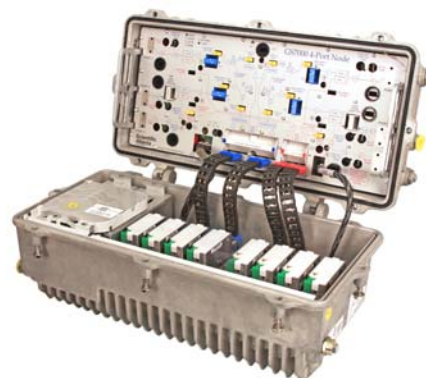


Model GS7000 4-Port Node 1 GHz with 55/70 MHz split

The Model GS7000 4-Port Node is our latest generation 1 GHz optical node platform and utilizes a completely new housing designed for optimal heat dissipation. This platform allows independent segmentation and redundancy for both the forward and reverse paths in a reliable, cost-effective package.

The forward path of the Model GS7000 Node can be deployed with a single broadcast 1310/1550 nm optical receiver distributing common services to either four output ports (all high level) or six output ports (two high level and four lower level). The forward path can also be segmented by using two independent optical receivers that each feed half of the node's output ports (left/right segmentation). Forward path optical redundancy is supported via the use of optional redundant optical receivers. The type of forward path segmentation and/or redundancy is determined by the type of Forward Configuration Module installed in the node.



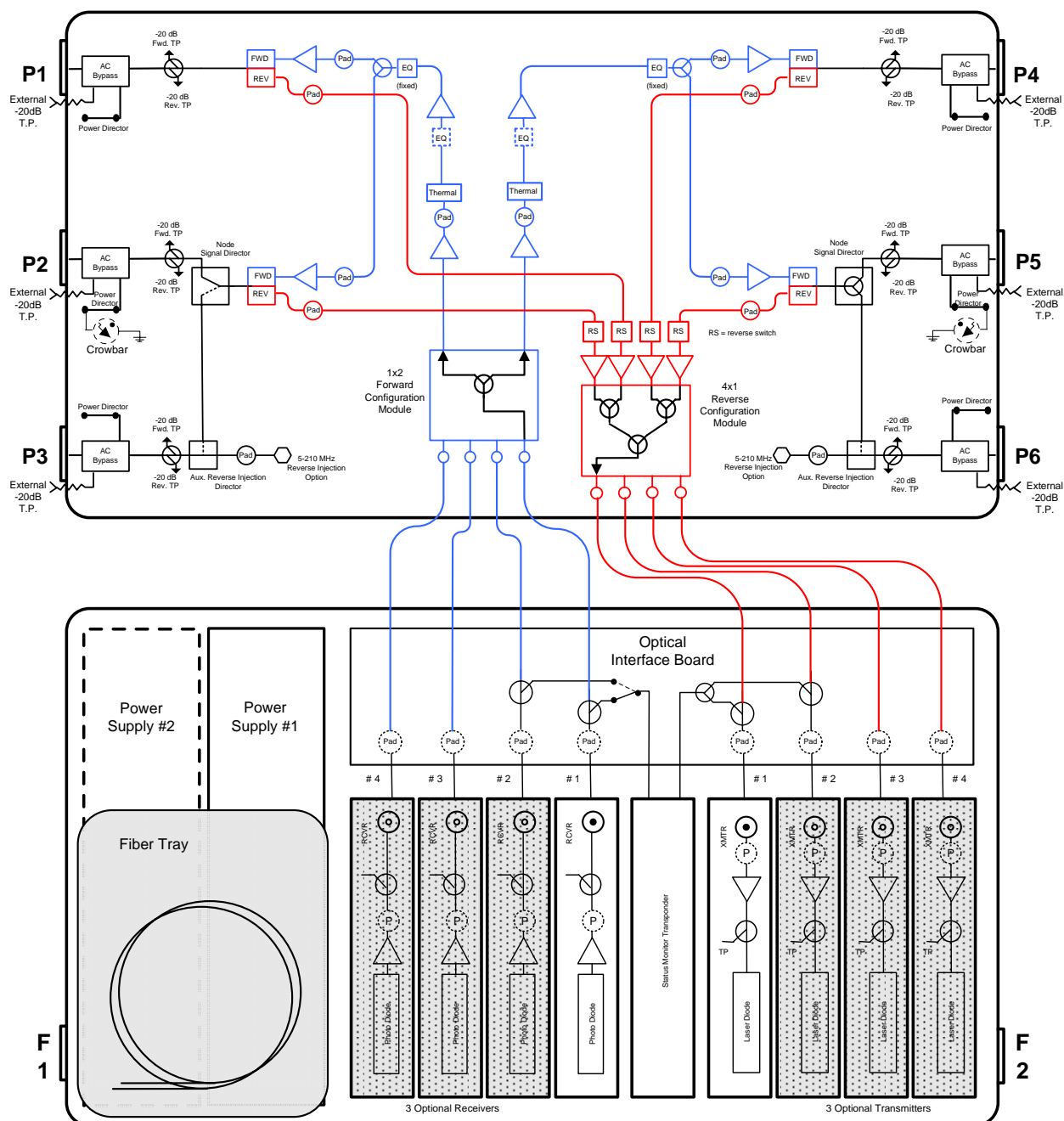
The Model GS7000 Node's reverse path is equally flexible. Reverse traffic can be segmented or combined and routed to a maximum of 4 FP, DFB, CWDM, or DWDM reverse optical transmitters, or to advanced Baseband Digital Reverse optical transmitters as part of the bdr system. Reverse path optical redundancy is supported via the use of optional redundant optical transmitters. The type of reverse path segmentation and/or redundancy is determined by the type of Reverse Configuration Module installed in the node. A Reverse Input Port is also provided for high frequency (5 – 210 MHz) reverse signal injection.

All optical transmitters and optical receivers used in the GS7000 have new high-profile module covers that include both a self-contained fiber pigtail storage area and an integrated pull ring for easier module installation and removal. Additionally, the GS7000 optical receiver is a new low-current design that dissipates less power and incorporates a two-state interstage RF attenuator switch for performance optimization.

