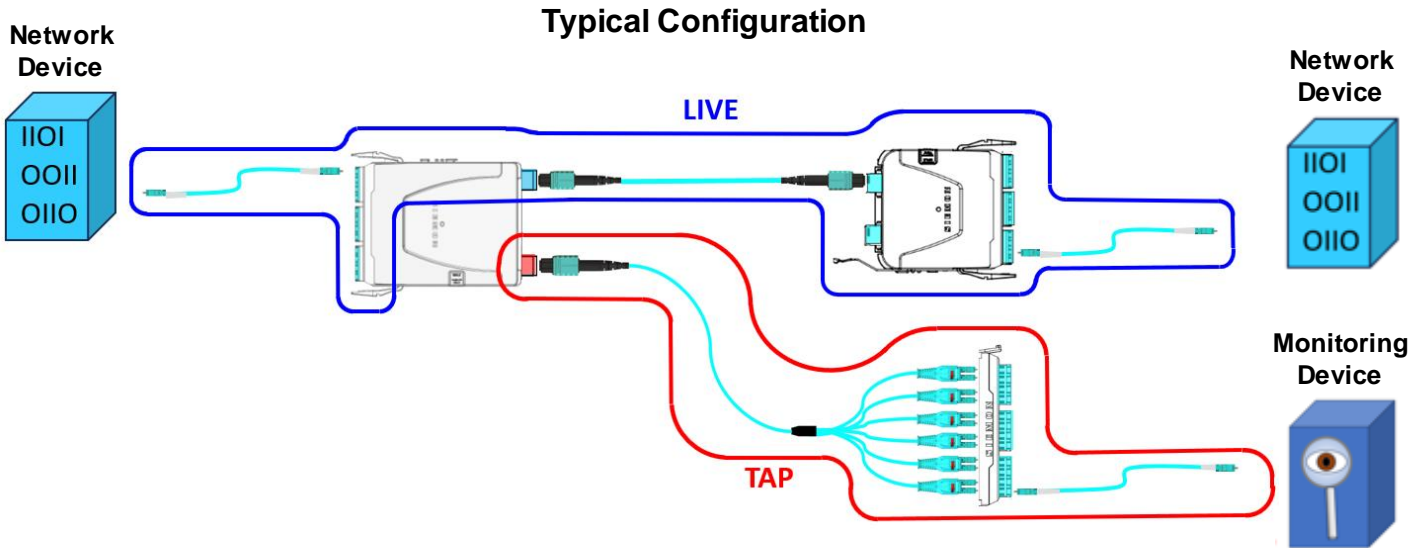


LightVerse TAP Module Instructions

LightVerse MTP-to-LC TAP Module

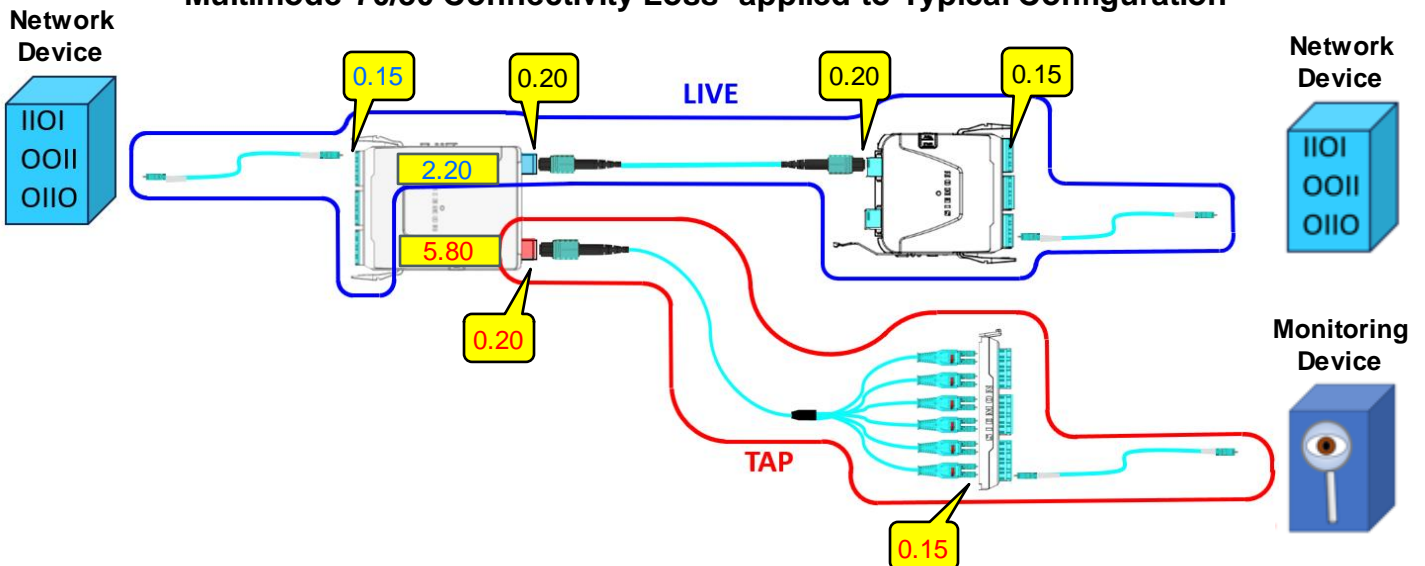


Connectivity Loss

Component Loss (max)	Multimode (OM4)	Singlemode
LC	0.15	0.20
MTP	0.20	0.30
Splitter 50/50 (Live/Tap)*	3.50	3.50
Splitter 70/30 (Live/Tap)	2.20/5.80	2.10/5.80

* Includes BiDi

Multimode 70/30 Connectivity Loss* applied to Typical Configuration



* Loss shown does not reflect fiber loss derived from length of fiber which should be included in loss budget calculations. For information on sample loss budget calculations, see Simon Optical Network Tapping Tech Brief.

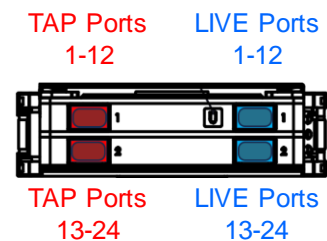
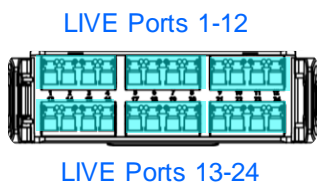
LightVerse TAP Module Instructions

LightVerse MTP-to-LC TAP Module

Fiber Mapping*

LC Port #	Direction	Ratio	Direction	Ratio	Direction	MTP Port	MTP Fiber Position
1	←	70%	←	100%	←	LIVE-1	1
			→	30%	→	TAP-1	1
2	→	100%	→	70%	→	LIVE-1	12
			→	30%	→	TAP-1	12
3	←	70%	←	100%	←	LIVE-1	2
			→	30%	→	TAP-1	2
4	→	100%	→	70%	→	LIVE-1	11
			→	30%	→	TAP-1	11
5	←	70%	←	100%	←	LIVE-1	3
			→	30%	→	TAP-1	3
6	→	100%	→	70%	→	LIVE-1	10
			→	30%	→	TAP-1	10
7	←	70%	←	100%	←	LIVE-1	4
			→	30%	→	TAP-1	4
8	→	100%	→	70%	→	LIVE-1	9
			→	30%	→	TAP-1	9
9	←	70%	←	100%	←	LIVE-1	5
			→	30%	→	TAP-1	5
10	→	100%	→	70%	→	LIVE-1	8
			→	30%	→	TAP-1	8
11	←	70%	←	100%	←	LIVE-1	6
			→	30%	→	TAP-1	6
12	→	100%	→	70%	→	LIVE-1	7
			→	30%	→	TAP-1	7

