



OSMINE Layout Rules

G.1 OSMINE Layout Rules

In this appendix, “OPT-BST” refers to the OPT-BST, OPT-BST-E, OPT-BST-L cards, and to the OPT-AMP-L and OPT-AMP-17-C cards when they are provisioned in OPT-LINE (optical booster) mode. “OPT-PRE” refers to the OPT-PRE card and to the OPT-AMP-L and OPT-AMP-17-C cards provisioned in OPT-PRE (preamplifier) mode.

G.1.1 OSMINE Layout Rules for Software Release 9.2.1

[Table G-1](#) lists the OSMINE layout rules for various configurations and their card placements for Software Release 9.2.1.

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|------------------------------|---|---|
| Hub node 32 channel (100GHz) | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —32 MUX-O Slot 5 and 6 —32 DMX-O Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 and 13 —32 DMX-O Slot 14 and 15 —32 MUX-O Slot 16 —Pre Slot 17 —Booster (A) | Node containing the following: <ul style="list-style-type: none"> pre and booster units. 32-channel MUX-O and 32-channel DMX-O units. |
| OADM node | Slot 1 —Booster Slot 2 —Pre Slot 3 —AD-xC Slot 4 —AD-xC Slot 5 —AD-xC Slot 6 —MS-ISC Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —MS-ISC Slot 13 —AD-xC Slot 14 —AD-xC Slot 15 —AD-xC Slot 16 —Pre Slot 17 —Booster (A) | Nodes: <ul style="list-style-type: none"> containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |
| Line Amplifier mode | Slot 1 —Booster Slot 2 —Pre Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —BLANK Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —BLANK Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —Pre Slot 17 —Booster (A) | Nodes: <ul style="list-style-type: none"> containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|------------------------------|---|---|
| Line Site with OPT-RAMP-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —BLANK or TXP Slot 5 —BLANK or TXP Slot 6 —BLANK or TXP Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —BLANK or TXP Slot 13 —BLANK or TXP Slot 14 —BLANK or TXP Slot 15 —Booster Slot 16 and 17 —OPT-RAMP-C | Nodes: <ul style="list-style-type: none"> • containing pre units. • not containing booster units. |
| OSC Regenerator site | Slot 1 —OSC-CSM Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —BLANK Slot 7 —TCC2P Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2P Slot 12 —BLANK Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —OSC-CSM | Nodes not containing pre and booster units |
| 32 channel ROADM/Hub node | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —32-WSS Slot 5 —32-DMX Slot 6 —MS-ISC Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —MS-ISC Slot 13 —32-DMX Slot 14 and 15 —32-WSS Slot 16 —Pre Slot 17 —Booster | Nodes containing pre and booster units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--------------------------------------|---|---|
| 40 channel ROADM/Hub node | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WSS Slot 5 —40-DMX Slot 6 —MS-ISC Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —MS-ISC Slot 13 —40-DMX Slot 14 and 15 —40-WSS Slot 16 —Pre Slot 17 —Booster | Nodes containing pre and booster units. |
| 40 channel HUB/ROADM with OPT-RAMP-C | NC shelf Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —Pre Slot 5 —BLANK or TXP Slot 6 —MS-ISC-100T Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC-100T Slot 13 —40-DMX Slot 14 and 15 —40-WSS Slot 16 —BLANK or TXP Slot 17 —BLANK or TXP Subtended Opt shelf Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —Pre Slot 5 —BLANK or TXP Slot 6 —BLANK or TXP Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —BLANK or TXP Slot 13 —40-DMX Slot 14 and 15 —40-WSS Slot 16 —BLANK or TXP Slot 17 —BLANK or TXP | <ul style="list-style-type: none"> • OPT-RAMP-C or OPT-RAMP-CE on both sides. • OPT-RAMP-CE can replace OPT-RAMP-C cards. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--------------------------------------|---|--|
| 40 channel HUB/ROADM with OPT-RAMP-C | NC shelf Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —Pre Slot 5 —BLANK or TXP Slot 6 —MS-ISC-100T Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC-100T Slot 13 —40-DMX Slot 14 and 15 —40-WSS Slot 16 —BLANK or TXP Slot 17 —BLANK or TXP | <ul style="list-style-type: none"> • OPT-RAMP-C or OPT-RAMP-CE on one side only. • OPT-RAMP-CE can replace OPT-RAMP-C. |