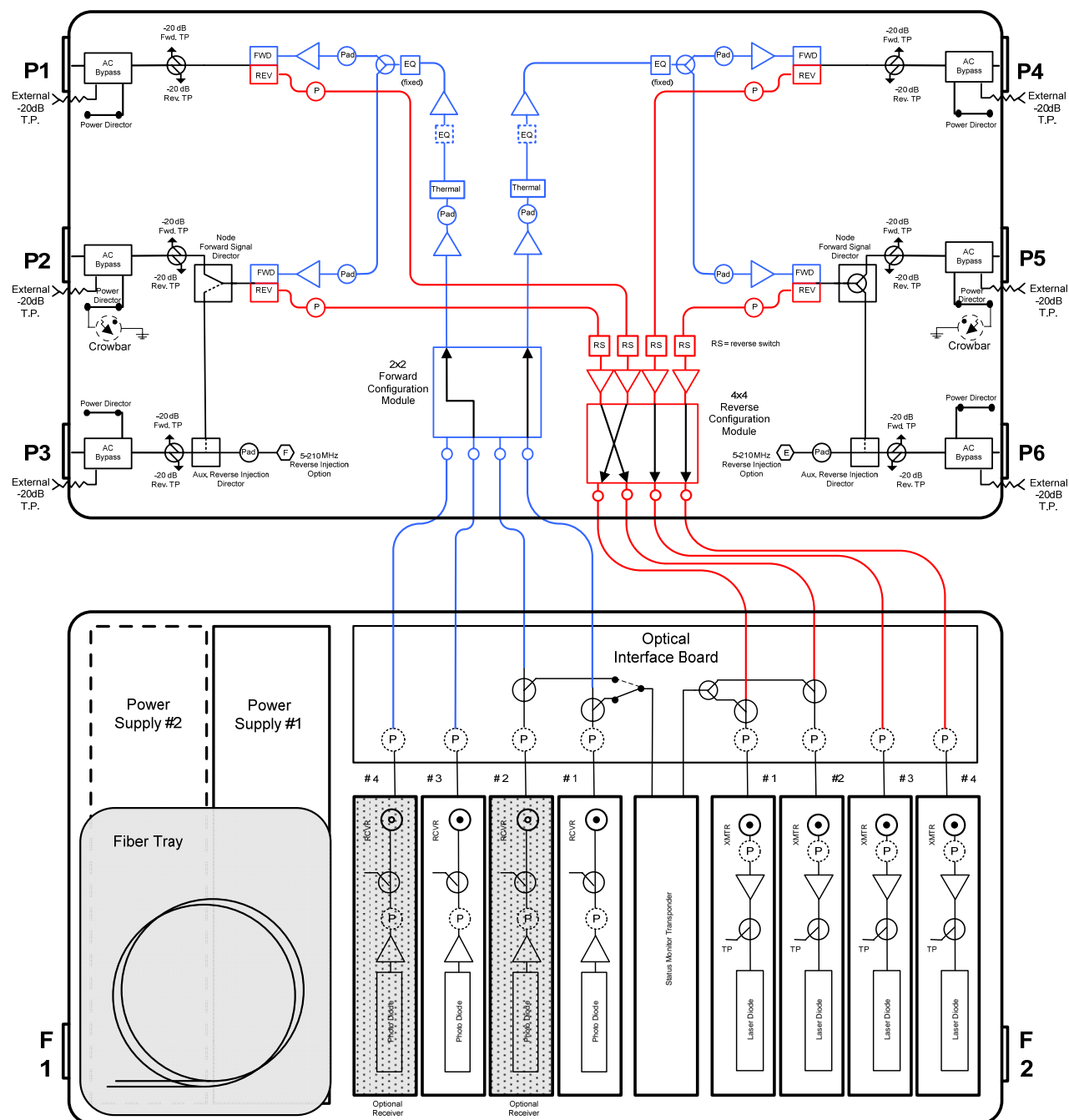
Features

- Six port 1 GHz RF platform
- Uses GainMaker type GaAs FET gain stages
- Uses standard GainMaker style accessories (i.e., attenuator pads, equalizers, diplexers, and crowbar)
- Field accessible plug-in Forward Interstage Linear Equalizers, Forward / Reverse Configuration Modules, and Signal Directors
- 3-state reverse switch (on/off/-6 dB) allows each reverse input to be isolated for noise and ingress troubleshooting (status monitoring or local control module required)
- Auxiliary reverse injection (5 - 210 MHz) configurable on up to 2 ports
- Positions for up to 4 optical receivers and 4 optical transmitters in housing lid
- Optional low-cost Local Control Module may be installed in conjunction with a Redundant Forward Configuration Module to allow optical path redundancy when no status monitor is required
- Optional Status Monitoring (ROSA /TNCS or other compatible element management system required)
- Fiber entry ports on both ends of housing lid
- Fiber management tray and track provides easy access to fiber connections
- Primary and redundant Power Supplies with passive load sharing
- Spring loaded seizure assemblies allow coax connectors to be installed or removed without removing amplifier chassis or spring loaded mechanism from the rear of the housing base
- Dual/Split AC powering

