3 S4 E1 E2 E3 E4 E5 E6 S5 S6 S7 S8

J1 to remain powered off

J1 — 48V 75W — **919** 1048181-154 3m — R P — **650** 7m → **15003** ONC UVC Anti-Biofouling System 01 10.136.132.129:4001 (Out Port)

UVC System was powered off but remained in place until full platform is recovered in the future

J2 — 15V 75W — **918** 1048181-153 3m

J3 — 15V 75W — **913** 1048181-151 3m — R P — **1023** ODI 12way to CTD RMG-4FS 20m → **24140** Sea-Bird SeaCAT SBE19plus V2 4996 10.136.132.129:4003 (Out Port)

- Serial → **26819** Sea-Bird SBE 63 Dissolved Oxygen Sensor 631868 (Out)
- V0 → ChL → **20221** WET Labs ECO FLNTUS 895
- V1 → NTU → WET Labs ECO FLNTUS 895
- V2 → Out → **23059** Biospherical PAR Irradiance QSP-2350L 70434

J4 — 48V 75W — **911** 1048181-149 3m — R P — **111** 101.EX.0026 3m → **23093** RDI Workhorse Monitor ADCP 600 kHz(SN 17434) IP: 10.136.132.129:4004 (Out Port)

J5 — 48V 75W — **968** 1048181-22 3m — R — ODI12Way Plug (Platform) to potted internal terminal block (UV lights), 8 way cable → **88012** ONC UV Antifouling System (SN 003) (Out)

J6 — 15V 75W — **914** 1048181-152 3m — R P — **1427** MCBH8MP to ODI 12 way Plug 7m → **20002** Nortek Aquadopp Profiler AQD 2958 IP: 10.136.132.133:4002 (Out)

J7 — 48V 600W — **917** 1048181-148 3m — R P

J8 — 48V 150W — **912** 1048181-150 3m — R — **386** 1070608-1 5m

917 1048181-148 3m → **13204** Ocean Presence Technologies OPT-06FHDE (SN 9300861) 10.136.132.134: 80 (Out Port)

J9 Not Fitted

J10

45950 Axis M3068-P Mini Dome Network Camera SN B8A44F194FE IP: 10.136.132.135 (Out Port)

- Port 1 → **65140** AML UV-Xchange (SN 830018) (Out)
- Port 2 → **65160** AML UV-Xchange (SN 830026) (Out)
- Port 3 → **30239** AML UV-Xchange (SN 830008) (Out)

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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
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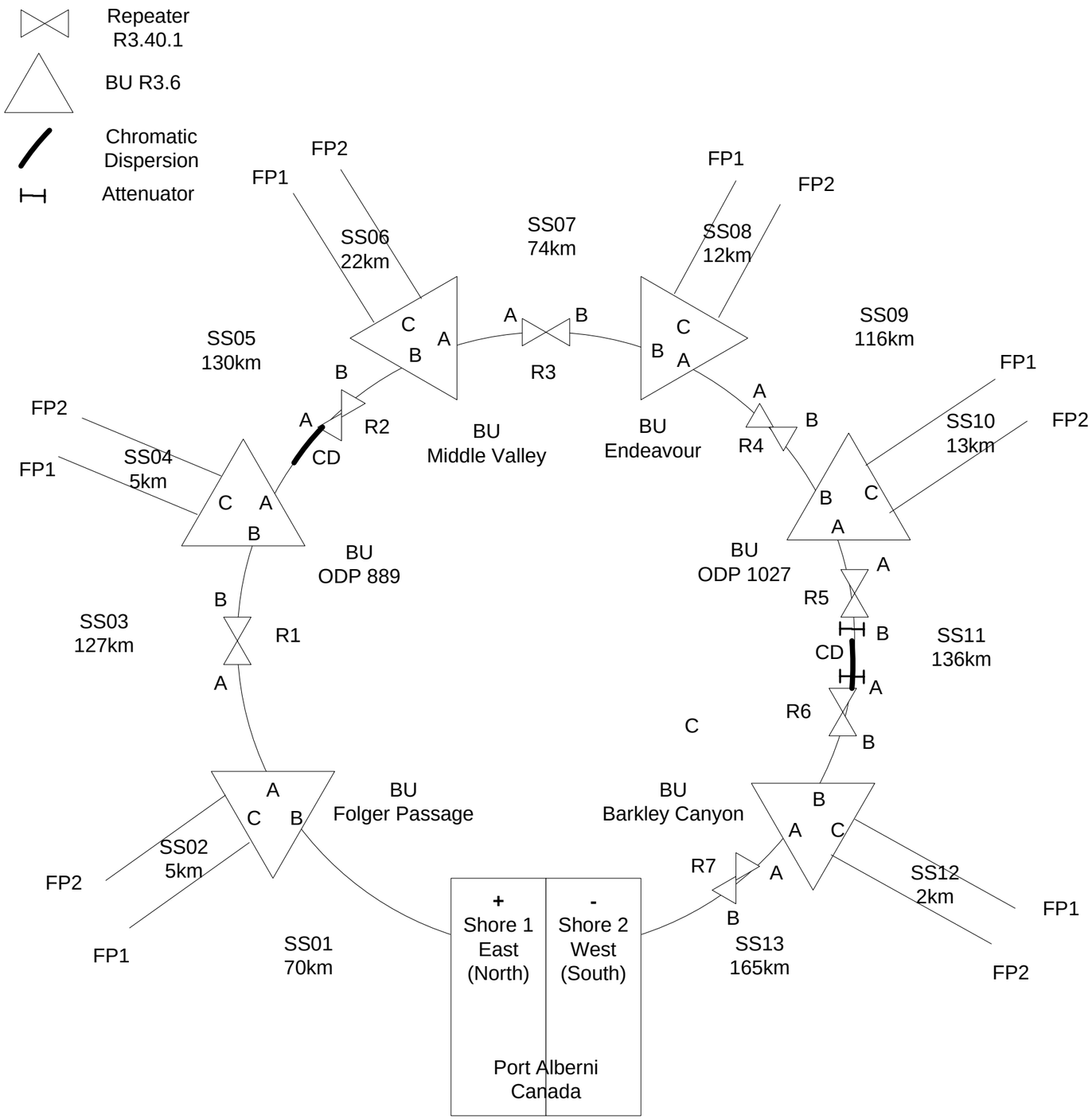
Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	NEPTUNE	Location	Northeast Pacific