| | Subtended shelf Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WSS Slot 5 —40-DMX Slot 6 —BLANK or TXP Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —BLANK or TXP Slot 13 —BLANK or TXP Slot 14 —BLANK or TXP Slot 16 —BLANK or TXP Slot 15 —BLANK or TXP Slot 17 —BLANK or TXP | |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|---|---|
| 40 channel HUB with 40-MUX-C | Slot 1 —Booster Slot 2 —Pre Slot 3 —40-DMX-C Slot 4 —40-MUX-C Slot 5 —BLANK or TXPs Slot 6 —MS-ISC Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —MS-ISC Slot 13 —BLANK or TXPs Slot 14 —40-MUX-C Slot 15 —40-DMX-C Slot 16 —Pre Slot 17 —Booster | Nodes containing pre and booster units. |
| 32 channel Terminal Site (Half of Hub node) | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —32-WSS Slot 5 —32-DMX Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | Nodes containing pre and booster units. |
| 40 channel Terminal Site (Half of Hub node) | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WSS Slot 5 —40-DMX Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | Nodes containing pre and booster units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|--|---|
| 40 channel Terminal Site with OPT-RAMP-C | NC shelf Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —Pre Slot 5 —BLANK or TXP Slot 6 —MS-ISC-100T Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC-100T Slot 13 —40-DMX Slot 14 and 15 —40-WSS Slot 16 —BLANK or TXP Slot 17 —BLANK or TXP | Nodes containing pre and booster units. |
| 40 channel Terminal Site with 40-MUX-C (Half Hub) | Slot 1 —Booster Slot 2 —Pre Slot 3 —40-DMX-C Slot 4 —40-MUX-C Slot 5 —BLANK or TXPs Slot 6 —MS-ISC Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2P Slot 12 —MS-ISC Slot 13 —BLANK or TXPs Slot 14 —BLANK or TXPs Slot 15 —BLANK or TXPs Slot 16 —BLANK or TXPs Slot 17 —BLANK or TXPs | Nodes containing pre and booster units. |
| 32 channel Gain Equalizer | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —32-WSS Slot 5 —BLANK or TXPs Slot 6 —BLANK or TXPs Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —BLANK or TXPs Slot 13 —BLANK or TXPs Slot 14 and 15 —32-WSS Slot 16 —Pre Slot 17 —Booster | Nodes containing pre and booster units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|---|--|
| 40 channel Gain Equalizer with OPT-RAMP-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 and 5 —40-WSS-C Slot 6 —BLANK Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —BLANK Slot 13 and 14 —40-WSS-C Slot 15 —Booster Slot 16 and 17 —OPT-RAMP-C | Nodes: <ul style="list-style-type: none"> • not containing pre units. • containing booster units. |
| 40 channel n-degree ROADM—Optical shelf | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WXC-C Slot 5 —40-MUX-C Slot 6 —40-DMX-C Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —40-DMX-C Slot 13 —40-MUX-C Slot 14 and 15 —40-WXC-C Slot 16 —Pre Slot 17 —Booster | Nodes containing pre and booster units. |
| 40 channel 4-degree ROADM | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WXC-C Slot 5 —40-MUX-C Slot 6 —40-DMX-C Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —40-DMX-C Slot 13 —40-MUX-C Slot 14 and 15 —40-WXC-C Slot 16 —Pre Slot 17 —Booster | <ul style="list-style-type: none"> • Maximum 30 shelves. • Nodes containing pre and booster units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|--|---|
| 40 channel 8-degree ROADM (Maximum 30 shelves) | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WXC-C Slot 5 —40-MUX-C Slot 6 —40-DMX-C Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —40-DMX-C Slot 13 —40-MUX-C Slot 14 and 15 —40-WXC-C Slot 16 —Pre Slot 17 —Booster | Nodes containing pre and booster units. |
| n degree ROADM with OPT-RAMP-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —Pre Slot 5 —BLANK or TXP Slot 6 —MS-ISC-100T Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC-100T Slot 13 —40-DMX-C Slot 14 —40-MUX-C Slot 15 and 16 —40-WXC-C Slot 17 —BLANK or TXP | <ul style="list-style-type: none"> MS-ISC-100T is optional. NC shelf. |
| | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —Pre Slot 5 —BLANK or TXP Slot 6 —BLANK or TXP Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —BLANK or TXP Slot 13 —40-DMX-C Slot 14 —40-MUX-C Slot 15 and 16 —40-WXC-C Slot 17 —BLANK or TXP | <ul style="list-style-type: none"> MS-ISC-100T is optional. Subtended ROADM shelf with OPT-RAMP-C or OPT-RAMP-CE. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---------------|---|---|
| | Slot 1 —BLANK or TXP Slot 2 —BLANK or TXP Slot 3 —BLANK or TXP Slot 4 —BLANK or TXP Slot 5 —BLANK or TXP Slot 6 —BLANK or TXP Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —BLANK or TXP Slot 13 —BLANK or TXP Slot 14 —BLANK or TXP Slot 15 —BLANK or TXP Slot 16 —BLANK or TXP Slot 17 —BLANK or TXP | <ul style="list-style-type: none"> Subtended TXP shelf. Nodes not containing pre and booster units. |
| | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —40-WXC-C Slot 5 —40-MUX-C Slot 6 —40-DMX-C Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —40-MUX-C Slot 13 —40-DMX-C Slot 14 and 15 —40-WXC-C Slot 16 —Pre Slot 17 —Booster | <ul style="list-style-type: none"> Subtended ROADM shelf without OPT-RAMP-C or OPT-RAMP-CE. Nodes containing pre and booster units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|------------------------|---|--|
| PSM channel Protection | TXP shelf (Sample 1) Slot 1 —PSM Slot 2 —TXP Slot 3 —PSM Slot 4 —TXP Slot 5 —PSM Slot 6 —TXP Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —PSM Slot 13 —TXP Slot 14 —PSM Slot 15 —TXP Slot 16 —PSM Slot 17 —TXP | <ul style="list-style-type: none"> • TXP can be one slot or two slot. • Focus on 10-DME, 10-DMEX, 4x2.5 MUXP, and 40G. |
| | TXP shelf (Sample 2) Slot 1 —PSM Slot 2 and 3 —TXP Slot 4 —PSM Slot 5 and 6 —TXP Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —PSM Slot 13 —TXP Slot 14 —PSM Slot 15 —TXP Slot 16 —PSM Slot 17 —TXP | |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|------------------------------------|---|---|
| 40 channel ROADM/ HUB—40-SMR1-C | Sh1 - Option 1 Slot 1 —Booster Slot 2 —40-SMR1-C Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —40-SMR1-C Slot 17 —Booster | Nodes: <ul style="list-style-type: none"> not containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |
| | Sh1 - Option 2 Slot 1 —40-SMR1-C Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —40-SMR1-C | Nodes: <ul style="list-style-type: none"> not containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|---|--|
| 40 channel ROADM/HUB—40- SMR1-C | Slot 1 —40-SMR2-C Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —40-SMR2-C | Nodes: <ul style="list-style-type: none"> • not containing pre and booster units. • not containing 32-channel MUX-O and 32-channel DMX-O units. |
| 40 channel ROADM/HUB with OPT-RAMP-C – 40-SMR1-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —40-SMR1-C Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —40-SMR1-C Slot 15 —Booster Slot 16 and 17 —OPT-RAMP-C | Nodes: <ul style="list-style-type: none"> • not containing pre units. • containing booster units. • not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|------------------------------------|--|--|
| 40 channel Terminal Site—40-SMR1-C | Shelf 1 - Option A Slot 1 —Booster Slot 2 —40-SMR1-C Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | Nodes: <ul style="list-style-type: none"> not containing pre units. containing booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |
| | Shelf 1 - Option B Slot 1 —40-SMR1-C Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | Nodes: <ul style="list-style-type: none"> not containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|--|--|
| 40 channel Terminal Site—40-SMR2-C | Shelf 1 - Option C Slot 1 —40-SMR2-C Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | Nodes: <ul style="list-style-type: none"> not containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |
| 40 channel Terminal Site with OPT-RAMP-C – 40-SMR1-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —40-SMR1-C Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | Nodes: <ul style="list-style-type: none"> not containing pre units. containing booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|-------------------------------------|---|---|
| 40 channel 4-degree ROADM—40-SMR1-C | Slot 1 —40-SMR2-C Slot 2 —40-SMR2-C Slot 3 —OSC-CSM Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —OSC-CSM Slot 16 —40-SMR2-C Slot 17 —40-SMR2-C | <ul style="list-style-type: none"> This 4-degree node may also be configured with the 4-degrees spanning two, three, or four shelves. 40-SMR1-C and OSC-CSM are supported only for management supervisory channel capability. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|---|--|
| 40 channel Gain Equalizer— 40-SMR1-C | Option A Slot 1 —Booster Slot 2 —40-SMR1-C Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —40-SMR1-C Slot 17 —Booster | Nodes: <ul style="list-style-type: none"> • not containing pre. • containing booster units. • not containing 32-channel MUX-O and 32-channel DMX-O units. |
| | Option B Slot 1 —40-SMR1-C Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —40-SMR1-C | Nodes: <ul style="list-style-type: none"> • not containing pre and booster units. • not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|---|--|
| | Option C Slot 1 —40-SMR2-C Slot 2 —BLANK Slot 3 —BLANK Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —40-SMR2-C | Nodes: <ul style="list-style-type: none"> not containing pre and booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |
| 40 channel Gain Equalizer with OPT-RAMP-C – 40-SMR1-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —Booster Slot 4 —40-SMR1-C Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —40-SMR1-C Slot 15 —Booster Slot 16 and 17 —OPT-RAMP-C | Nodes: <ul style="list-style-type: none"> not containing pre units. containing booster units. not containing 32-channel MUX-O and 32-channel DMX-O units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|---|--|
| 40 channel n-degree ROADM — omnidirectional colored side | Slot 1 —40-MUX-C Slot 2 —40-DMX-C Slot 3 —Pre Slot 4 —Pre Slot 5 and 6 —40-WXC-C Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —Any Other Side Slot 11 —TCC2 Slot 12 —Any Other Side Slot 13 —Any Other Side Slot 14 —Any Other Side Slot 15 —Any Other Side Slot 16 —Any Other Side Slot 17 —Any Other Side | Any other side can equip another omnidirectional side: <ul style="list-style-type: none"> Slot 12 and 13: 40-WXC-C Slot 14: Pre Slot 15: Pre slot 16: DMX slot 17: MUX |
| 40 channel colorless terminal site configuration | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —80-WXC-C Slot 5 and 6 —80-WXC-C Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2P Slot 12 and 13 —80-WXC-C Slot 14 and 15 —80-WXC-C Slot 16 —BLANK Slot 17 —BLANK | Slot 16 can equip 40-DMX and slot 17 can equip 40-MUX to replace passive Odd (MD-40-ODD). They are connected to L1 MUX/DMX (port EAD 1). WXC Role: <ul style="list-style-type: none"> Slot 3: L1 MUX Slot 5: L1 DMX Slot 12: L2 MUX Slot 14: L2 DMX |
| 40 channel n-degree ROADM—WXC - colorless side | Slot 1 —Booster Slot 2 —Pre Slot 3 and 4 —80-WXC-C Slot 5 and 6 —80-WXC-C Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2P Slot 12 and 13 —40-WXC-C Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | <ul style="list-style-type: none"> 80 WXC is connected to the Add/Drop port of the 40-WXC-C card as a colorless MUX and DMX. Add and drops ports from the 80-WXC-C can be OCH or OMS. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|---|--|
| 40 channel n-degree ROADM-colorless and omnidirectional side | Slot 1 and 2 —80-WXC-C Slot 3 and 4 —80-WXC-C Slot 5 —Pre Slot 6 —Pre Slot 7 —TCC2P Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2P Slot 12 and 13 —40-WXC-C Slot 14 —BLANK Slot 15 —BLANK Slot 16 —BLANK Slot 17 —BLANK | <ul style="list-style-type: none"> Passive MD can be subtended to L1 MUX/DMX. 80 WXC are connected to the pre amplifiers as colorless omnidirectional MUX and DMX. Add and drop ports from the 80-WXC-C can be OCH or OMS. <p>WXC Role:</p> <ul style="list-style-type: none"> Slot 1: MUX Slot 3: DMX <p>Additional cards:</p> <ul style="list-style-type: none"> Slot 14: MUX to extend add ports > 9. Slot 16: DMX to extend drop ports > 9. |