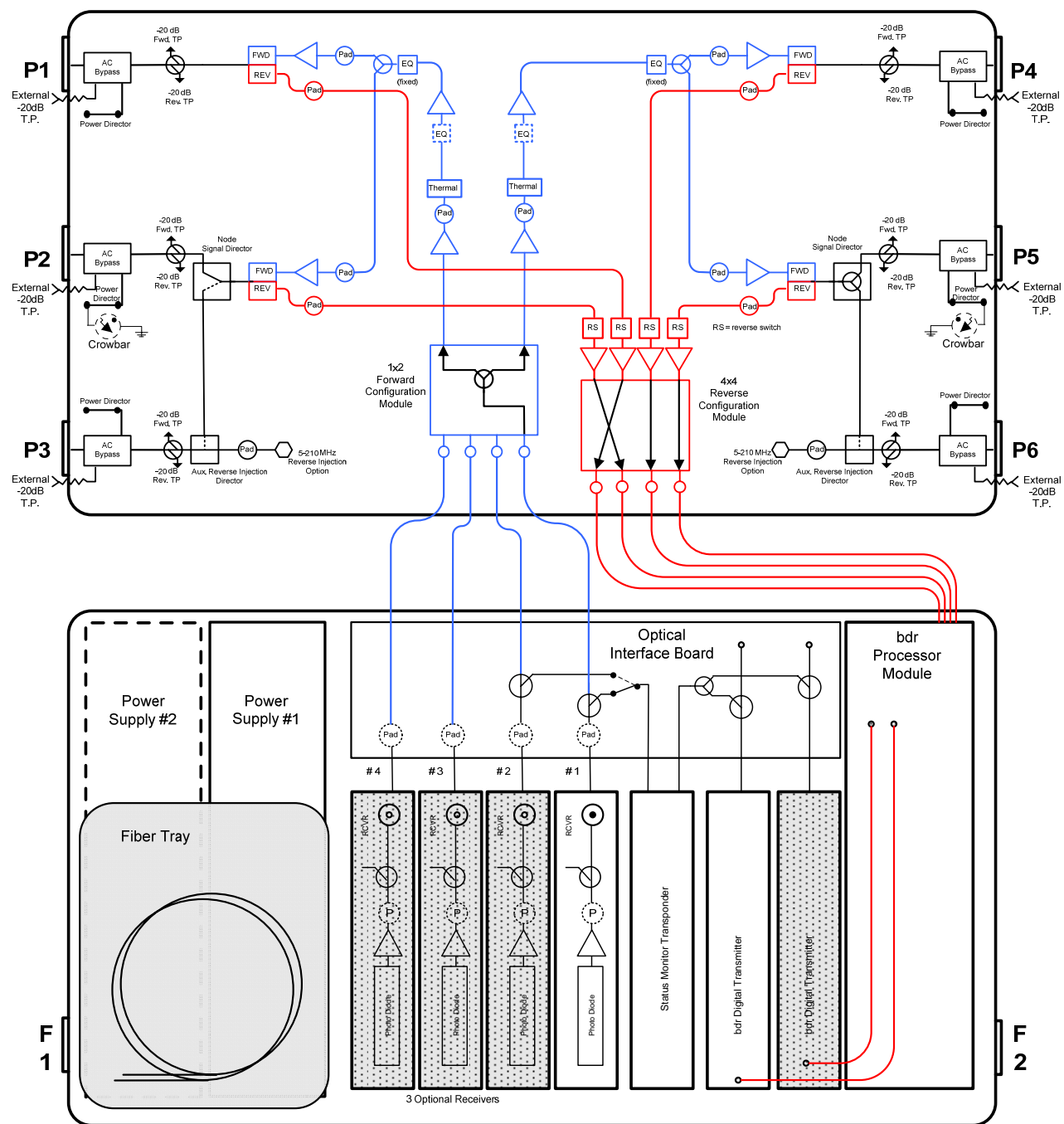
Block Diagram – Non-segmented Node with 8-position Optical Interface Board



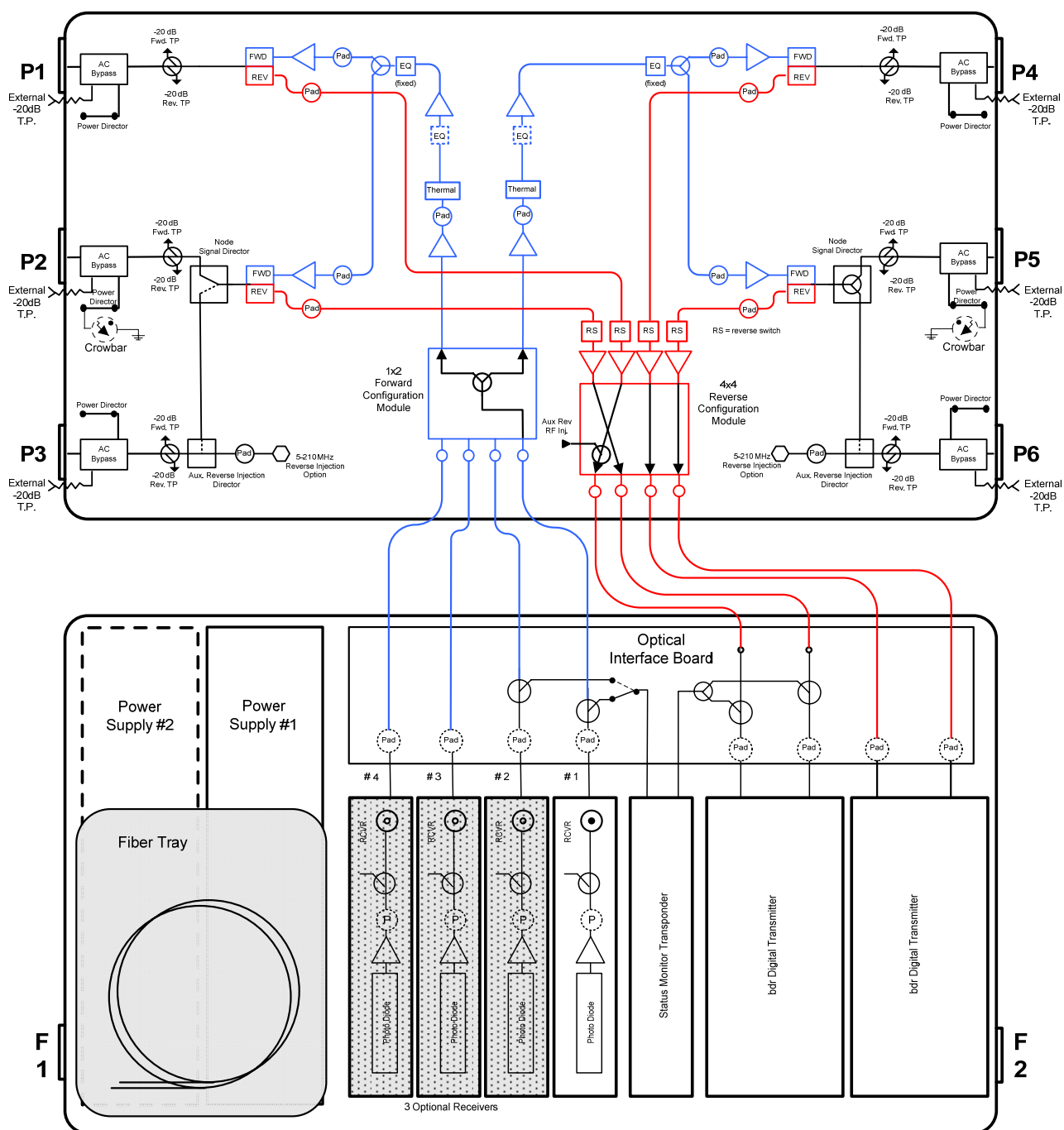
Block Diagram – Segmented Node with 8-position Optical Interface Board