* Repeats for LC Ports 13-24

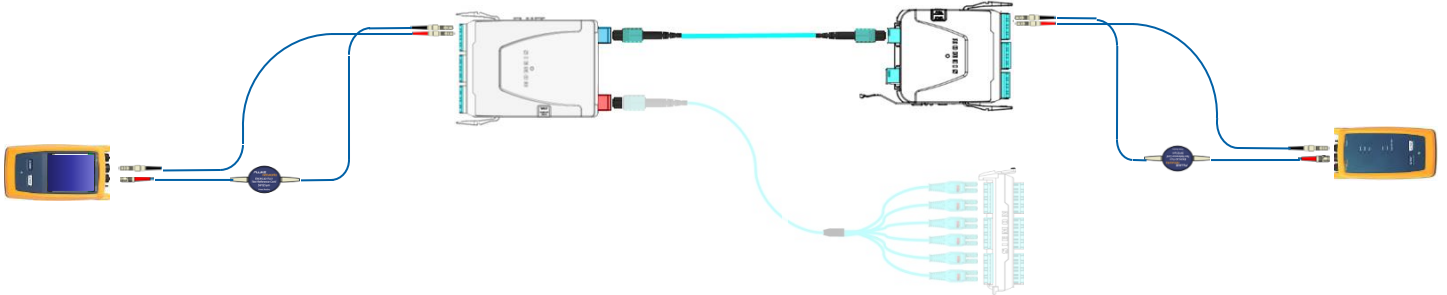


The LIVE ports carry data and represent a typical structured cabling system. The LIVE ports are Aqua for Multimode and Blue (LC)/Black (MTP) for Singlemode.

TAP ports are used as passive monitoring of the system and are represented as red MTP ports.

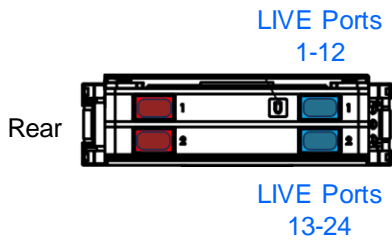
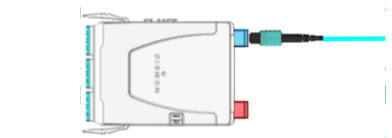
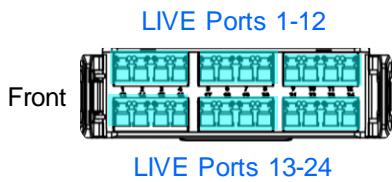
LightVerse TAP Module Instructions

LightVerse MTP-to-LC TAP Module LIVE Testing

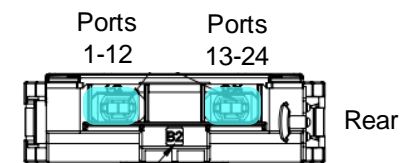
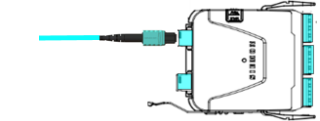
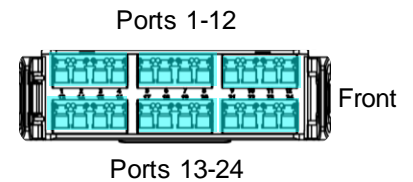


LIVE segment is tested the same as a conventional MTP-to-LC Module system
Base-12 example shown for illustrative purposes

Channel Mapping

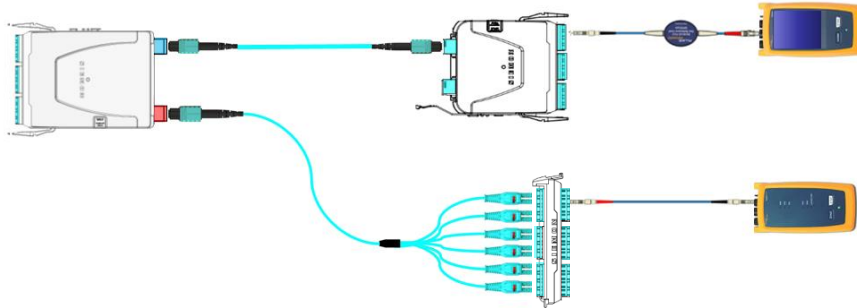


TAP Module LC Port #	Standard Module LC Port #
2	1
1	2
4	3
3	4
6	5
5	6
8	7
7	8
10	9
9	10
12	11
11	12
14	13
13	14
16	15
15	16
18	17
17	18
20	19
19	20
22	21
21	22
24	23
23	24



LightVerse TAP Module Instructions

LightVerse MTP-to-LC TAP Module TAP Testing (Far End)

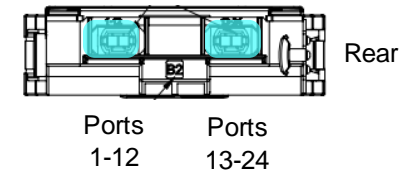
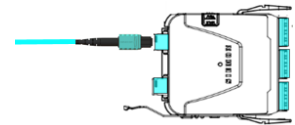
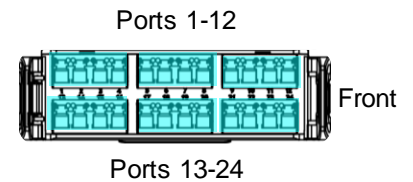
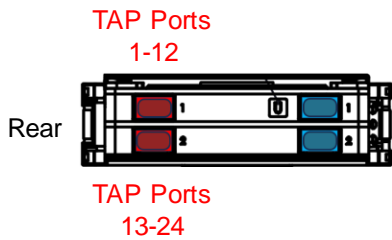
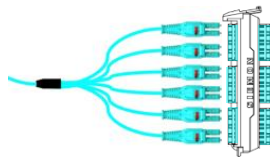
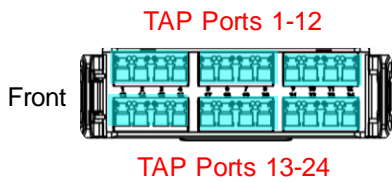


TAP segment should be tested in simplex mode
Base-12 example shown for illustrative purposes

Channel Port Mapping*

Harness LC Leg #	Standard Module LC Port #
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12

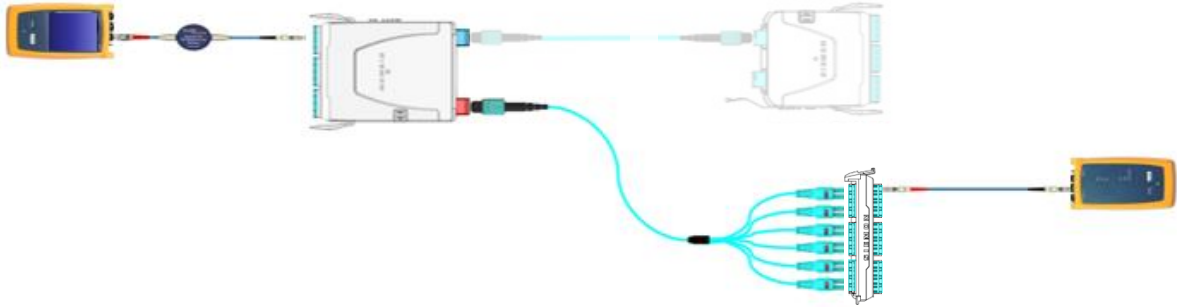
* Repeat for Ports 13-24



Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

LightVerse TAP Module Instructions

LightVerse MTP-to-LC TAP Module TAP Testing (Near End)

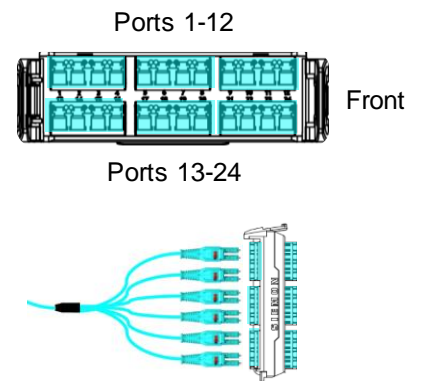
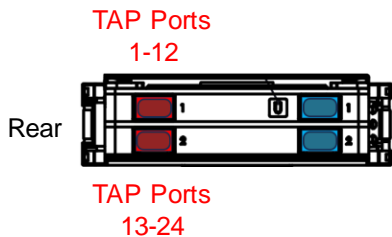
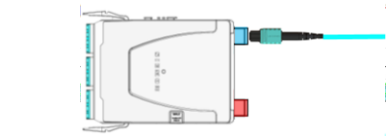
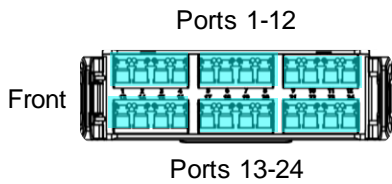