| 40 channel–non DWDM | Standalone shelf Slot 1 —Booster or TXP Slot 2 —BLANK or Pre or Booster TXP Slot 3 —BLANK or Pre or Booster TXP Slot 4 —BLANK or Pre or Booster TXP Slot 5 —BLANK or Pre or Booster TXP Slot 6 —BLANK or Pre or Booster TXP Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —BLANK or Pre or Booster TXP Slot 13 —BLANK or Pre or Booster TXP Slot 14 —BLANK or Pre or Booster TXP Slot 15 —BLANK or Pre or Booster TXP Slot 16 —BLANK or Pre or Booster TXP Slot 17 —Booster or TXP | Standalone transponder shelves can be added. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|---|---|
| 40 channel n-degree ROADM – 40-SMR2-C – Two-colored omnidirectional side | Slot 1 —BLANK Slot 2 —BLANK Slot 3 —40-SMR2-C Slot 4 —40-SMR2-C Slot 5 —BLANK Slot 6 —BLANK Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —BLANK Slot 13 —BLANK Slot 14 —BLANK Slot 15 —BLANK Slot 16 —40-SMR2-C Slot 17 —40-SMR2-C | <ul style="list-style-type: none"> 40-SMR2-C cards in slot 3 and 4 are connected to passive omnidirectional MUX/DMX. Optical safety must be disabled on 40-SMR2-C in slot 3 and 4. |
| 40 channel n-degree ROADM— 40-SMR2-C—Single-colorless omnidirectional side | Slot 1—BLANK Slot 2 and 3 —80-WXC-C Slot 4 and 5 —80-WXC-C Slot 6 —40-SMR2-C Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —OSC-CSM Slot 13 —BLANK Slot 14 —BLANK Slot 15 —40-SMR2-C Slot 16 —40-SMR2-C Slot 17 —40-SMR2-C | <ul style="list-style-type: none"> Additional shelf with 80-WXC-C cards to extend Add and Drop ports > 9 (to equip L2 MUX and DMX). 80 WXC are connected to the Line ports of the 40-SMR2 cards in slot 5 as colorless omnidirectional MUX and DMX. Optical safety of the 40-SMR2 cards in Slot 5 must be disabled. <p>WXC Role:</p> <ul style="list-style-type: none"> Slot 2: L1 MUX Slot 4: L1 DMX |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|--|---|---|
| 40 channel 4-degree ROADM – 40-SMR2-C –colorless side | Slot 1 —40-SMR2-C Slot 2 and 3 —80-WXC-C Slot 4 and 5 —80-WXC-C Slot 6 —BLANK Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —Any Other Side Slot 11 —TCC2P Slot 12 —Any Other Side Slot 13 —Any Other Side Slot 14 —Any Other Side Slot 15 —Any Other Side Slot 16 —Any Other Side Slot 17 —Any Other Side | 80 WXC are connected to the Add/Drop port of the 40-SMR2 card in slot 1 as colorless MUX and DMX. WXC Role: <ul style="list-style-type: none"> Slot 1: MUX Slot 3: DMX |
| 40 channel n-degree ROADM — 40-SMR2-C – two-colorless omnidirectional side chassis | Slot 1 —BLANK Slot 2 and 3 —80-WXC-C Slot 4 and 5 —80-WXC-C Slot 6 —40-SMR2-C Slot 7 —TCC2P Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2P Slot 12 —40-SMR2-C Slot 13 and 14 —80-WXC-C Slot 15 and 16 —80-WXC-C Slot 17 —BLANK | WXC Role: <ul style="list-style-type: none"> Slot 2,15: L1 MUX Slot 3,13: L1 DMX |
| 40 channel ROADM/HUB with OPT-RAMP-C – 40-SMR2-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —40-SMR2-C Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —40-SMR2-C Slot 16 and 17 —OPT-RAMP-C | <ul style="list-style-type: none"> MS-ISC may or may not be present. Without 15216MD (MD-40-ODD), this layout becomes a gain equalizer. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|---|--|
| 40 channel 4-degree ROADM with OPT-RAMP-C – 40-SMR2-C | Slot 1 and 2 —OPT-RAMP-C Slot 3 —40-SMR2-C Slot 4 —BLANK Slot 5 —BLANK Slot 6 —MS-ISC Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —MS-ISC Slot 13 —BLANK Slot 14 —BLANK Slot 15 —40-SMR2-C Slot 16 and 17 —OPT-RAMP-C | NC shelf. Nodes not containing: <ul style="list-style-type: none"> • pre and booster units. • MUX/DMX units. |
| | Slot 1 and 2 —OPT-RAMP-C Slot 3 —40-SMR2-C Slot 4 —BLANK Slot 5 —BLANK Slot 6 —BLANK Slot 7 —TCC2 Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2 Slot 12 —BLANK Slot 13 —BLANK Slot 14 —BLANK Slot 15 —40-SMR2-C Slot 16 and 17 —OPT-RAMP-C | Subtended shelf. Nodes not containing: <ul style="list-style-type: none"> • pre and booster units. • MUX/DMX units. |