Block Diagram – Node with bdr reverse and 6-position Optical Interface Board

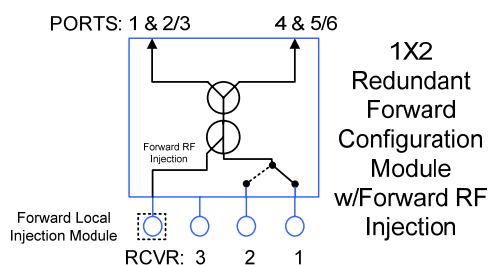
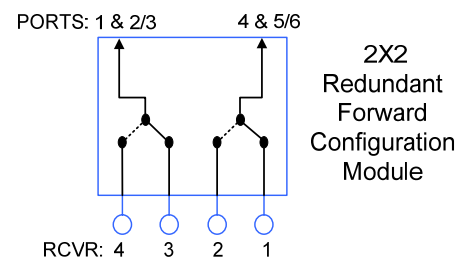
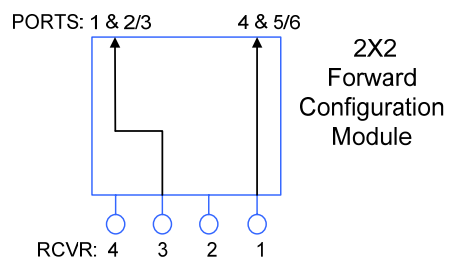
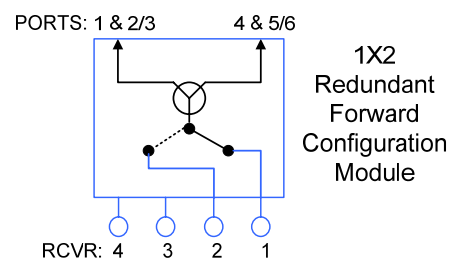
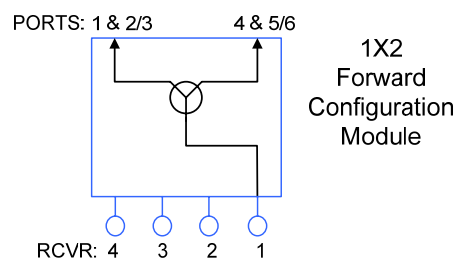


Block Diagram – Node with integrated bdr reverse & 8-position Optical Interface Board



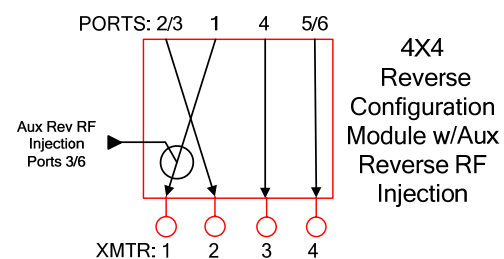
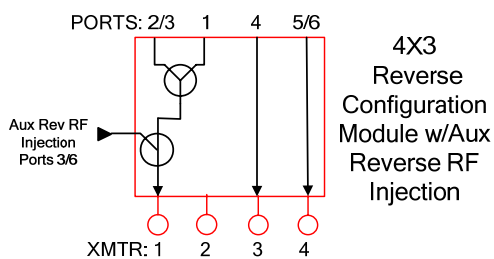
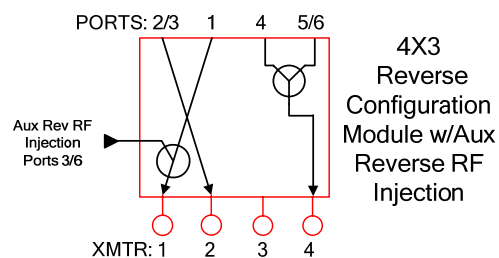
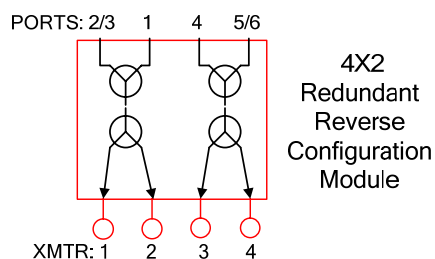
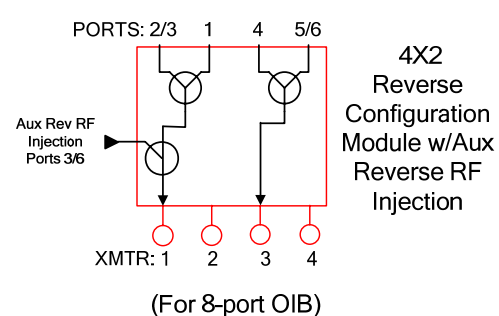
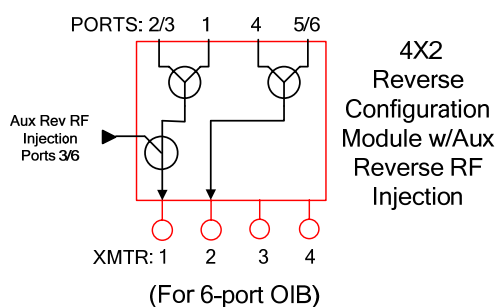
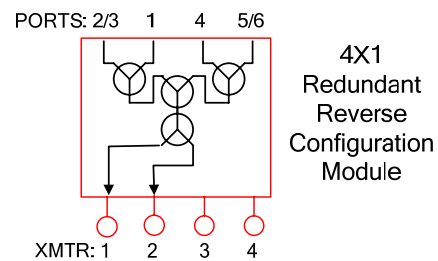
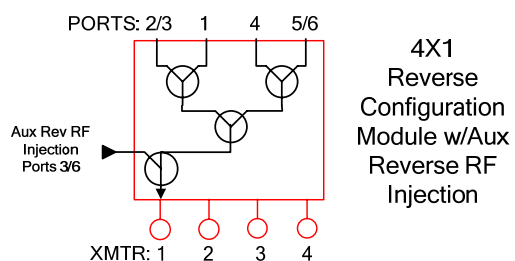
Block Diagrams – Configuration Modules