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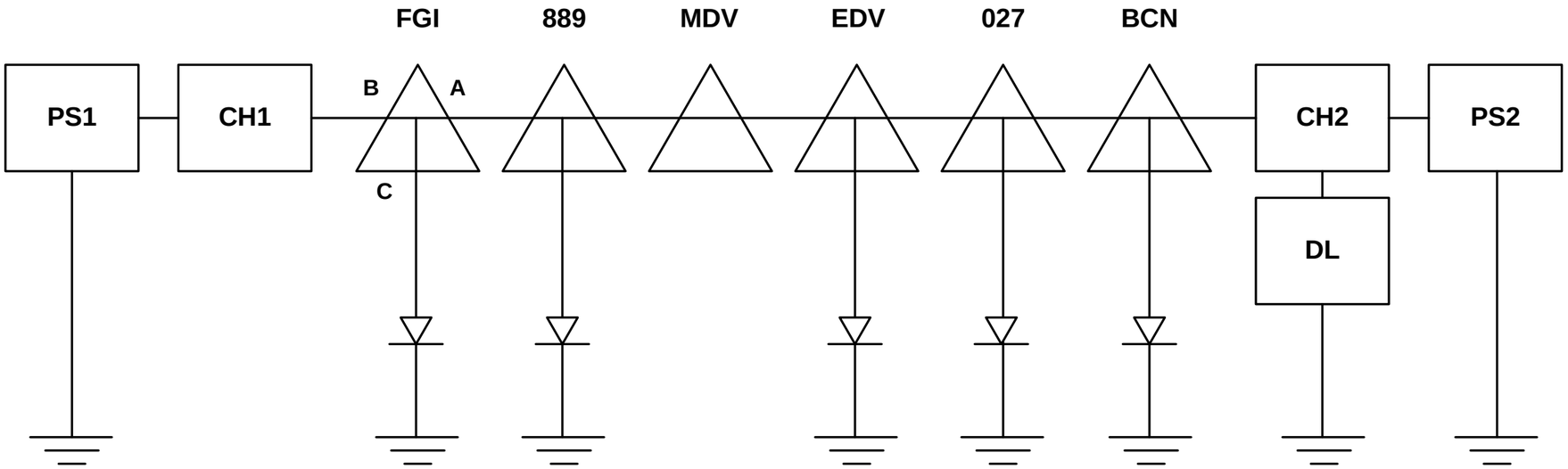
Marine Configuration Diagram

Updated by	Bahar Torabi	Page 57

Observatory	NEPTUNE	Location	Northeast Pacific

BU Arrangement and Normal Powering



MVC acts as diode for voltages +1.3kV > V > -5.6kV
Forward voltage drop approx 73V

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Marine Configuration Diagram

Observatory	VENUS	Location	Salish Sea

VENUS Recent Updates

Version MarineNetworkConfig_2024-10-23
(DSO-1941) Update marine config for post-expedition 2024-10 CanPac cruise
pg - 60 - Saanich Inlet- SI node
 * SIIM DI 1210 and cable EXTID 1021 recovered during Dive CAN008 https://data.oceannetworks.ca/app/dive-logs/4901?annotationId=6596401 - removed from J6 of Saanich Inlet Node
pg - 61 - Saanich Inlet- SI node
* SIIM DI 1210 recovered and removed from J6 of Saanich Inlet Node
pg - 65 - Saanich Inlet VIP
 * VIP DI 1210 and downstream instruments DIs 23289, 47780, 22634, 23912, 26279 were recovered during Dive CAN008 - See handoff notes from 2024-10-12 6:30 AM to 1:30 PM: https://docs.google.com/document/d/1AvU0AJqu54Iy72uEdAdgdUFauN_PimYyqLsLn3xFNmo/edit?tab=t.0 and recovery annotation: https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=4901&time=2024-10-12T18:03:37.561Z&annotationId=6596401
 * However, hydrophone array DIs 68660, 80252, 23478, 24346 disconnected from SIIM DI 1210 and then were left on site without being recovered: see disconnection annotation: https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=4901&time=2024-10-12T17:37:04.807Z&annotationId=6594801 . So, I added a red note mentioning the situation: "The hydrophone array was disconnected from from J6 LV port of S30006 DI 1210 during 2024-10 CanPac cruise. After the recovery of the upstream SIIM DI 1210, the disconnected hydrophone array was left on-site and not recovered"
 * SIIM DI 1210 moved to Small Obs diagram under MTC section pg 70-S30006

Version MarineNetworkConfig_2024-08-08
(DSO-1532) Marine Configuration Diagram Update for 2024-07 VENUS autonomous moorings

* pg 72 - SoG Central CTD (Auto)
 ** swapped CTD
* pg 76 - SoG East CTD (Auto)
 ** deployed CTD

Version MarineNetworkConfig_2024-01-25
(NEPDATA-24986) Update Marine Config Diagram for Saanich Sill
*pg.68: SI SILL Autonomous:
** DIs 23281, 12102, 10 included notes for planned recovery
** added DIs 24001, 24121, 525 & included notes for deployment

Version: MarineNetworkConfig_2023-11-23
(NEPDATA-24891) Update Marine Config Diagram after 2023-11 SoG Central and SoG East maintenance
* page 72 - Autonomous Site - Strait of Georgia Central Autonomous CTD
** all 5 devices CTD/O2, Flasher, beacon,release swapped for new set of devices DIs 23832/31939, 71980,26539,50680 - FS-106 and EN-7250
* page 78 - Autonomous Site - Strait of Georgia East Autonomous CTD
** Devices not recovered

Version: MarineNetworkConfig_2023-11-02
(NEPDATA-24819) Update Marine Config Diagram for 2023-11 SoG Central and SoG East maintenance
* page 72 - Autonomous Site - Strait of Georgia Central Autonomous CTD
** all 5 devices CTD/O2, Flasher, beacon,release to be swapped for new set of devices DIs 23832/31939, 71980,26539,50680 - FS-106 and EN-7250
* page 78 - Autonomous Site - Strait of Georgia East Autonomous CTD
** all 5 devices CTD/O2, Flasher, beacon,release to be recovered - FS-106

Version: MarineNetworkConfig_2023-10-31
(NEPDATA-24816) Update marine config for post expedition 2023-10 BPS Maintenance
* pg 63 - SI Buoy Profiler System Mooring
** recovered CTD DIs 49160, 23568
** swapped GPS DI 15103 for 74760
* pg 65 - SI Buoy Profiler System Instruments
** deployed CTD DIs 23087, 22642, 24117, 80692 via Ext 1190 on port J1

Version: MarineNetworkConfig_2023-10-25
(NEPDATA-24799) Update marine config for pre expedition 2023-10 BPS Maintenance
* pg 63 - SI Buoy Profiler System Mooring
** recover CTD DIs 49160, 23568
* pg 65 - SI Buoy Profiler System Instruments
** deploy CTD DIs 23087, 22642, 24117, 80692

Version: MarineNetworkConfig_2023-08-24
(NEPDATA-24309) Update marine config for post-expedition 2023-07 Sill Maintenance
* pg 67 - Autonomous Site - Saanich Inlet SILL (Pyramid Frame):
** CTD DI 23028, O2 DI 23044, ADCP DI 525, and Acoustic Release DI 45480 got recovered and CTD DI 12102, O2 DI 23281, ADCP DI 10 were deployed