TAP segment should be tested in simplex mode
Base-12 example shown for illustrative purposes

Channel Port Mapping*

TAP Module LC Port #	Harness LC Leg #
1	2
2	1
3	4
4	3
5	6
6	5
7	8
8	7
9	10
10	9
11	12
12	11

* Repeat for Ports 13-24

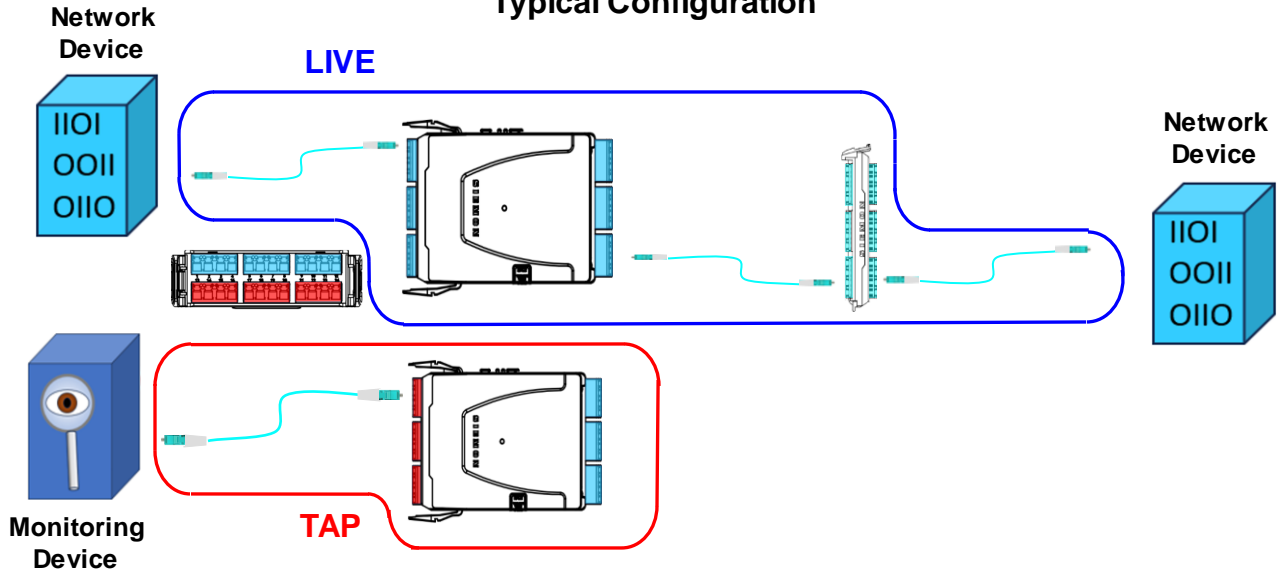


Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

LightVerse TAP Module Instructions

LightVerse LC-to-LC TAP Module

Typical Configuration

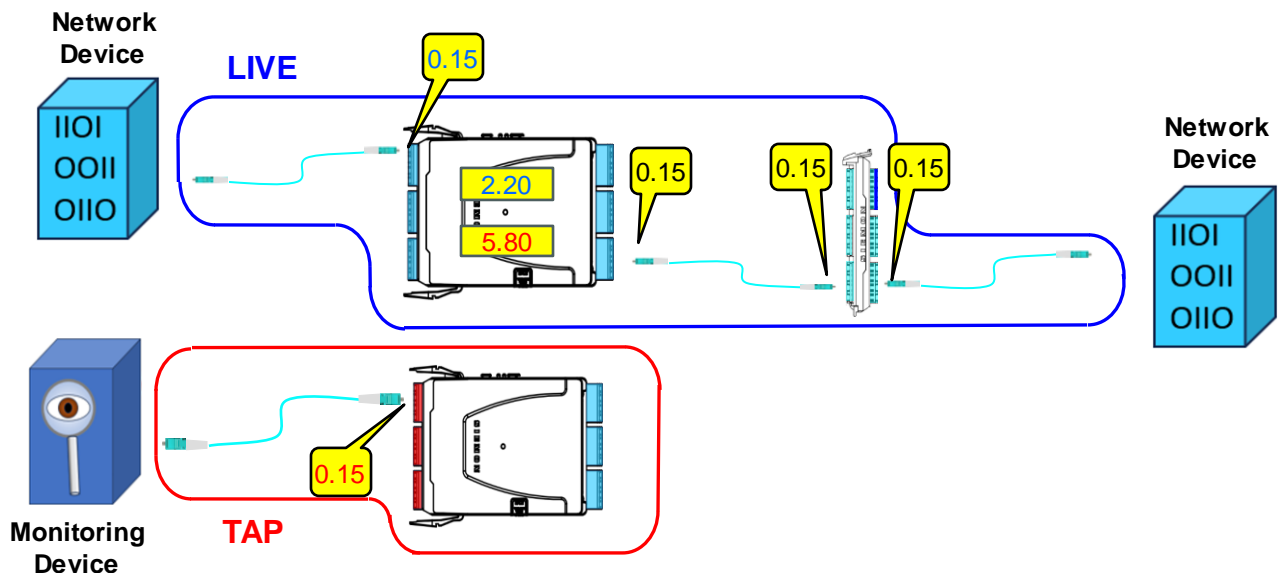


Connectivity Loss

Component Loss (max)	Multimode (OM4)	Singlemode
LC	0.15	0.20
MTP	0.20	0.30
Splitter 50/50 (Live/Tap)*	3.50	3.50
Splitter 70/30 (Live/Tap)	2.20/5.80	2.10/5.80

* Includes BiDi

Multimode 70/30 Connectivity Loss* applied to Typical Configuration



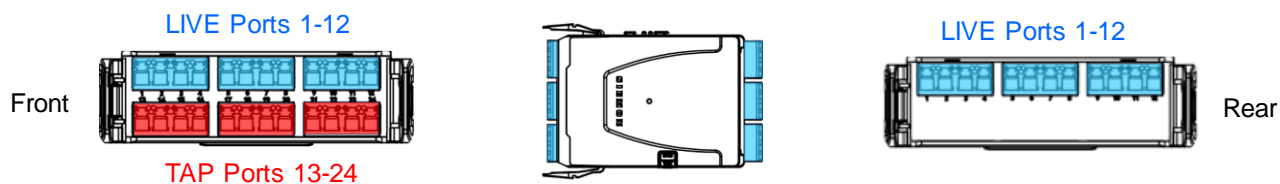
* Loss shown does not reflect fiber loss derived from length of fiber which should be included in loss budget calculations. For information on sample loss budget calculations, see Simon Optical Network Tapping Tech Brief.