Forward Configuration Modules



Block Diagrams – Configuration Modules

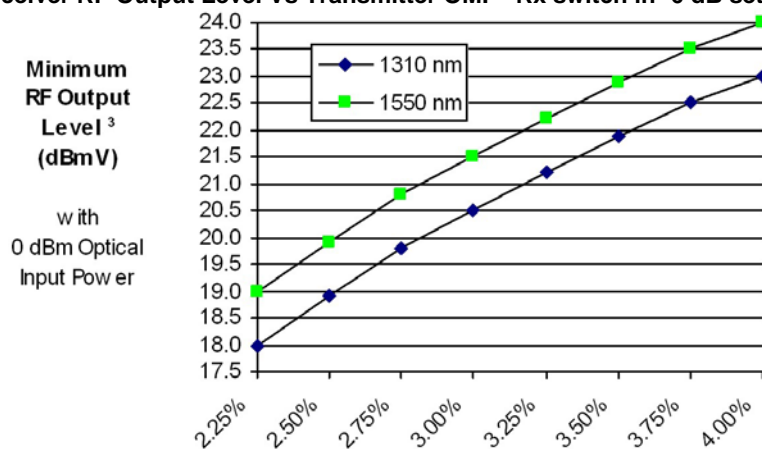
Reverse Configuration Modules



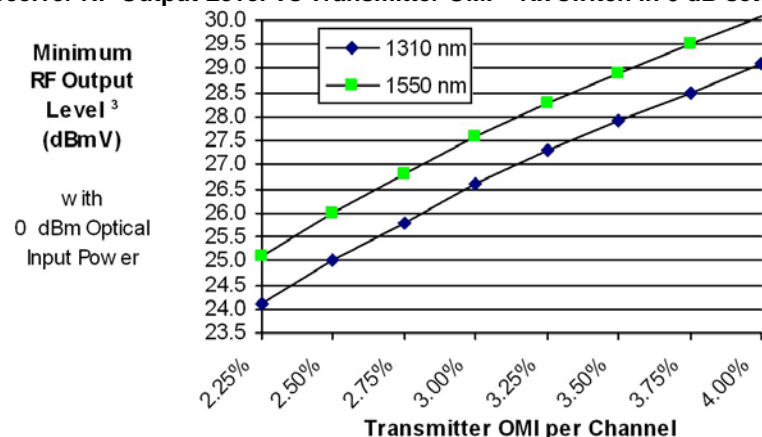
Optical Section Specifications

| Optical Section - Forward Receiver Module | Units | GS7000 Low Current RX | Notes |
|--|-----------|-------------------------|-------|
| Wavelength | nm | 1310 and 1550 | |
| Optical Input Range | mW dBm | 0.5 to 1.6 -3 to +2 | 1 |
| Pass Band | MHz | 52-1002 | |
| Frequency Response | dB | 0.5 | 2 |
| Tilt (1.0 dB) | dB | 0 | |
| Optical Input Test Point (10%) | V DC | 1V/mW | |
| Redundant Optical Rx Switching Threshold (± 1.0 dB) | dBm | -6 | |
| Rx RF Output Level at 0 dBm Optical Rx Power | dBmV | Refer to charts (below) | 3 |
| Rx RF Output Test Point (± 1.0 dB) | dB | - 20 | |

Receiver RF Output Level Vs Transmitter OMI – Rx switch in -6 dB setting



Receiver RF Output Level Vs Transmitter OMI – Rx switch in 0 dB setting



Notes for Optical Section Specifications:

1. Receiver (Rx) has a 2-position RF attenuator switch (-6 dB and 0 dB). The -6 dB setting is used for 0 to +2 dBm optical Rx power, the 0 dB setting is used for -3 to 0 dBm Rx power.
2. For forward receiver module only. Does not include frequency response contributions from forward optical transmitter.
3. Minimum receiver RF output level for the stated transmitter percent OMI/ch. (Optical Modulation Index per channel), with receiver optical input power of 0 dBm, and specified Rx attenuator setting. To determine RF output levels at other optical input power, add (or subtract) 2 dB in RF level for each 1 dB increase (or decrease) in receiver optical input power.

For reverse optical transmitter and link performance, see the "Analog Reverse Optical Transmitters with Thermal Compensation" data sheet.

Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 C). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

RF Section Specifications

| General Station Performance | Units | Forward | Reverse | Notes |
|-------------------------------|-------|--------------------------------------|---------------------------------|-------|
| Pass Band | MHz | 70-1002 | 5-55 | |
| Input/Output Port Return Loss | dB | 17 | 16 | |
| Hum Modulation @ 12 A | dB | 70 (70-870 MHz) 60 (871-1002 MHz) | 60 (5-10 MHz) 70 (11-55 MHz) | |
| Hum Modulation @ 15 A | dB | 65 (70-870 MHz) 60 (871-1002 MHz) | 60 (5-10 MHz) 65 (11-55 MHz) | |
| Test Points (± 0.5 dB) | dB | -20 | -20 | |

| Forward Station Performance | Units | 7.5 dB I/S EQ w/3 dB I/S Pad | Notes |
|--|-------|--|-----------|
| Amplifier Type | - | GaAs FET | |
| Operational Gain (minimum) | dB | 32 | 1 |
| Frequency Response | dB | 0.5 | |
| Internal Tilt (± 1 dB) | dB | 14.2 | 2,4 |
| Port to Port Isolation | dB | 65 (70-750 MHz) 55 (751-1002 MHz) | |
| Noise Figure @... 70 MHz 1002 MHz | dB | 14.0 12.0 | 3 |
| Reference Output Levels @... 1002 MHz 870 MHz 750 MHz 650 MHz 550 MHz 70 MHz | dBmV | 49.5 47.5 45.7 44.0 42.5 35.3 | |
| Reference Output Tilt (70-1002 MHz) | dB | 14.2 | 2,5 |
| 64 PAL B/G channels (CW) with digital | | | 11 |
| Composite Triple Beat | dB | 79 | 6 |
| Cross Modulation | dB | 69 | 6,10 |
| Composite Second Order (high side) | dB | 70 | 6 |
| 64 PAL I channels (CW) with digital | | | 12 |
| Composite Beat | dB | 72 | 6 |
| Cross Modulation | dB | 68 | 6,10 |
| 42 CENELEC channels (CW) | | | 13 |
| Composite Triple Beat | dBuV | 112.5 | |
| Cross Modulation | dBuV | 111 | |
| Composite Second Order (high side) | dBuV | 115 | |
| 78 NTSC channels (CW) with digital | | | 8 |
| Composite Triple Beat | dB | 78 | 6 |
| Cross Modulation | dB | 68 | 6,10 |
| Composite Second Order (high side) | dB | 70 | 6 |