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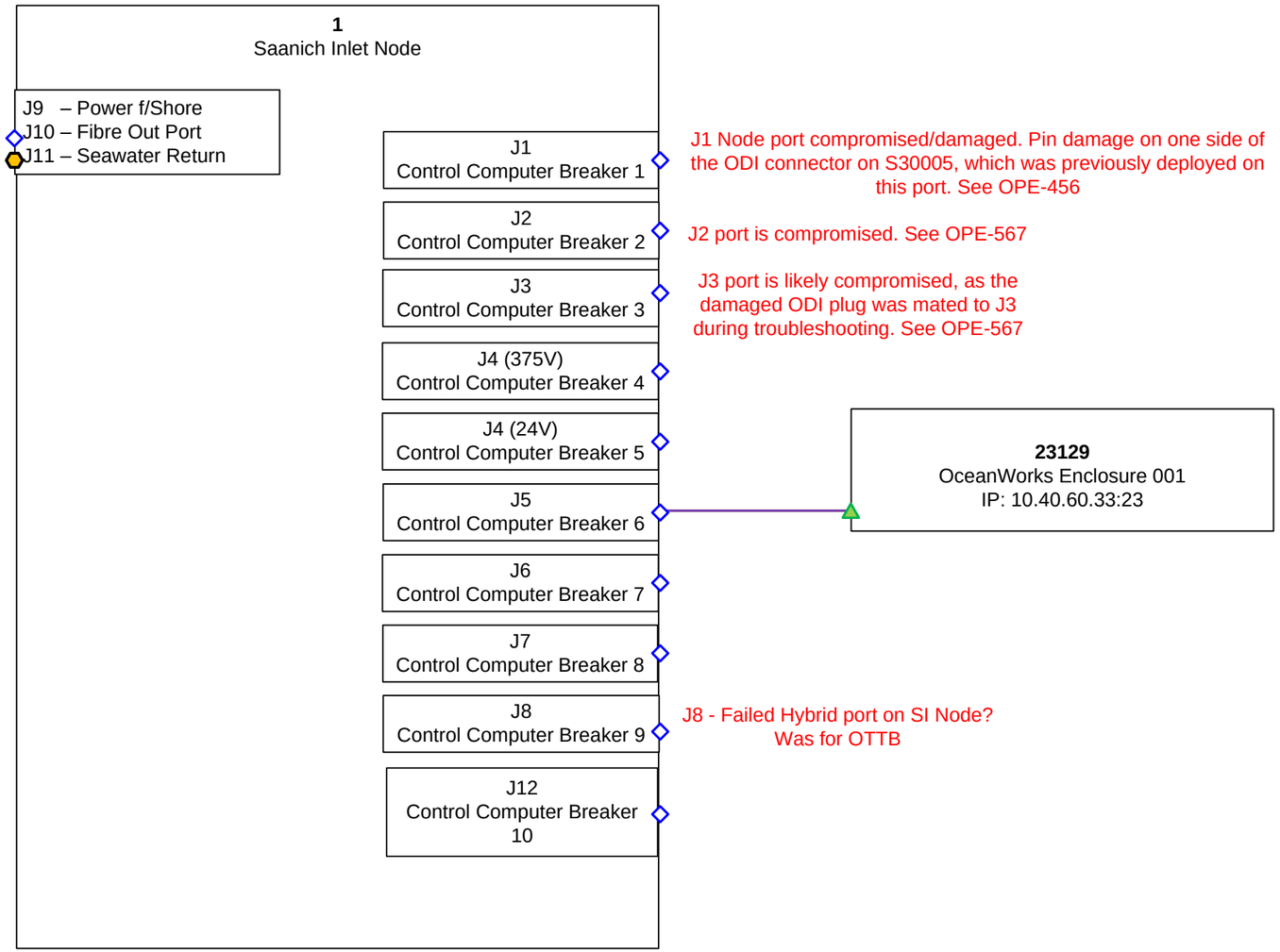
University of Victoria Queenswood Campus
#100-2474 Arbutus Road, Victoria, BC V8N 1V8
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Observatory	VENUS	Location	Saanich Inlet - SI Node



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Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	VENUS	Location	Saanich Inlet - SI Node

J9 – Power f/Shore
J10 – Fibre Out Port
J11 – Seawater Return

J12 Fibre Ethernet

1
Saanich Inlet Node
DNS Name: sw2955.n1.saa.venus

Moxa EDS 518A
16-Port Ethernet Switch A
IP: 10.40.32.1

G1, G2 — 1000BaseSX/LX/LHX/ZX Ethernet Ports

10/100BaseT Ethernet Ports

Port 1	J1
Port 2	J2
Port 3	J3
Port 4	J4
Port 5	J5
Port 6	J6
Port 7	J7
Port 8	J8
Port 9	J4
Port 10	J3
Port 11	
Port 12	
Port 13	
Port 14	
Port 15	
Port 16	

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

1021
SI Node Primary Board
Control Computer
(Wolf Computer Board BL2600)
IP: 10.40.32.33 : 23

Port 1	J1 Control Computer Breaker 1 — 375VDC
Port 2	J2 Control Computer Breaker 2 — 375VDC
Port 3	J3 Control Computer Breaker 3 — 375VDC
Port 4	J4 (375V) Control Computer Breaker 4 — 375VDC
Port 5	J4 (24V) Control Computer Breaker 5 — 24VDC
Port 6	J5 Control Computer Breaker 6 — 375VDC
Port 7	J6 Control Computer Breaker 7 — 375VDC
Port 8	J7 Control Computer Breaker 8 — 375VDC
Port 9	J8 Control Computer Breaker 9 — 375VDC
Port 10	J12 Control Computer Breaker 10 — 375VDC Fibre Ethernet

J1 Node port compromised/damaged. Pin damage on one side of the ODI connector on S30005, which was previously deployed on this port. See OPE-456

J2 port is compromised. See OPE-567

J3 port is likely compromised, as the damaged ODI plug was mated to J3 during troubleshooting. See OPE-567

23129
OceanWorks Enclosure 001
IP: 10.40.60.33:23

Moxa EDS 518A
16-Port Ethernet Switch B
IP: 10.40.32.2

G1, G2 — 1000BaseSX/LX/LHX/ZX Ethernet Ports

10/100BaseT Ethernet Ports

Port 1	J1
Port 2	J2
Port 3	J3
Port 4	J4
Port 5	J5
Port 6	J6
Port 7	J7
Port 8	J8
Port 9	J4
Port 10	J3
Port 11	
Port 12	
Port 13	
Port 14	
Port 15	
Port 16	

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

1022
SI Node Secondary Board
Control Computer
(Wolf Computer Board BL2600)
IP: 10.40.32.34 :23

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10

J8 - Failed Hybrid port on SI Node? Was for OTTB

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Tel. (250) 472-5400
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Marine Configuration Diagram

Observatory	VENUS	Location	Buoy Profiler System (BPS) Mooring

Power Supply Switch (under buoy)

Thick grey conduit cable

To SI Node Port 5

Out

23129 OceanWorks Enclosure 001
(grey box under buoy)

MOXA Serial Server
IP: 10.40.60.129
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8

MOXA 518 Switch
IP: 10.40.60.1
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8

J1 — Power Supply #1
J2 — Power Supply #2
J3 — Power Supply #3
J4 — Power Supply #4
J5 — Power Supply #4
J6 — Power Supply #4
J7 — Power Supply #4
J8 — Power Supply #10
J9 — Seawater reference
J10

OceanWorks Controller
IP: 10.40.60.33

Rabbit Remote Programmer
IP: 10.40.60.34

OceanWorks CAN Bridge
IP: 10.40.60.35

PNI TCM XB
IP: 10.40.60.129
Port:4008

74760
Garmin 19X HVS GPS
2J5089875
IP:10.40.60.129:4003

Enclosure 001 ports J4, J5, J6 and J7 are all powered by Power Supply #4. J4, J5, J6 and J7 correspond to 'OWE Port 4' in topology which is shown here in the diagram as J4

Out
66400
ONC Mini Junction Box 028
IP: 10.40.61.33:4002
In (J1)

MacArtney Winch
(no deviceid)

Port J8 is powered by Power Supply #10. J8 corresponds to 'OWE Port 10' in topology which is shown here in the diagram as J8