LightVerse TAP Module Instructions

LightVerse LC-to-LC TAP Module

Fiber Mapping

LC (Front) Port #	Direction	Ratio	Direction	Ratio	Direction	Port Type	LC (Back) Port #
1	←	70%	←	100%	←	LIVE	2
1	←	30%	←				
2	→	100%	→	70%	→	LIVE	1
2	←	30%	←				
3	←	70%	←	100%	←	LIVE	4
3	←	30%	←				
4	→	100%	→	70%	→	LIVE	3
4	←	30%	←				
5	←	70%	←	100%	←	LIVE	6
5	←	30%	←				
6	→	100%	→	70%	→	LIVE	5
7	←	30%	←				
7	←	70%	←	100%	←	LIVE	8
7	←	30%	←				
8	→	100%	→	70%	→	LIVE	7
8	←	30%	←				
9	←	70%	←	100%	←	LIVE	10
9	←	30%	←				
10	→	100%	→	70%	→	LIVE	9
10	←	30%	←				
11	←	70%	←	100%	←	LIVE	12
11	←	30%	←				
12	→	100%	→	70%	→	LIVE	11
12	←	30%	←				

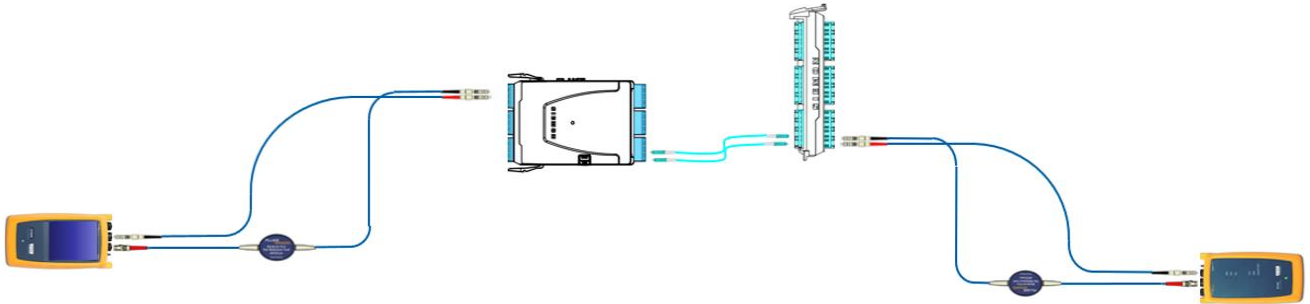


The LIVE ports carry data and represent a typical structured cabling system. The LIVE ports are Aqua for Multimode and Blue for Singlemode.

TAP ports are used as passive monitoring of the system and are represented as red ports.

LightVerse TAP Module Instructions

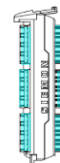
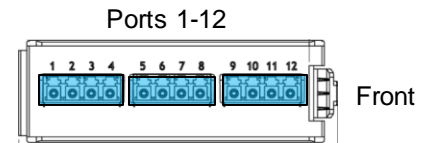
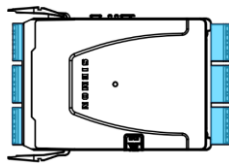
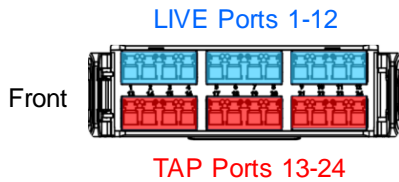
LightVerse LC-to-LC TAP Module LIVE Testing



LIVE segment is tested the same as a conventional LC-to-LC system

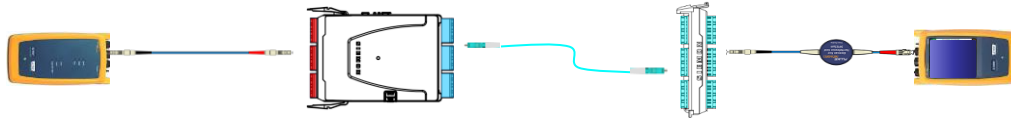
Channel Mapping

Harness LC Leg #	Standard Module LC Port #
1	2
2	1
3	4
4	3
5	6
6	5
7	8
8	7
9	10
10	9
11	12
12	11



LightVerse TAP Module Instructions

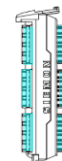
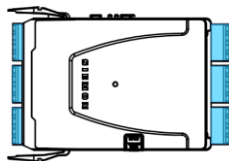
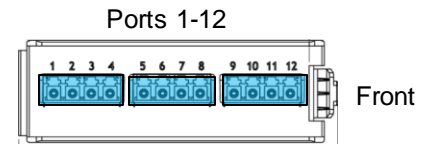
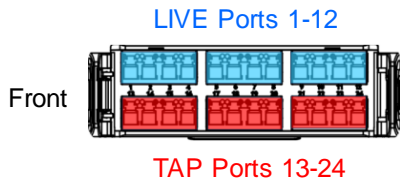
LightVerse LC-to-LC TAP Module TAP Testing (Far End)



TAP segment should be tested in simplex mode

Channel Mapping

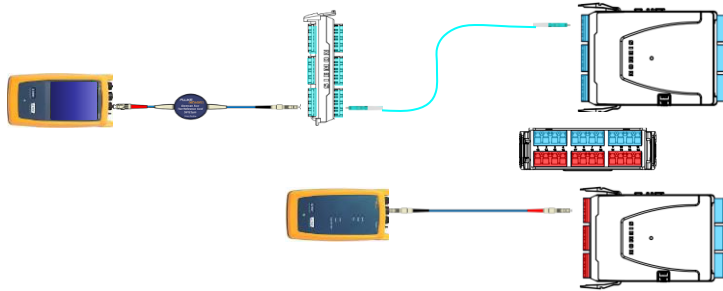
TAP LC Port Front	LC Adapter Plate Front
1	1
3	3
5	5
7	7
9	9
11	11



Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

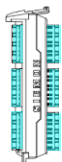
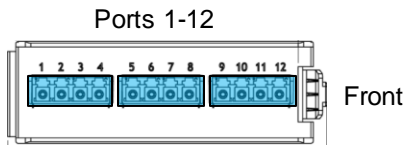
LightVerse TAP Module Instructions

LightVerse LC-to-LC TAP Module TAP Testing (Near End)