| Reverse Station Performance | Units | Reverse | Notes |
|-----------------------------|-------|----------|-------|
| Amplifier Type | - | GaAs FET | |
| Operational Gain (minimum) | dB | -2 | 7 |
| Frequency Response | dB | 0.5 | |
| Internal Tilt (+/- 1 dB) | dB | 0 | |
| Path to Path Isolation | dB | 55 | |
| Noise Figure | dB | 7.5 | 9 |

Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 C). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

RF Section Specifications, continued

| Station Delay Characteristics | | 55 / 70 Split | |
|---|------------|--|------------|
| Forward (Chrominance to Luminance Delay) | | Reverse (Group Delay in 1.5 MHz BW) | |
| Frequency (MHz) | Delay (nS) | Frequency (MHz) | Delay (nS) |
| 71.25 - 75.68 | 15 | 5.0 - 6.5 | 35 |
| 76.25 - 80.68 | 8 | 6.5 - 8.0 | 15 |
| 83.25 - 87.68 | 4 | 8.0 - 9.5 | 7 |
| 112.25 - 116.68 | 3 | 50.5 - 52.0 | 9 |
| | | 52.0 - 53.5 | 15 |
| | | 53.5 - 55.0 | 27 |

Notes for RF Section Specifications:

- Forward operational gain is for station from output of optical Rx to node RF output port, with 0 dB pad in optical interface board (OIB), any forward configuration module, 3 dB interstage (I/S) pad, 7.5 dB linear I/S EQ, factory select output pad. Includes OIB losses.
- Reference output tilt and internal tilt are both "Linear" tilt.
- Forward noise figure at input of OIB (Rx output), with 0 dB OIB pad, any forward configuration module, 3 dB I/S pad, 7.5 dB linear I/S EQ, factory select output pad.
- Forward internal tilt specified is primarily due to an on-board fixed equalizer and a factory configured 7.5 dB linear I/S EQ
- The forward reference output tilt specified is achieved via field installation of appropriate linear I/S EQ, in conjunction with the internal tilt of the launch amplifier and the tilt associated with the optical link (transmitter/receiver combination).
- Stated distortion performance is for launch amplifier section operated at reference output levels and tilts. Full station performance can be determined by combining optic performance and launch amplifier performance.
- Reverse operational gain from the node's input port(s) to reverse transmitter input, with 0 dB reverse input pad, any reverse configuration module, 0 dB OIB pad. Includes OIB losses.
- Loaded with 78 NTSC CW carriers from 77-550 MHz. "Digital" refers to 550 - 1002 MHz loading with QAM carriers at -6 dB relative to analog video carrier levels.
- Reverse noise figure from reverse input port to input of reverse optical transmitter module, with 0 dB reverse input pad.
- X-mod (@ 15.75 kHz) specified using 100% synchronous modulation and frequency-selective measurement device.
- Loaded with 64 PAL B/G CW carriers from 112-600 MHz. "Digital" refers to 600 - 1002 MHz loading with QAM carriers at -6 dB relative to analog video carrier levels.
- Loaded with 64 PAL I CW carriers from 88-600 MHz. "Digital" refers to 600 - 1002 MHz loading with QAM carriers at -6 dB relative to analog video carrier levels.
- Tested per CENELEC Standard EN50083-3. RF output level is at 1002 MHz (forward).

Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 C). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

Specifications, continued

| Electrical | Units | | | | | Notes |
|---|-------|-----------------|-----------------|-----------------|-----------------|-------|
| Max. AC Through Current (continuous) | Amps | 15 | | | | |
| Max. AC Through Current (surge) | Amps | 25 | | | | |
| Component DC Power Consumption (typical) | | @+24 VDC | @ +8 VDC | @ +5 VDC | @ -6 VDC | |
| Launch Amplifier (includes reverse amp) | Amps | 2.7 | - | 0.5 | - | |
| Status Monitoring Transponder | Amps | 0.01 | - | 0.2 | - | |
| GS7000 Low Current Optical Receiver | Amps | 0.12 | - | - | - | |
| Reverse Transmitter – High Gain FP | Amps | 0.09 | - | - | 0.07 | |
| Reverse Transmitter – High Gain DFB | Amps | 0.09 | - | - | 0.09 | |
| | | | | | | |
| Power Supply DC Current Rating | Amps | 6.20 | 0.90 | 1.30 | 0.80 | |

| Station Powering Data | | | | | | | | | | | | |
|--|--------------------------|----------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GS7000 Node | I DC (Amps at 24 VDC) | | AC Voltage | | | | | | | | | |
| | | | 90 | 85 | 80 | 75 | 70 | 65 | 60 | 55 | 50 | 45 |
| with: 1 forward Rx, 1x2 forward config module, 1 reverse Tx, 4x1 reverse config module | 2.93 | AC Current (A) | 1.3 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.6 | 1.8 | 1.9 | 2.2 |
| | | Power (W) | 94.0 | 93.9 | 93.6 | 93.5 | 93.4 | 93.4 | 93.3 | 93.4 | 93.5 | 94.0 |
| with: 2 forward Rx's, 2x2 forward config module, 4 reverse Tx's, 4x4 reverse config module | 3.30 | AC Current (A) | 1.5 | 1.5 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.3 | 2.5 |
| | | Power (W) | 108.4 | 108.1 | 108.0 | 107.7 | 107.6 | 107.6 | 107.6 | 107.6 | 107.8 | 108.7 |

Data is based on stations configured with status monitoring transponder. AC currents specified are based on measurements made with typical CATV type ferro-resonant AC power supply (quasi-square wave).