15200
RM Young
Meteorological
Station 02
10.40.60.129:4006
Out
V1
V2
V3
V4
V5
V6
V7
V8

22661
AXIS 214 PTZ Webcam
00408C4C56B
IP:10.40.60.131:10005

WDCorr
WDUnCorr
WSpeed
15202
RM Young
Wind Monitor
5103 117264

AirTemp
RelHumid
67740
Rotronic
Campbell Scientific
Temperature RH
HC2A-S3 20496167

BaroP
15204
Vaisala PTB110
Barometer H1960068

Compass
15201
RM Young
Electronic Compass
32500-56 CI 02525

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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
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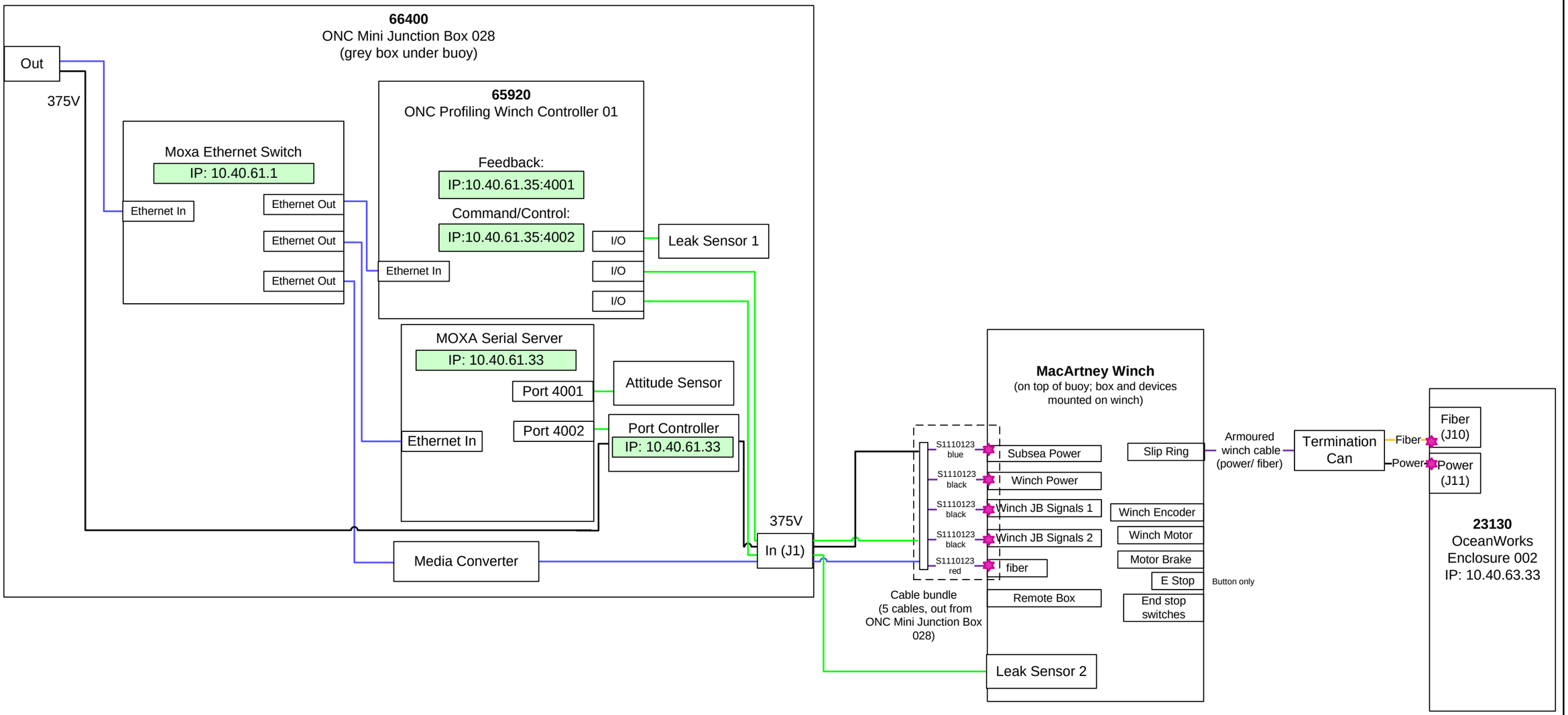
Fax (250) 472-5370

Marine Configuration Diagram

Observatory	VENUS	Location	Buoy Profiler System (BPS) Mini Junction Box



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Marine Configuration Diagram

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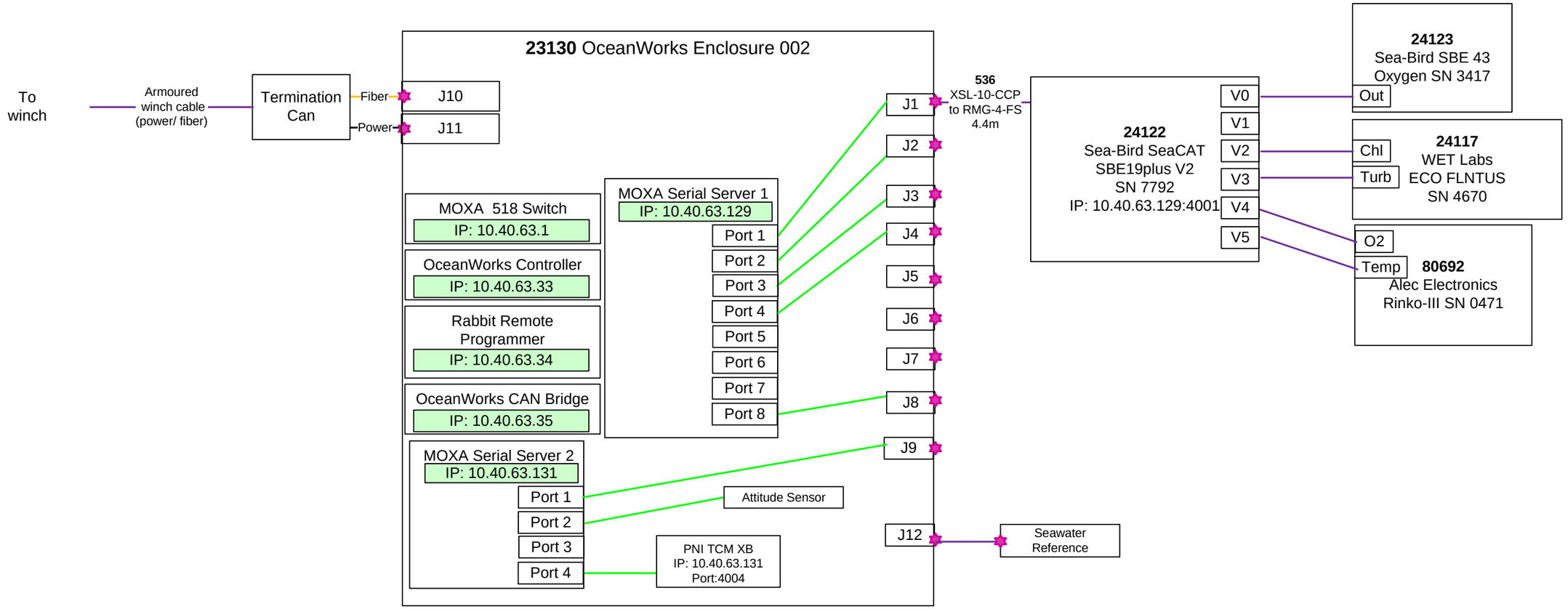
Observatory	VENUS	Location	Buoy Profiler System (BPS) Instrument Package