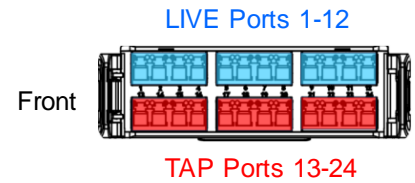


TAP segment should be tested in simplex mode

Channel Mapping



LC Live Port Front	LC TAP Port Front
2	2
4	4
6	6
8	8
10	10
12	12

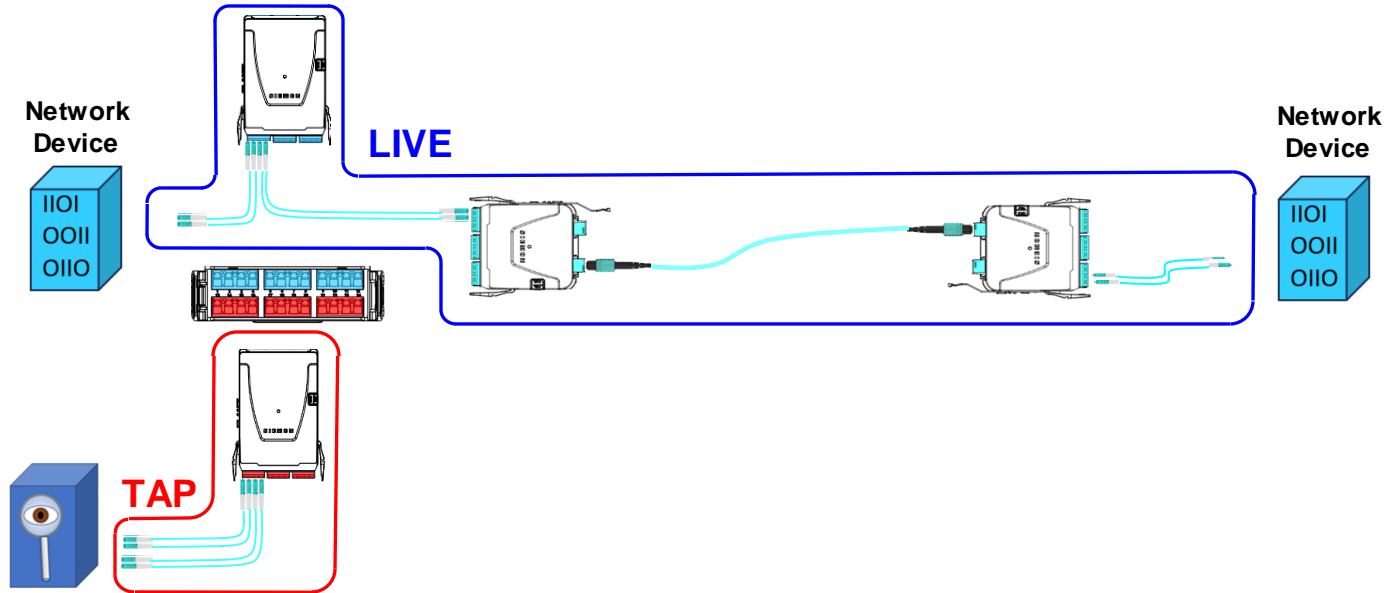


Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

LightVerse TAP Module Instructions

LightVerse LC-to-LC BiDi TAP Module

Typical Configuration

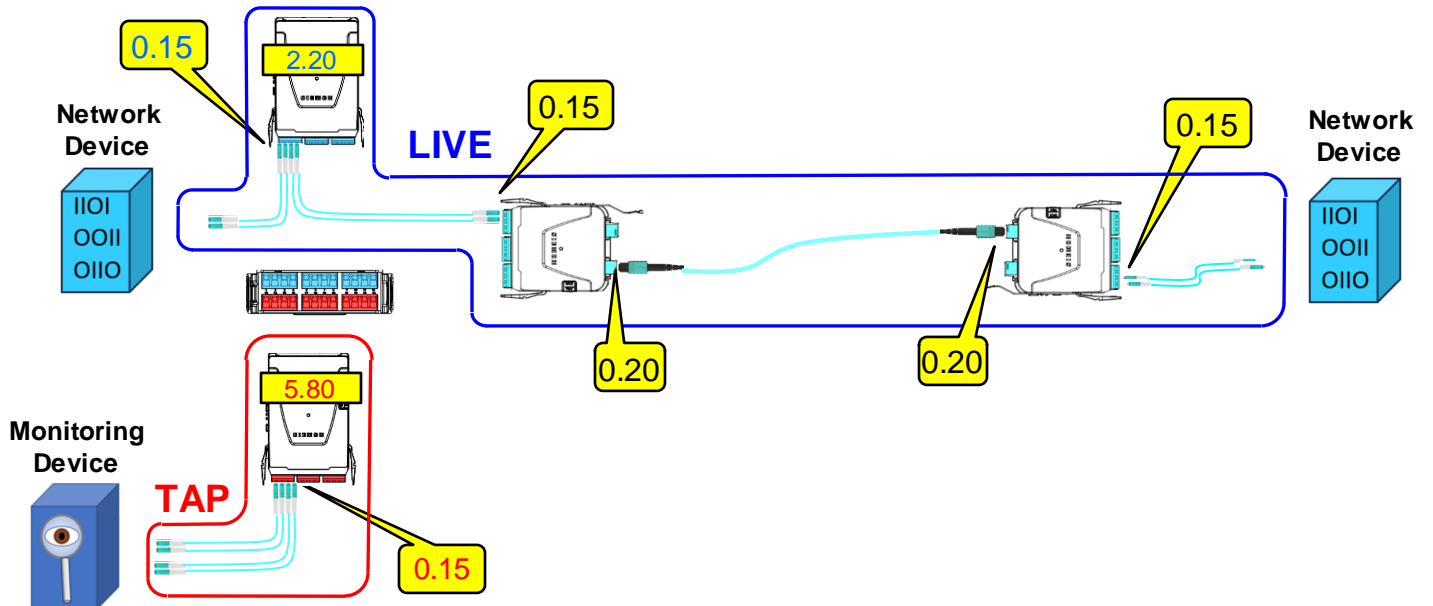


Connectivity Loss

Component Loss (max)	Multimode (OM4)	Singlemode
LC	0.15	0.20
MTP	0.20	0.30
Splitter 50/50 (Live/Tap)*	3.50	3.50
Splitter 70/30 (Live/Tap)	2.20/5.80	2.10/5.80

* Includes BiDi

Multimode 50/50 Connectivity Loss* applied to Typical Configuration



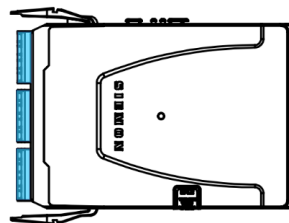
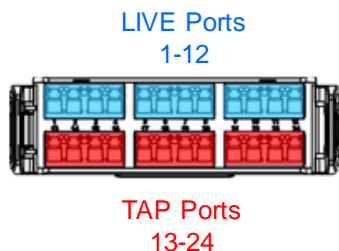
* Loss shown does not reflect fiber loss derived from length of fiber which should be included in loss budget calculations. For information on sample loss budget calculations, see Siemon Optical Network Tapping Tech Brief.

LightVerse TAP Module Instructions

LightVerse LC-to-LC BiDi TAP Module

Fiber Mapping

LC (Front) Port #	Direction	Ratio	Direction	Ratio	Direction	Port Type	LC (Front) Port #
1	→	100%	→	70%	→	LIVE	4
16	←	30%	←				
4	→	100%	→	70%	→	LIVE	1
13	←	30%	←				
3	←	100%	←	70%	←	LIVE	2
14	←	30%	←				
2	←	100%	←	70%	←	LIVE	3
15	←	30%	←				
5	→	100%	→	70%	→	LIVE	8
20	←	30%	←				
8	→	100%	→	70%	→	LIVE	5
17	←	30%	←				
7	→	100%	→	70%	→	LIVE	6
18	←	30%	←				
6	→	100%	→	70%	→	LIVE	7
19	←	30%	←				
9	→	100%	→	70%	→	LIVE	12
24	←	30%	←				
12	→	100%	→	70%	→	LIVE	9
21	←	30%	←				
11	→	100%	→	70%	→	LIVE	10
22	←	30%	←				
10	→	100%	→	70%	→	LIVE	11
23	←	30%	←				



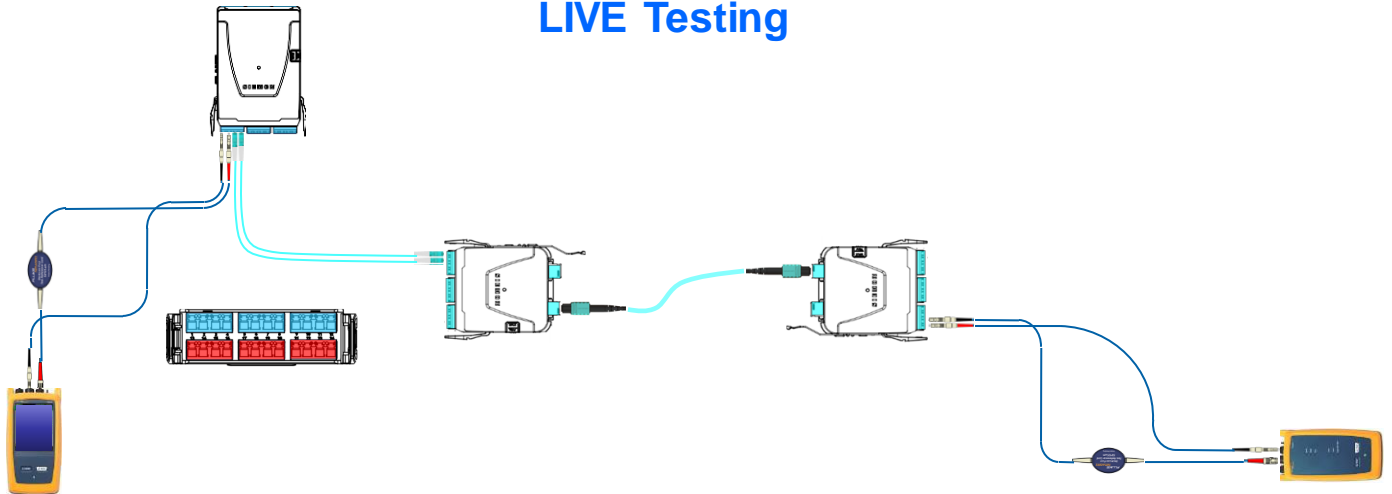
The LIVE ports carry data and represent a typical structured cabling system. The LIVE ports are Aqua for Multimode and Blue for Singlemode.