Table G-1 OSMINE Layout Rules for Software Release 9.2.1

| Configuration | Card Placement | Condition |
|---|---|---|
| 40 channel n-degree ROADM — 40-SMR2-C – 2 Colored omnidirectional side with OPT-RAMP-C or OPT-RAMP-CE | Slot 1 —BLANK Slot 2 —BLANK Slot 3 —40-SMR2-C Slot 4 —40-SMR2-C Slot 5 —BLANK Slot 6 —BLANK Slot 7 —TCC2P Slot 8 —OSCM Slot 9 —AIC-I Slot 10 —OSCM Slot 11 —TCC2P Slot 12 —40-SMR2-C Slot 13 and 14 —OPT-RAMP-C Slot 15 —40-SMR2-C Slot 16 and 17 —OPT-RAMP-C | <ul style="list-style-type: none"> 40-SMR2-C in slot 3 and 4 are connected to passive omnidirectional MUX/DMX. Optical safety must be disabled on 40-SMR2-C card in slot 3 and 4. |
| 40 channel—Passive Mux/Demux terminal site | Slot 1 —Booster Slot 2 —BLANK or Pre or TXP Slot 3 —BLANK or TXP Slot 4 —BLANK or TXP Slot 5 —BLANK or TXP Slot 6 —BLANK or TXP Slot 7 —TCC2 Slot 8 —BLANK Slot 9 —AIC-I Slot 10 —BLANK Slot 11 —TCC2 Slot 12 —BLANK or TXP Slot 13 —BLANK or TXP Slot 14 —BLANK or TXP Slot 15 —BLANK or TXP Slot 16 —BLANK or TXP Slot 17 —BLANK or TXP | Standalone transponder shelves can be added. |

G.1.2 OSMINE Layout Rules for Software Release 9.2.1 and 9.6.0.x

Table G-2 lists the OSMINE layout rules for various configurations and their card placements for Software Release 9.2.1 and 9.6.0.x.