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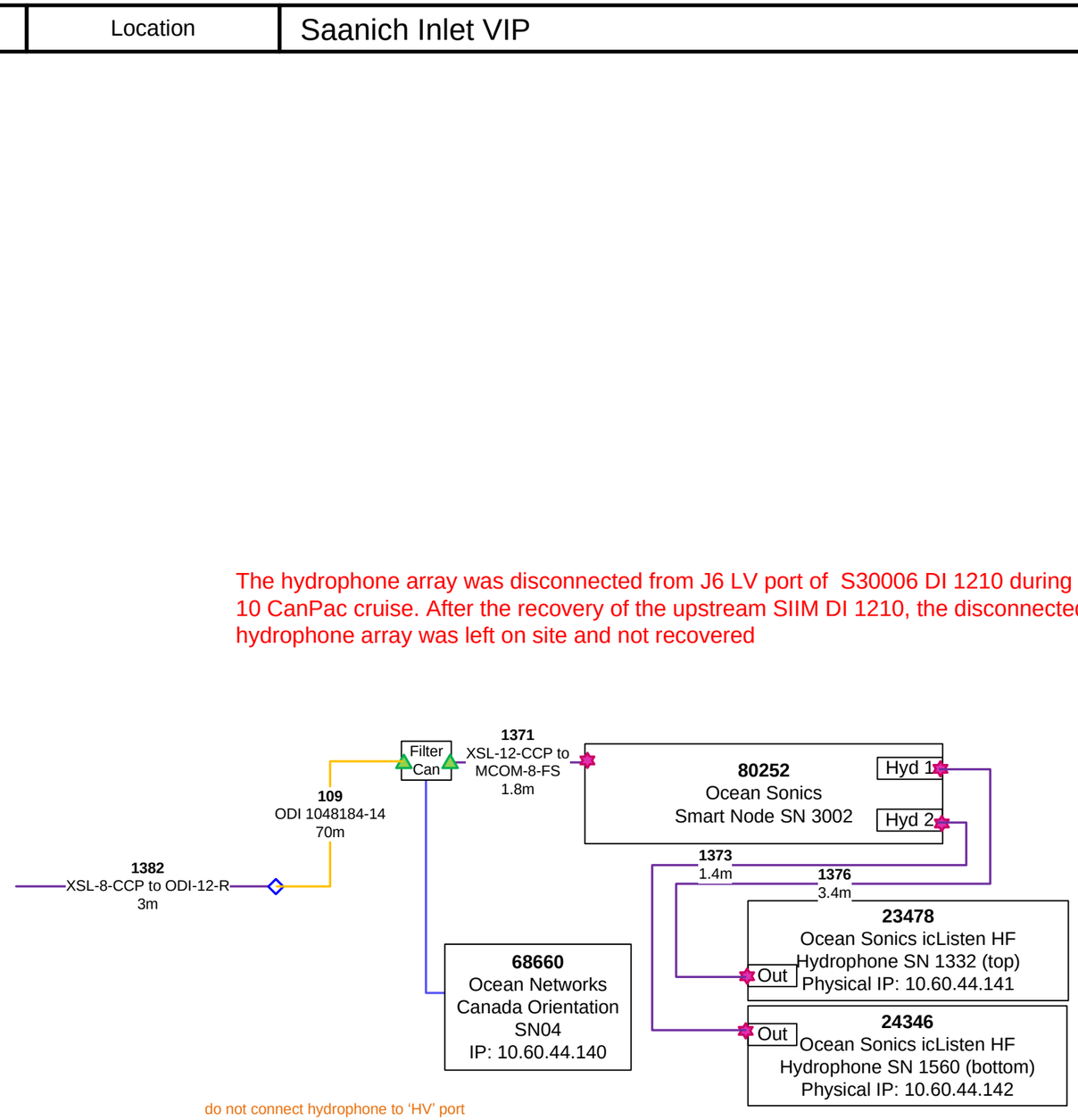
Marine Configuration Diagram

Observatory	VENUS	Location	Saanich Inlet VIP

The hydrophone array was disconnected from J6 LV port of S30006 DI 1210 during 2024-10 CanPac cruise. After the recovery of the upstream SIIM DI 1210, the disconnected hydrophone array was left on site and not recovered



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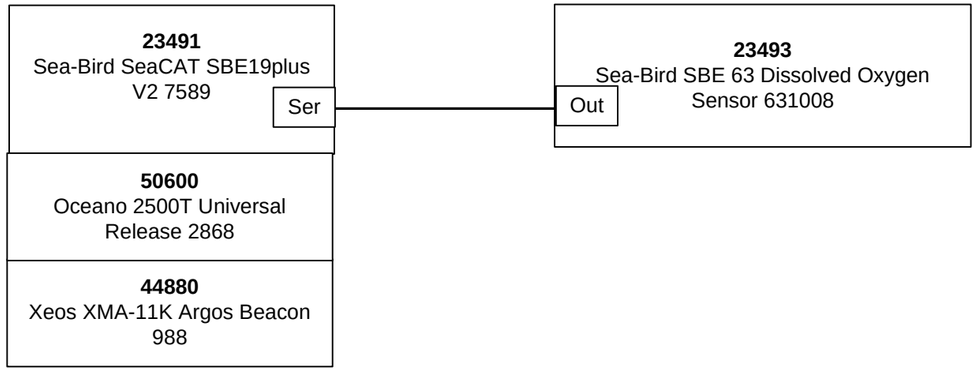
Marine Configuration Diagram

Observatory	VENUS	Location	Autonomous Site - Saanich Inlet Autonomous CTD



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#100-2474 Arbutus Road, Victoria, BC V8N 1V8
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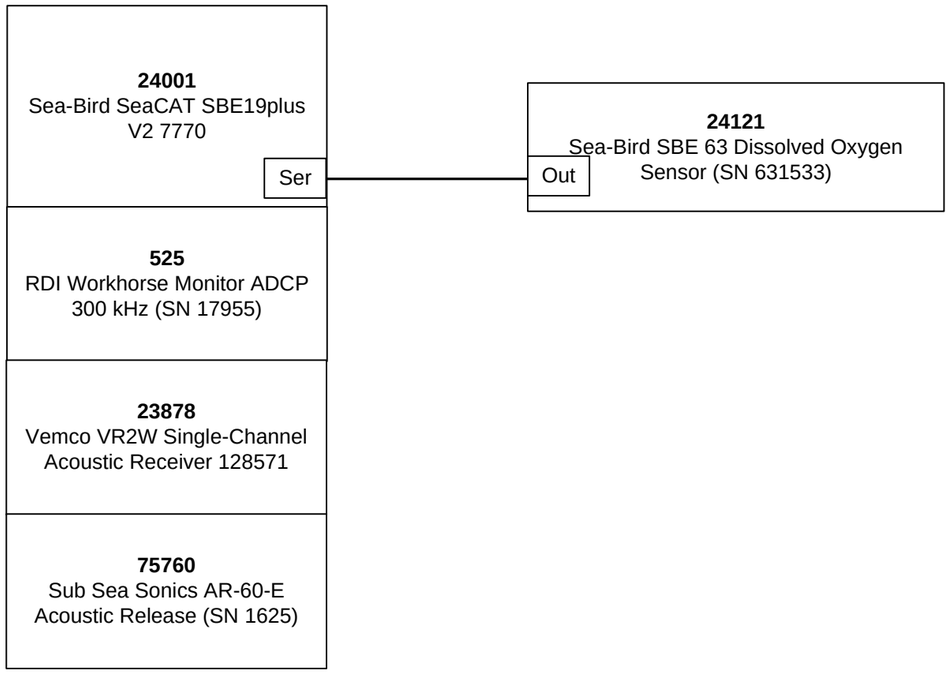
Marine Configuration Diagram