TAP ports are used as passive monitoring of the system and are represented as red ports.

LightVerse TAP Module Instructions

LightVerse LC-to-LC BiDi TAP Module

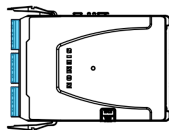
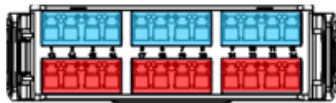
LIVE Testing



LIVE segment is tested the same as a conventional LC-to-LC Module system

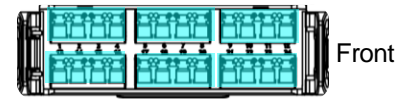
Channel Mapping

LIVE Ports
1-12

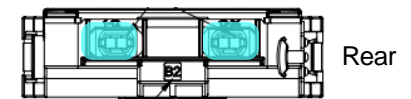
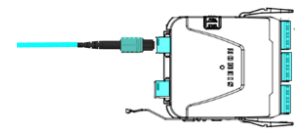


TAP Module Live LC Port #	TAP Module Live LC Port #
1	4
3	2
5	8
7	6
9	12
11	10
4	1
2	3
8	5
6	7
12	9
10	11

Ports 1-12



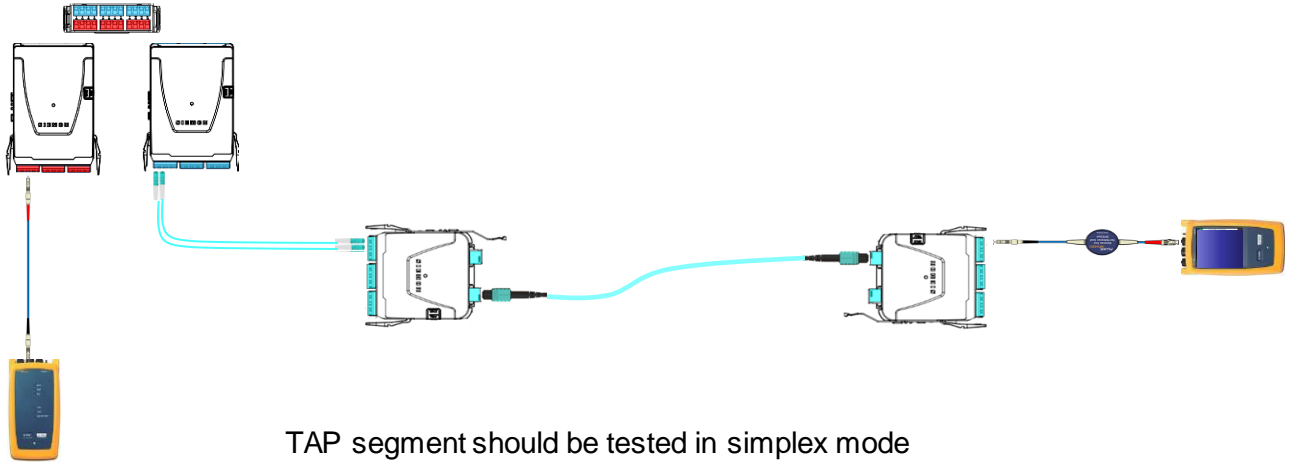
Ports 13-24



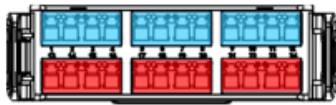
Ports 1-12 Ports 13-24

LightVerse TAP Module Instructions

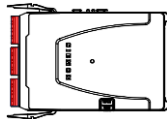
LightVerse LC-to-LC BiDi TAP Module TAP Testing (Far End)



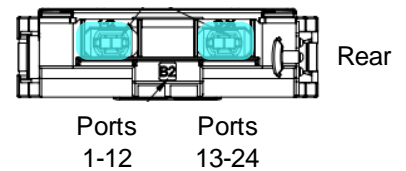
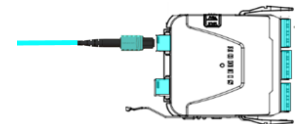
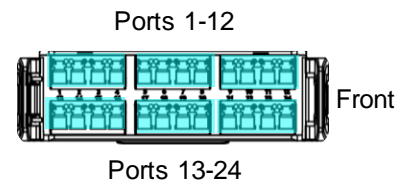
Channel Mapping



TAP Ports
13-24



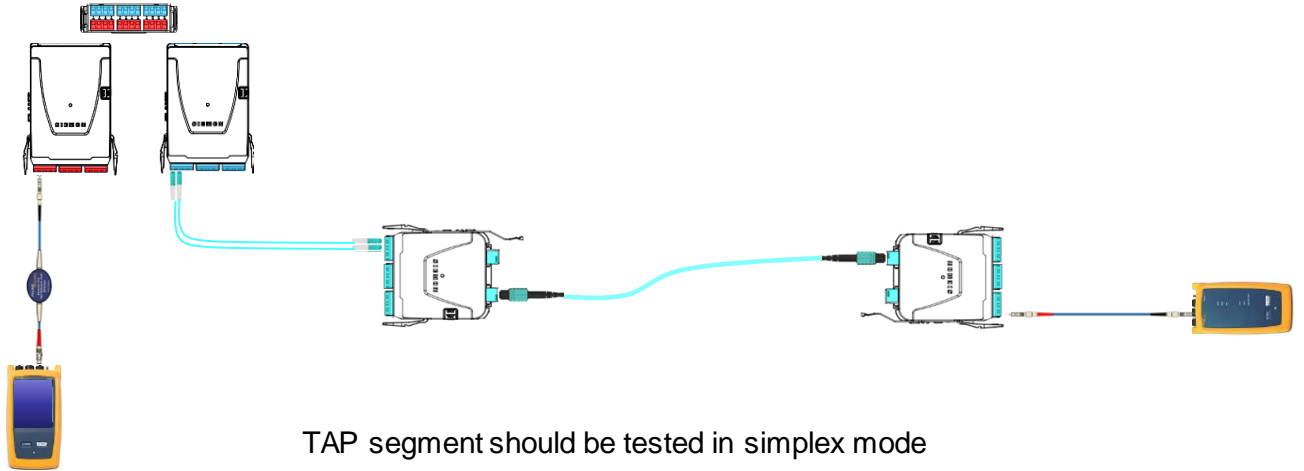
TAP Module LC Port #	Live LC Port
13	1
15	3
17	5
19	7
21	9
23	11
14	2
16	4
18	6
20	8
22	10
24	12



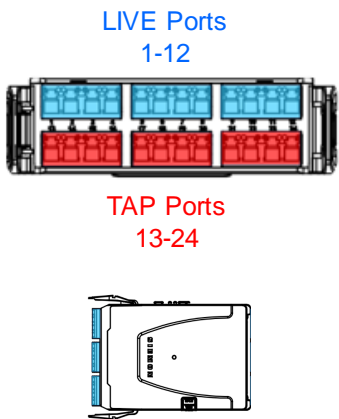
Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

LightVerse TAP Module Instructions

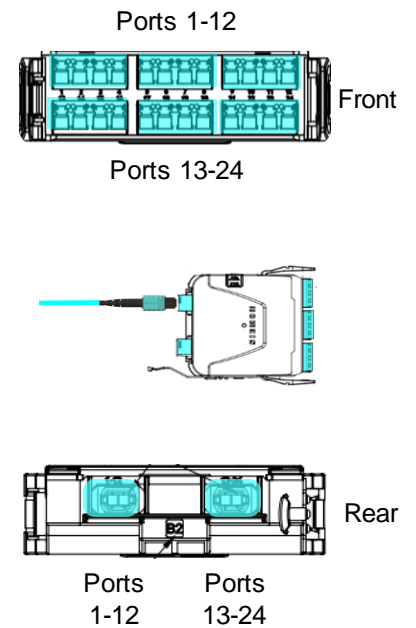
LightVerse LC-to-LC BiDi TAP Module TAP Testing (Near End)