Table G-2 OSMINE Layout Rules for Software Release 9.2.1 and 9.6.0.x

| Configuration | Card Placement | Condition |
|------------------------|--|---|
| Line Site (M6) | With two amplifiers per side Slot 8 —TNC Slot 7 —Booster (B) Slot 6 —Pre (B) Slot 5 —BLANK Slot 4 —BLANK Slot 3 —Pre (A) Slot 2 —Booster (A) Slot 1 —TNC | Two sides accommodated in one chassis are placed in the order shown. |
| | With one amplifier per side Slot 8 —TNC Slot 7 —Amp-C (B) Slot 6 —BLANK Slot 5 —BLANK Slot 4 —BLANK Slot 3 —BLANK Slot 2 —Amp-C (A) Slot 1 —TNC | |
| Transponder shelf (M6) | Slot 8 —TSC Slot 7 —TXP Slot 6 —TXP Slot 5 —TXP Slot 4 —TXP Slot 3 —TXP Slot 2 —TXP Slot 1 —TSC | TXP and MXP cards do not have any forcing based on direction or slot placement. Therefore, it follows the same rules as optimized configurations (non OSMINE configurations). |
| | Slot 8 —TSC Slot 6 and 7 —TXP Slot 4 and 5 —TXP Slot 3 and 2 —TXP Slot 1 —TSC | |

Table G-2 OSMINE Layout Rules for Software Release 9.2.1 and 9.6.0.x

| Configuration | Card Placement | Condition |
|---|---|--|
| 40 channel ROADM/HUB — 40-SMR1-C - M6 | <p>40 channel ROADM/HUB – 40-SMR1-C – M6</p> <p>Shelf 1—Option A</p> <p>Slot 8 —TNC</p> <p>Slot 7 —Booster (B)</p> <p>Slot 6 —40-SMR1-C</p> <p>Slot 5 —BLANK</p> <p>Slot 4 —BLANK</p> <p>Slot 3 —40-SMR1-C</p> <p>Slot 2 —Booster (A)</p> <p>Slot 1 —TNC</p> <p>Shelf 1—Option B</p> <p>Slot 8 —TNC</p> <p>Slot 7 —40-SMR1-C</p> <p>Slot 6 —BLANK</p> <p>Slot 5 —BLANK</p> <p>Slot 4 —BLANK</p> <p>Slot 3 —BLANK</p> <p>Slot 2 —40-SMR1-C</p> <p>Slot 1 —TNC</p> <p>Shelf 1—Option C</p> <p>Slot 8 —TNC</p> <p>Slot 7 —Booster (B)</p> <p>Slot 6 —40-SMR1-C</p> <p>Slot 5 —BLANK</p> <p>Slot 4 —BLANK</p> <p>Slot 3 —BLANK</p> <p>Slot 2 —40-SMR1-C</p> <p>Slot 1 —TNC</p> <p>Shelf 1—Option D</p> <p>Slot 8 —TNC</p> <p>Slot 7 —40-SMR2-C</p> <p>Slot 6 —BLANK</p> <p>Slot 5 —BLANK</p> <p>Slot 4 —BLANK</p> <p>Slot 3 —BLANK</p> <p>Slot 2 —40-SMR2-C</p> <p>Slot 1 —TNC</p> | 40-SMR1-C card configuration in a two-degree 40 channel ROADM/HUB with or without booster units. |

Table G-2 OSMINE Layout Rules for Software Release 9.2.1 and 9.6.0.x

| Configuration | Card Placement | Condition |
|---|---|--|
| 40 channel ROADM/HUB — 40-SMR2-C - M6 | 40 channel Terminal Site – 40-SMR2-C – M6 Shelf 1—Option A Slot 8 —TNC Slot 7 —BLANK Slot 6 —BLANK Slot 5 —BLANK Slot 4 —BLANK Slot 3 —40-SMR1-C Slot 2 —Booster (A) Slot 1 —TNC | 40-SMR2-C card configuration in a two-degree 40 channel ROADM/HUB with or without booster units. |
| | Shelf 1—Option B Slot 8 —TNC Slot 7 —BLANK Slot 6 —BLANK Slot 5 —BLANK Slot 4 —BLANK Slot 3 —BLANK Slot 2 —40-SMR1-C Slot 1 —TNC | |
| | Shelf 1—Option C Slot 8 —TNC Slot 7 —BLANK Slot 6 —BLANK Slot 5 —BLANK Slot 4 —BLANK Slot 3 —BLANK Slot 2 —40-SMR2-C Slot 1 —TNC | |