Observatory	VENUS	Location	Autonomous Site - Saanich Inlet SILL (Pyramid Frame)



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Marine Configuration Diagram

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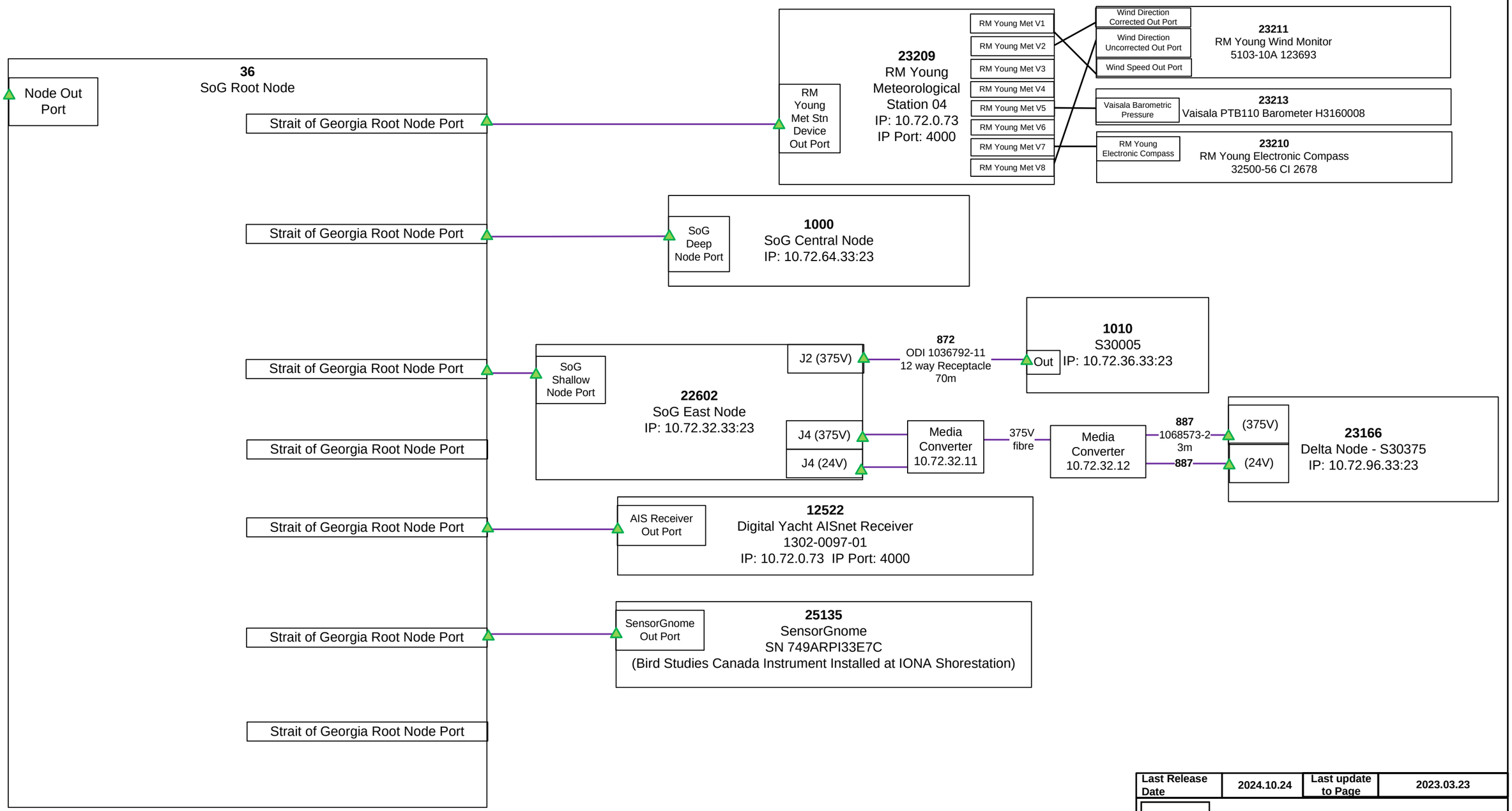
Observatory	VENUS	Location	Strait of Georgia Overview



Last Release Date	2024.10.24	Last update to Page	2023.03.23

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Marine Configuration Diagram

Observatory	VENUS	Location	Strait of Georgia Central Node

J9 – Fibre Out Port
J10 – Seawater Return
J11 – Power f/Shore

1000
SoG Central Node

Fiber wire

Moxa EDS 518A
16-Port Ethernet Switch A
IP: 10.72.64.1

G1
G2
1000BaseSX/LX/LHX/ZX Ethernet Ports

10/100BaseT Ethernet Ports

Port 1 – J1
Port 2 – J2
Port 3 – J3
Port 4 – J4
Port 5 – J5
Port 6 – J6
Port 7 – J7
Port 8 – J8
Port 9 – J4
Port 10 – J3
Port 11
Port 12
Port 13
Port 14
Port 15
Port 16

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

Fiber wire

Copper wire

Moxa EDS 518A
16-Port Ethernet Switch B
IP: 10.72.64.2

G1
G2
1000BaseSX/LX/LHX/ZX Ethernet Ports

10/100BaseT Ethernet Ports

Port 1 – J1
Port 2 – J2
Port 3 – J3
Port 4 – J4
Port 5 – J5
Port 6 – J6
Port 7 – J7
Port 8 – J8
Port 9 – J4
Port 10 – J3
Port 11
Port 12
Port 13
Port 14
Port 15
Port 16

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

1023
SoG Central Node Primary Board Control Computer
(Wolf Computer Board BL2600)
IP: 10.72.64.33 : 23

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10

1024
SoG Central Secondary Board Control Computer
(Wolf Computer Board BL2600)
IP: 10.72.64.34 :23

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10

J1 (375V)
Control Computer Breaker 1

J2 (375V)
Control Computer Breaker 2

J3 (375V)
Control Computer Breaker 3

J4 (375V)
Control Computer Breaker 4

J4 (24V on pins 11/12)
Control Computer Breaker 5

J5 (375V)
Control Computer Breaker 6

J5 (24V on pins 11/12)
Control Computer Breaker 7

J6 (375V)
Control Computer Breaker 8

J7 (375V)
Control Computer Breaker 9

J8 (375 V)
Control Computer Breaker 10

24 V emergency power input on pins 11/12

TBD
1036192-xx
70m

SIIM Out Port

22785
S30008
Controller: 10.72.76.33: 23

Note: we have never used pins 11/12 on an ODI connector (EN-5493)

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Marine Configuration Diagram

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Observatory	VENUS	Location	Strait of Georgia Central Instrument Platform

TBD
1036192-xx
70m

To SoG Central Node J3

22785
S30008

SIIM Out Port

Moxa EDS 408A
8-Port Ethernet Switch
IP: 10.72.76.1

10/100BaseT Ethernet Ports

72,92	Port 1
72	Port 2
72	Port 3
72	Port 4
92	Port 5
72	Port 6
72,92	Port 7
72	Port 8