Channel Mapping



TAP Module LC Port #	Live LC Port
13	1
15	3
17	5
19	7
21	9
23	11
14	2
16	4
18	6
20	8
22	10
24	12

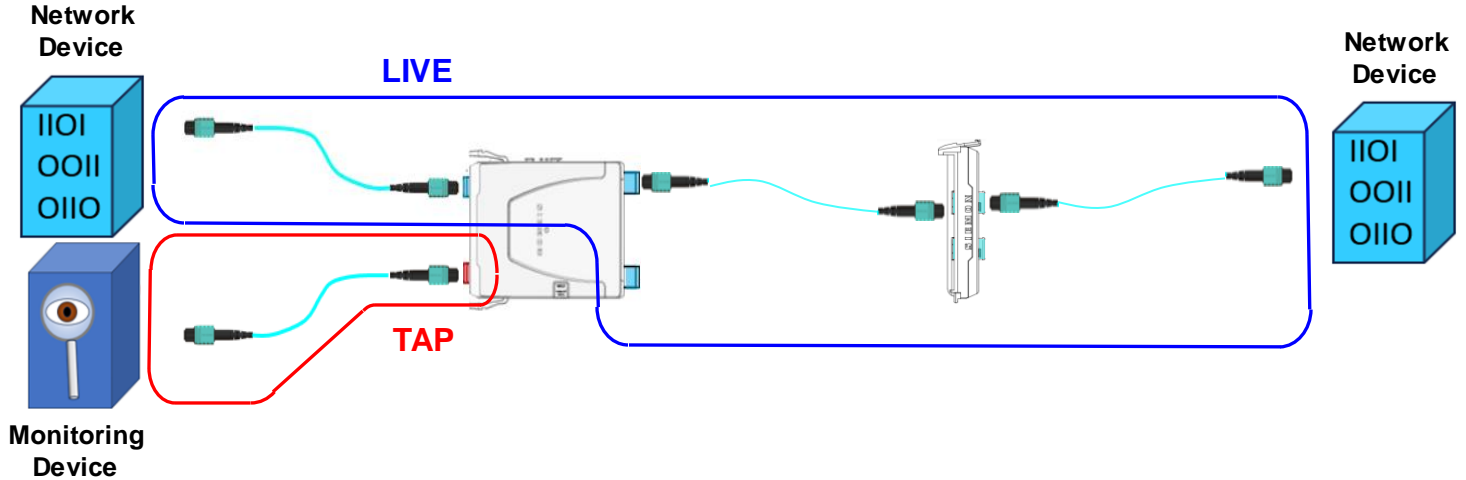


Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

LightVerse TAP Module Instructions

LightVerse MTP-to-MTP TAP Module

Typical Configuration

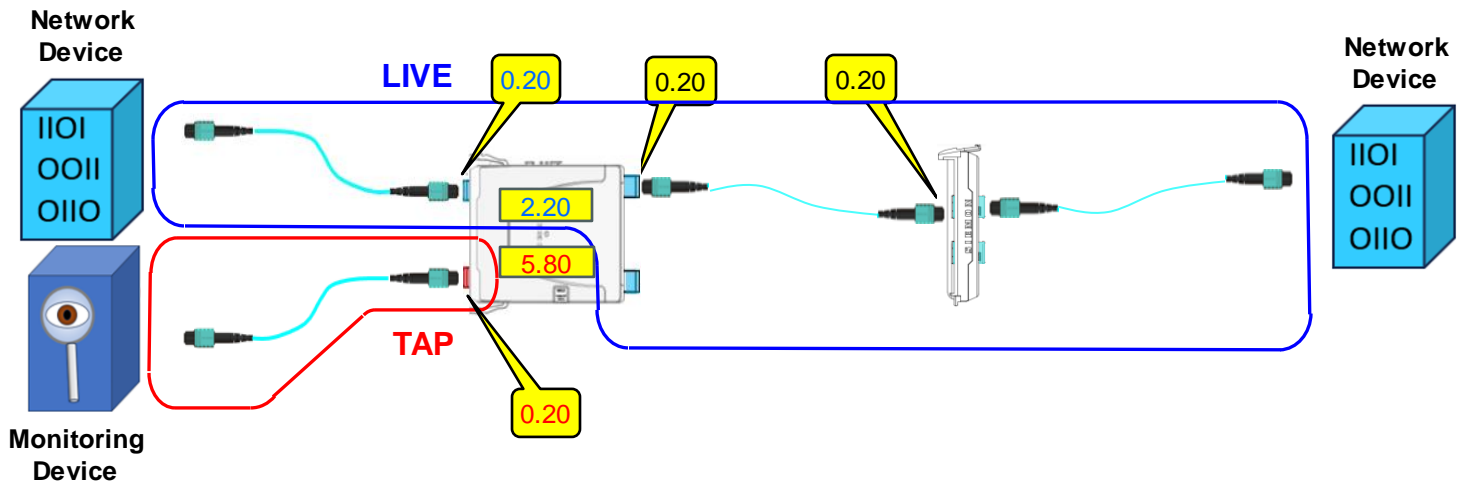


Connectivity Loss

Component Loss (max)	Multimode (OM4)	Singlemode
LC	0.15	0.20
MTP	0.20	0.30
Splitter 50/50 (Live/Tap)*	3.50	3.50
Splitter 70/30 (Live/Tap)	2.20/5.80	2.10/5.80

* Includes BiDi

Multimode 70/30 Connectivity Loss* applied to Typical Configuration



* Loss shown does not reflect fiber loss derived from length of fiber which should be included in loss budget calculations. For information on sample loss budget calculations, see Simon Optical Network Tapping Tech Brief.

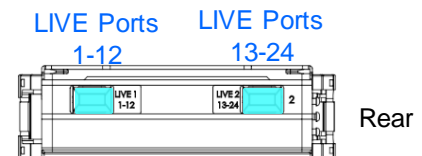
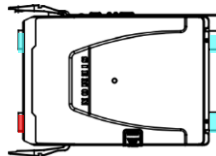
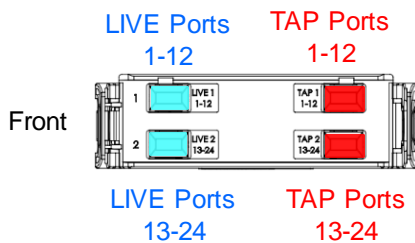
LightVerse TAP Module Instructions

LightVerse MTP-to-MTP TAP Module

Fiber Mapping*

MTP (Front)	Port Type	Direction	Ratio	Direction	Ratio	Direction	Port Type	MTP (Rear)
12	LIVE	←	70%	←	100%	←	LIVE 1	1
12	TAP	←	30%	←				
11	LIVE	←	100%	←	70%	←	LIVE 1	2
11	TAP	←	30%	←				
10	LIVE	←	70%	←	100%	←	LIVE 1	3
10	TAP	←	30%	←				
9	LIVE	←	100%	←	70%	←	LIVE 1	4
9	TAP	←	30%	←				
8	LIVE	←	70%	←	100%	←	LIVE 1	5
8	TAP	←	30%	←				
7	LIVE	←	100%	←	70%	←	LIVE 1	6
7	TAP	←	30%	←				
6	LIVE	→	70%	→	100%	→	LIVE 1	7
6	TAP	←	30%	←				
5	LIVE	→	100%	→	70%	→	LIVE 1	8
5	TAP	←	30%	←				
4	LIVE	→	70%	→	100%	→	LIVE 1	19
4	TAP	←	30%	←				
3	LIVE	→	100%	→	70%	→	LIVE 1	10
3	TAP	←	30%	←				
2	LIVE	→	70%	←	100%	→	LIVE 1	11
2	TAP	←	30%	←				
1	LIVE	→	100%	→	70%	→	LIVE 1	12
1	TAP	←	30%	←				

* Repeats for LC Ports 13-24

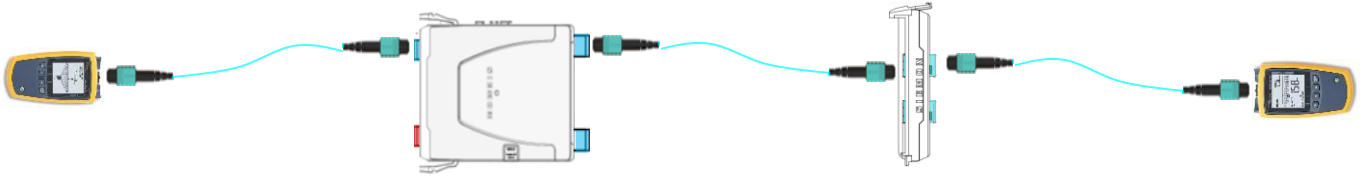


The LIVE ports carry data and represent a typical structured cabling system. The LIVE ports are Aqua for Multimode and Black for Singlemode.