DC supply has a fixed under-voltage lockout of 33 V AC.

| Environmental | Units | |
|--|---|--------------------------------|
| Operating Temperature Range | degrees | -40 F to 140 F (-40 C to 60 C) |
| Relative Humidity Range | percent | 5% to 95% |
| Mechanical | | |
| Housing Dimensions | Weight | |
| 21.3 in. L x 11.6 in. H x 11.1 in. D (541 mm x 295 mm x 282 mm) | Station with 4 RX, 4 TX, 2 power supplies: 50.0 lbs. (22.7 Kg) | |

Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 C). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

Ordering Information

The GS7000 Node is available in a wide variety of configurations. The GS7000 Ordering Matrix provides ordering information for configured node stations. This page contains ordering information for required and optional accessories. Please consult with your Account Representative, Customer Service Representative, or Applications Engineer to determine the best configuration for your particular application.

| Required Accessories | Part Number |
|--|-------------------|
| Plug-in Pads (attenuators) – Available in 0.5 dB steps from 0 to 20 dB | |
| 1 required for each Optical Receiver Module installed in the node (for Optical Interface Board) | 589693 (0 dB) |
| 1 required for each Optical Transmitter Module installed in the node (for Optical Interface Board) | sequentially thru |
| 1 required for each Reverse input path activated (for Launch Amplifier) | 589734 (20.5dB) |

| Optional Accessories | Part Number |
|---|-----------------|
| Plug-in Forward Linear Equalizers – Available in 1.5 dB steps from 0 to 21 dB. | 4007228 (0 dB) |
| Node shipped with 7.5 dB Linear Equalizers (2)* installed for 14.5dB of tilt to 1002 MHz (*4008782) | see table below |
| Plug-in Signal Directors – 2 required | |
| Node shipped with Jumpers installed to activate 4 RF output ports | 4011907 |
| Optional 2-Way Splitters are required to activate 5 or 6 RF output ports | 4011908 |

Note: Configured nodes ship without reverse input pads and any of the pads on the OIB. All other standard accessories are shipped from the factory. Forward Launch Amp attenuator pads, (2) 7.5 dB linear Eqs, and (2) signal director jumpers are shipped with every configured node.

| GS7000 Forward Launch Amplifiers | Part Number |
|---|-------------|
| Node Launch Amplifier, 2-way forward segmentation, 55/70 MHz split | 4014384 |
| GS7000 Forward Configuration Modules | |
| Forward Configuration Module, 1x2 | 4011900 |
| Forward Configuration Module, 1x2 Redundant | 4011901 |
| Forward Configuration Module, 2x2 | 4011902 |
| Forward Configuration Module, 2x2 Redundant | 4011903 |
| Forward Configuration Module, 1x2, Forward RF Injection, Redundant | 4017858 |
| Forward Linear Equalizers | |
| 0 dB 1GHz Forward Linear EQ | 4007228 |
| 1.5 dB 1GHz Forward Linear EQ | 4008778 |
| 3.0 dB 1GHz Forward Linear EQ | 4008779 |
| 4.5 dB 1GHz Forward Linear EQ | 4008780 |
| 6.0 dB 1GHz Forward Linear EQ | 4008781 |
| 7.5 dB 1GHz Forward Linear EQ | 4008782 |
| 9.0 dB 1GHz Forward Linear EQ | 4008783 |
| 10.5 dB 1GHz Forward Linear EQ | 4008784 |
| 12.0 dB 1GHz Forward Linear EQ | 4008785 |
| 13.5 dB 1GHz Forward Linear EQ | 4008786 |
| 15.0 dB 1GHz Forward Linear EQ | 4008787 |
| 16.5 dB 1GHz Forward Linear EQ | 4019258 |
| 18.0 dB 1GHz Forward Linear EQ | 4019259 |
| 19.5 dB 1GHz Forward Linear EQ | 4019260 |
| 21.0 dB 1GHz Forward Linear EQ | 4019261 |
| GS7000 Node Signal Directors | |
| Node Signal Director Jumper | 4011907 |
| Node Signal Director Splitter | 4011908 |
| GS7000 Forward Low Current Optical Receivers | |
| Optical Receiver, SCA connector | 4013593 |
| Optical Receiver, SCU connector | 4013594 |
| Optical Receiver, FCA connector | 4013595 |
| GS7000 Forward Local Injection Module Kit <i>(does not include FCM)</i> | |
| Forward Local Injection Module | 4013575 |