Table G-2 OSMINE Layout Rules for Software Release 9.2.1 and 9.6.0.x

| Configuration | Card Placement | Condition |
|---------------------------------------|--|--|
| 40 channel ROADM/HUB — 40-SMR1-C - M6 | 40 channel Gain Equalizer – 40-SMR1-C (M6) Option A Slot 8 —TNC Slot 7 —Booster (B) Slot 6 —40-SMR1-C Slot 5 —BLANK Slot 4 —BLANK Slot 3 —40-SMR1-C Slot 2 —Booster (A) Slot 1 —TNC | 40-SMR1-C card configuration in a two-degree 40 channel ROADM/HUB with or without booster units. |
| | Option B Slot 8 —TNC Slot 7 —40-SMR1-C Slot 6 —BLANK Slot 5 —BLANK Slot 4 —BLANK Slot 3 —BLANK Slot 2 —40-SMR1-C Slot 1 —TNC | |
| | Option C Slot 8 —TNC Slot 7 —40-SMR2-C Slot 6 —BLANK Slot 5 —BLANK Slot 4 —BLANK Slot 3 —BLANK Slot 2 —40-SMR2-C Slot 1 —TNC | |
| Omnidirectional side | 40 channel n-degree ROADM—omnidirectional side Slot 8 —TNC Slot 7 —40-DMX-C Slot 6 —40-MUX-C Slot 5 —Pre Slot 4 —Pre Slot 3 and 2 —40-WXC-C Slot 1 —TNC | XC card are placed first. All other cards are placed in the default order. |

G.1.3 OSMINE Layout Rules for Software Release 9.6.0.x

Table G-3 lists the OSMINE layout rules for various configurations and their card placements for Software Release 9.6.0.x.

Table G-3 OSMINE Layout Rules for Software Release 9.6.0.x

| Configuration | Card Placement | Condition |
|---|---|--|
| 80 channel n degree R-OADM with Chianti | n-degree 80 channel ROADM – Optical shelf (M6) Slot 8 —TNC Slot 7 —BLANK Slot 6 —BLANK Slot 5 and 4 —80-WXC-C Slot 3 —Pre Slot 2 —Booster Slot 1 —TNC | One side per shelf. |
| 80 channel n degree R-OADM | 80 channel 8-degree ROADM (Maximum 50 shelves) Slot 8 —TNC Slot 7 —BLANK Slot 6 —BLANK Slot 5 and 4 —80-WXC-C Slot 3 —Pre Slot 2 —Booster Slot 1 —TNC | Optical shelves—M6 only. Client shelves—M6 and M12. |
| 80 or 40 channel if two sides can fit in the same shelf | Interconnecting 80- channel and 40- channel networks 40-WXC-C and 80-WXC-C Interconnecting Degrees (M6 shelf only) 80 channel 8-degree ROADM (Maximum 50 shelves) Shelf M6 Slot 8 —TNC or TSC Slot 7 —Booster Slot 6 and 5 —40-WXC-C Slot 4 and 3 —40-WXC-C Slot 2 —Booster Slot 1 —TNC or TSC Shelf M6 Slot 8 —TNC or TSC Slot 7 —Booster Slot 6 and 5 —80-WXC-C Slot 4 and 3 —80-WXC-C Slot 2 —Booster Slot 1 —TNC or TSC Slot 5,6, and 7—Optional two degree in the same shelf. | Two sides are managed in the same shelf. |