SIIM
Control Computer
(Wolf Computer Board BL2600)
IP: 10.72.76.33 : 23

J4

Add this IP address to DMAS only

Port 1	
Port 2	
Port 3	
Port 4	
Port 5	
Port 6	
Port 7	
Port 8	
Port 9	
Port 10	

J3

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

4 Port
Serial Server
IP: 10.72.76.129

Port 1

10/100BaseT Ethernet Ports

Serial Port 10001	
Serial Port 10002	
Serial Port 10003	
Serial Port 10004	

J1 Serial Port — **1001** XSL-10-CCP to LPMIL-7-FS 3m → **23097** RDI Workhorse Quartermaster ADCP 150 kHz (SN 17457) IP: 10.72.76.129:10001

J2 Serial Port — **1002** XSL-12-CCP to 12 Way ODI receptacle 3m → R P → **1003** 12 Way ODI to RMG-4-FS 20m → **24120** Sea-Bird SeaCAT SBE19plus V2 7791 IP: 10.72.76.129:10002

Ser	Out — **24125** Sea-Bird SBE 63 Dissolved Oxygen Sensor SN 631524
V0	
V1	ChL / Turb — **23357** WET Labs ECO FLNTUS 3441
V2	
V3	
V4	
V5	

J3 Serial Port

J4 Serial Port — **1004** XSL-10-CCP to MCIL-8-MP 6m → **1301** Nortek Vector Current Meter 4895 (On Tripod) IP: 10.72.76.129:10004

J5 Ethernet Port — **1005** XSL-12-CCP to 12 Way ODI receptacle 3m → R P → **784** 1093189-19 70m → P R → ODI-12-R to XSL-8-CCP 3m **1369** → Filter Can → **1372** XSL-12-CCP to MCOM-8-FS 3m → **80232** Ocean Sonics Smart Node SN 3001

Hyd 1	**1374** 1.4m	Out — **23484** Ocean Sonics icListen HF Hydrophone SN 1353 (bottom) Physical IP: 10.92.80.151
Hyd 2	**1375** 3.4m	Out — **74180** Ocean Sonics icListen HF Hydrophone SN 6326 (top) Physical IP: 10.92.80.152

65980
Ocean Networks Canada Orientation SN02
IP: 10.92.80.150

J6 Ethernet Port (24V)

J6 Ethernet Port (375V)

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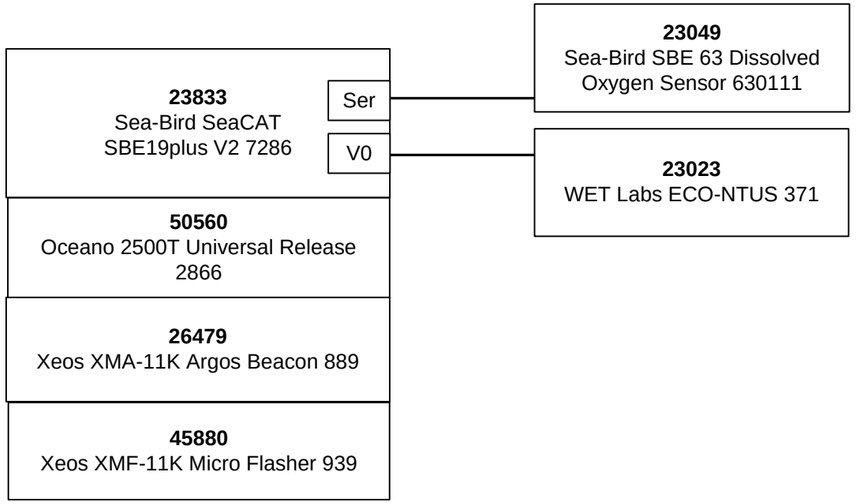
Marine Configuration Diagram

Observatory	VENUS	Location	Autonomous Site - Strait of Georgia Central Autonomous CTD



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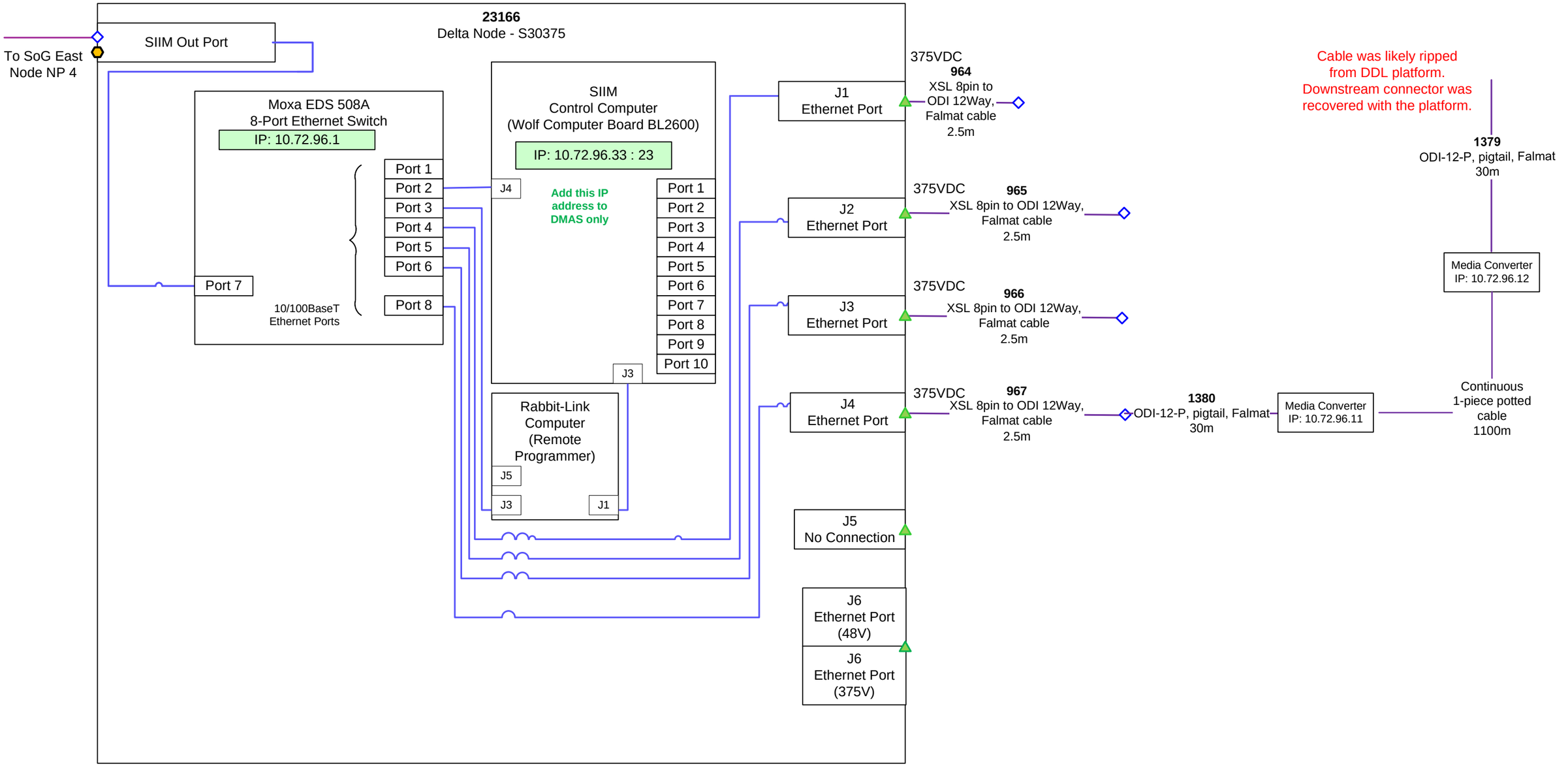
Marine Configuration Diagram