TAP ports are used as passive monitoring of the system and are represented as red ports.

LightVerse TAP Module Instructions

LightVerse MTP-to-MTP TAP Module LIVE Testing

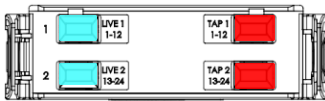


LIVE segment is tested the same as a conventional MTP system

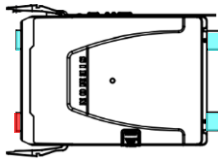
Channel Mapping

TAP Module LIVE Fiber #	TAP Module LIVE Port #	MTP Adapter Plate Port #	MTP Adapter Fiber #
12	1	1	1
11	1	1	2
10	1	1	3
9	1	1	4
8	1	1	5
7	1	1	6
6	1	1	7
5	1	1	8
4	1	1	9
3	1	1	10
2	1	1	11
1	1	1	12
24	2	2	1
23	2	2	2
22	2	2	3
21	2	2	4
20	2	2	5
19	2	2	6
18	2	2	7
17	2	2	8
16	2	2	9
15	2	2	10
14	2	2	11
13	2	2	12

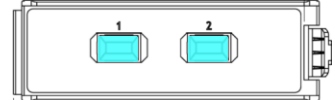
LIVE Port 1
Fibers 1-12



LIVE Port 2
Fibers 13-24



Port 1
Fibers 1-12

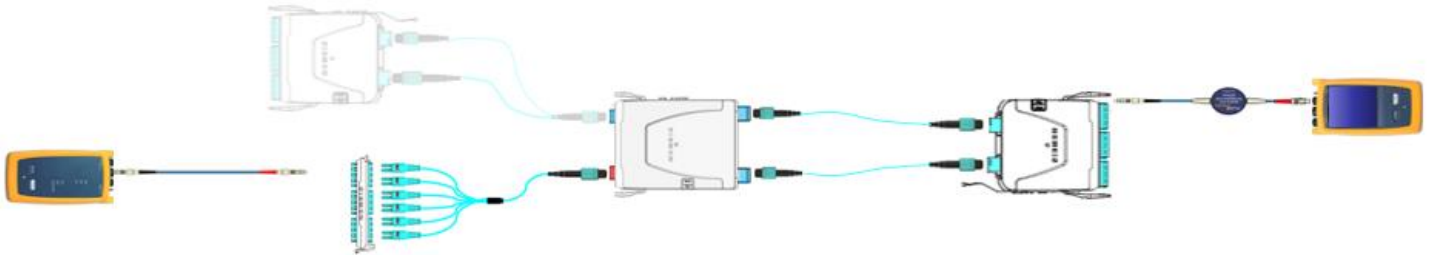


Front



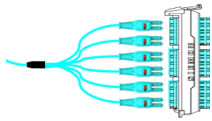
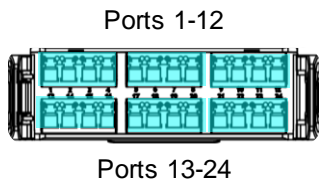
LightVerse TAP Module Instructions

LightVerse MTP-to-MTP TAP Module TAP Testing (Far End)

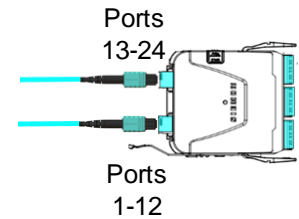
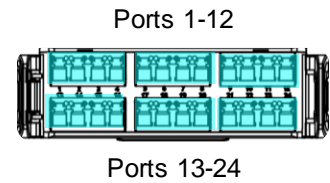


TAP segment should be tested in simplex mode

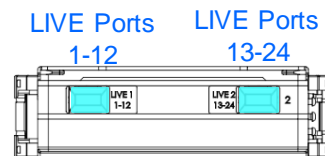
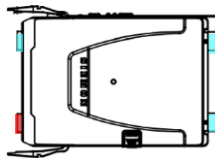
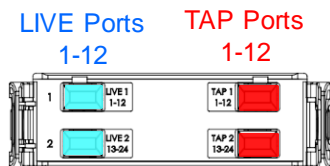
Channel Mapping*



TAP Module LC Port #	Harness LC Leg #
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12



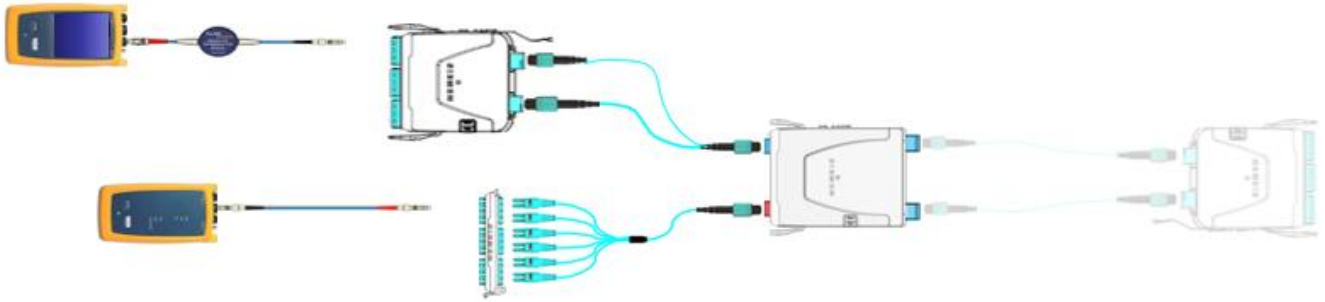
* Repeat for Ports 13-24



Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.

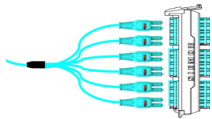
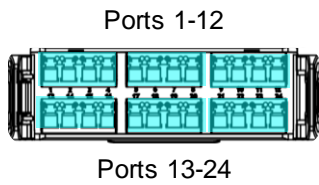
LightVerse TAP Module Instructions

LightVerse MTP-to-MTP TAP Module TAP Testing (Near End)

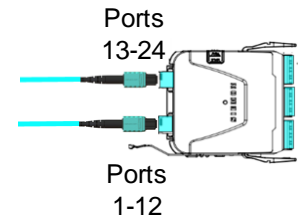
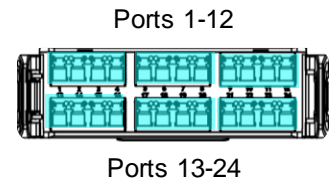


TAP segment should be tested in simplex mode

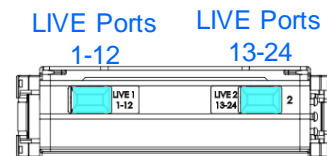
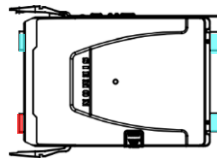
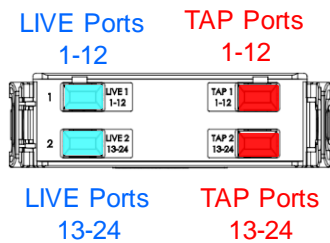
Channel Mapping*



Harness LC Leg #	Standard Module LC Port #
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12



* Repeat for Ports 13-24



Note: While TAP testing guidance is provided, only LIVE link testing is required for warranty. TAP port testing is not required but may be performed for diagnostic purposes.