Observatory	VENUS	Location	Strait of Georgia Delta Mini Node



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Marine Configuration Diagram

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Observatory	VENUS	Location	Strait of Georgia East Node

J9 – Fibre Out Port
J10 – Seawater Return
J11 – Power f/Shore

22602
SoG East Node

Fiber wire
Fiber wire
Copper wire

Moxa EDS 518A
16-Port Ethernet Switch A
IP: 10.72.32.1

G1
G2
1000BaseSX/LX/LHX/ZX Ethernet Ports

10/100BaseT Ethernet Ports

Port 1	J1
Port 2	J2
Port 3	J3
Port 4	J4
Port 5	J5
Port 6	J6
Port 7	J7
Port 8	J8
Port 9	J4
Port 10	J3
Port 11	
Port 12	
Port 13	
Port 14	
Port 15	
Port 16	

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

1025
SoG East Node Primary Board
Control Computer
(Wolf Computer Board BL2600)
IP: 10.72.32.33: 23

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10

Moxa EDS 518A
16-Port Ethernet Switch B
IP: 10.72.32.2

G1
G2
1000BaseSX/LX/LHX/ZX Ethernet Ports

10/100BaseT Ethernet Ports

Port 1	J1
Port 2	J2
Port 3	J3
Port 4	J4
Port 5	J5
Port 6	J6
Port 7	J7
Port 8	J8
Port 9	J4
Port 10	J3
Port 11	
Port 12	
Port 13	
Port 14	
Port 15	
Port 16	

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

1026
SoG East Secondary Board
Control Computer
(Wolf Computer Board BL2600)
IP: 10.72.32.34 :23

Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10

375VDC
J1
Control Computer Breaker 1

375VDC
J2
Control Computer Breaker 2
872
ODI 1036792-11
12 way Receptacle
70m
Out
1010
S30005
IP: 10.72.36.33:23

J3
Control Computer Breaker 3
375VDC
J3 Unusable Port - corroded

375VDC
J4 (375V)
Control Computer Breaker 4
887
1068573-2
(375V)
J4 (24V)
Control Computer Breaker 5
887
(24V)
24VDC
23166
Delta Node - S30375
IP: 10.72.96.33:23

J5 (375V)
Control Computer Breaker 6
375VDC
J5 (24V)
Control Computer Breaker 7
24VDC

J6
Control Computer Breaker 8
375VDC
375VDC

J7
Control Computer Breaker 9
375VDC

J8
Control Computer Breaker 10
375VDC
J8 Not usable

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Marine Configuration Diagram

Observatory	VENUS	Location	Strait of Georgia East Instrument Platform

1010
S30005

872 — SIIM Out Port

Moxa EDS 408A
8-Port Ethernet Switch
IP: 10.72.36.1
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
10/100BaseT Ethernet Ports

SIIM
Control Computer
(Wolf Computer Board BL2600)
IP: 10.72.36.33:23
J4
Add this IP address to DMAS only
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10
J3

Rabbit-Link Computer (Remote Programmer)
J5
J3
J1

4 Port Serial Server
IP: 10.72.36.129
Port 1
10/100BaseT Ethernet Ports
Serial Port 10001
Serial Port 10002
Serial Port 10003
Serial Port 10004

J1 Serial Port — Penetrator cable — **65** RDI Workhorse Quartermaster ADCP 150 kHz SN 8580 IP: 10.72.36.129:10001 RS232

J2 Serial Port — **1359** ODI-12Way to XSL-10-CCP 3m — **843** ODI 12-Way to RMG-4-FS 10m — **23607** Sea-Bird SeaCAT SBE19plus V2 SN 6934 IP:10.72.36.129:10002 RS232
Ser
V0
V1
V2
V3
V4
V5
Out — **24129** Sea-Bird SBE 63 Dissolved Oxygen Sensor SN 631534
ChL
Turb — **1304** WET Labs ECO FLNTUSB SN 2473

J3 Serial Port — **1377** XSL-10-CCP to MCIL-6-FS 3m — **79872** ASL AZFP Echosounder 55196 IP: 10.72.36.129:10003 RS422

J4 Serial Port — **1017** XSL-10-CCP to MCIL-8-MP 11m — **22795** Nortek Vector Current Meter 4820 IP: 10.72.36.129:10004 RS232

J5 Ethernet Port — **1360** ODI-12Way to XSL-12-CCP 3m — **854** 1093189-25 70m — P R — **1013** ODI 12-Way to MCIL-8-F 3m — **23655** JASCO AMAR Observer G3 478 Physical IP: 10.92.32.135
Ch1 — **1014** MCIL-8-M to 4x MCIL-8-FS 3m — **43260** JASCO M36-V35-100 Hydrophone E000186
Ch2 — **1014** MCIL-8-M to 4x MCIL-8-FS 3m — **43240** JASCO M36-V35-100 Hydrophone D001022
Ch5 — **1014** MCIL-8-M to 4x MCIL-8-FS 3m — **43241** JASCO M36-V35-100 Hydrophone D001025
Ch6 — **1014** MCIL-8-M to 4x MCIL-8-FS 3m — **43242** JASCO M36-V35-100 Hydrophone E000029

J6 Ethernet Port (24V)
J6 Ethernet Port (375V)
1425 ODI-12-Plug (platform) to DIL-8-FS (Cellula modem), Falmat-10 10m
In — **86212** Cellula Optical Modem (LX23020063) IP:10.72.36.80:0 — Out

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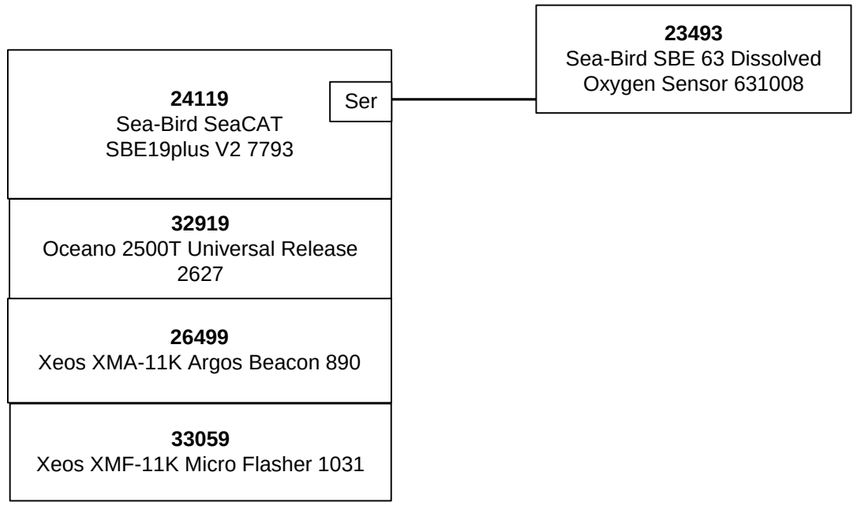
Tel. (250) 472-5400
Fax (250) 472-5370

Marine Configuration Diagram

Updated by	Bahar Torabi	

Observatory	VENUS	Location	Autonomous Site - Strait of Georgia East Autonomous CTD



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Marine Configuration Diagram

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