Ordering Information, continued

| GS7000 Reverse Amplifiers | Part Number |
|---|--------------------|
| Reverse Amplifier, 5-55 MHz | 4011914 |
| GS7000 Reverse Configuration Modules | |
| Reverse Configuration Module, 4x1 | 4011918 |
| Reverse Configuration Module, 4x1 Redundant | 4011919 |
| Reverse Configuration Module, 4x2 (for use with 6-position OIB) | 4011920 |
| Reverse Configuration Module, 4x2 (for use with 8-position OIB) | 4014300 |
| Reverse Configuration Module, 4x2 Redundant | 4011921 |
| Reverse Configuration Module, 4x4 | 4011922 |
| GS7000 1310 nm Reverse Optical Transmitters | |
| 3 dBm, DFB, High Gain, Analog, SC/APC | 4011952 |
| 3 dBm, DFB, High Gain, Analog, SC/UPC | 4011953 |
| 3 dBm, DFB, High Gain, Analog, FC/APC | 4011954 |
| 2 dBm, FP, High Gain, Analog, SC/APC | 4011958 |
| 2 dBm, FP, High Gain, Analog, SC/UPC | 4011959 |
| 2 dBm, FP, High Gain, Analog, FC/APC | 4011960 |
| GS7000 CWDM Reverse Optical Transmitters | |
| 3 dBm, CWDM High Gain, 1470 nm, Analog, SC/APC | 4011955 |
| 3 dBm, CWDM High Gain, 1490 nm, Analog, SC/APC | 4011956 |
| 3 dBm, CWDM High Gain, 1510 nm, Analog, SC/APC | 4011957 |
| 3 dBm, CWDM High Gain, 1530 nm, Analog, SC/APC | 4011961 |
| 3 dBm, CWDM High Gain, 1550 nm, Analog, SC/APC | 4011965 |
| 3 dBm, CWDM High Gain, 1570 nm, Analog, SC/APC | 4011966 |
| 3 dBm, CWDM High Gain, 1590 nm, Analog, SC/APC | 4011967 |
| 3 dBm, CWDM High Gain, 1610 nm, Analog, SC/APC | 4011968 |
| | |
| 3 dBm, CWDM High Gain, 1470 nm, Analog, SC/UPC | 4011969 |
| 3 dBm, CWDM High Gain, 1490 nm, Analog, SC/UPC | 4011970 |
| 3 dBm, CWDM High Gain, 1510 nm, Analog, SC/UPC | 4011974 |
| 3 dBm, CWDM High Gain, 1530 nm, Analog, SC/UPC | 4011975 |
| 3 dBm, CWDM High Gain, 1550 nm, Analog, SC/UPC | 4011976 |
| 3 dBm, CWDM High Gain, 1570 nm, Analog, SC/UPC | 4011977 |
| 3 dBm, CWDM High Gain, 1590 nm, Analog, SC/UPC | 4013218 |
| 3 dBm, CWDM High Gain, 1610 nm, Analog, SC/UPC | 4013299 |
| | |
| 3 dBm, CWDM High Gain, 1470 nm, Analog, FC/APC | 4013542 |
| 3 dBm, CWDM High Gain, 1490 nm, Analog, FC/APC | 4013543 |
| 3 dBm, CWDM High Gain, 1510 nm, Analog, FC/APC | 4013544 |
| 3 dBm, CWDM High Gain, 1530 nm, Analog, FC/APC | 4013545 |
| 3 dBm, CWDM High Gain, 1550 nm, Analog, FC/APC | 4013546 |
| 3 dBm, CWDM High Gain, 1570 nm, Analog, FC/APC | 4013547 |
| 3 dBm, CWDM High Gain, 1590 nm, Analog, FC/APC | 4013548 |
| 3 dBm, CWDM High Gain, 1610 nm, Analog, FC/APC | 4013549 |

Ordering Information, continued

| GS7000 DWDM Reverse Optical Transmitters | Part Number |
|--|--------------------|
| DWDM, ITU Grid, CH. 19, 1562.23 nm, Analog, SC/APC | 4022938.19 |
| DWDM, ITU Grid, CH. 20, 1561.42 nm, Analog, SC/APC | 4022938.20 |
| DWDM, ITU Grid, CH. 21, 1560.61 nm, Analog, SC/APC | 4022938.21 |
| DWDM, ITU Grid, CH. 22, 1559.79 nm, Analog, SC/APC | 4022938.22 |
| DWDM, ITU Grid, CH. 23, 1558.98 nm, Analog, SC/APC | 4022938.23 |
| DWDM, ITU Grid, CH. 24, 1558.17 nm, Analog, SC/APC | 4022938.24 |
| DWDM, ITU Grid, CH. 25, 1557.36 nm, Analog, SC/APC | 4022938.25 |
| DWDM, ITU Grid, CH. 26, 1556.55 nm, Analog, SC/APC | 4022938.26 |
| DWDM, ITU Grid, CH. 27, 1555.75 nm, Analog, SC/APC | 4022938.27 |
| DWDM, ITU Grid, CH. 28, 1554.94 nm, Analog, SC/APC | 4022938.28 |
| DWDM, ITU Grid, CH. 29, 1554.13 nm, Analog, SC/APC | 4022938.29 |
| DWDM, ITU Grid, CH. 30, 1553.33 nm, Analog, SC/APC | 4022938.30 |
| DWDM, ITU Grid, CH. 31, 1552.52 nm, Analog, SC/APC | 4022938.31 |
| DWDM, ITU Grid, CH. 32, 1551.72 nm, Analog, SC/APC | 4022938.32 |
| DWDM, ITU Grid, CH. 33, 1550.92 nm, Analog, SC/APC | 4022938.33 |
| DWDM, ITU Grid, CH. 34, 1550.12 nm, Analog, SC/APC | 4022938.34 |
| DWDM, ITU Grid, CH. 35, 1549.32 nm, Analog, SC/APC | 4022938.35 |
| DWDM, ITU Grid, CH. 36, 1548.51 nm, Analog, SC/APC | 4022938.36 |
| DWDM, ITU Grid, CH. 37, 1547.72 nm, Analog, SC/APC | 4022938.37 |
| DWDM, ITU Grid, CH. 38, 1546.92 nm, Analog, SC/APC | 4022938.38 |
| DWDM, ITU Grid, CH. 39, 1546.12 nm, Analog, SC/APC | 4022938.39 |
| DWDM, ITU Grid, CH. 40, 1545.32 nm, Analog, SC/APC | 4022938.40 |
| DWDM, ITU Grid, CH. 41, 1544.53 nm, Analog, SC/APC | 4022938.41 |
| DWDM, ITU Grid, CH. 42, 1543.73 nm, Analog, SC/APC | 4022938.42 |
| DWDM, ITU Grid, CH. 43, 1542.94 nm, Analog, SC/APC | 4022938.43 |
| DWDM, ITU Grid, CH. 44, 1542.14 nm, Analog, SC/APC | 4022938.44 |
| DWDM, ITU Grid, CH. 45, 1541.35 nm, Analog, SC/APC | 4022938.45 |
| DWDM, ITU Grid, CH. 46, 1540.56 nm, Analog, SC/APC | 4022938.46 |
| DWDM, ITU Grid, CH. 47, 1539.77 nm, Analog, SC/APC | 4022938.47 |
| DWDM, ITU Grid, CH. 48, 1538.98 nm, Analog, SC/APC | 4022938.48 |
| DWDM, ITU Grid, CH. 49, 1538.19 nm, Analog, SC/APC | 4022938.49 |
| DWDM, ITU Grid, CH. 50, 1537.40 nm, Analog, SC/APC | 4022938.50 |
| DWDM, ITU Grid, CH. 51, 1536.61 nm, Analog, SC/APC | 4022938.51 |
| DWDM, ITU Grid, CH. 52, 1535.82 nm, Analog, SC/APC | 4022938.52 |
| DWDM, ITU Grid, CH. 53, 1535.04 nm, Analog, SC/APC | 4022938.53 |
| DWDM, ITU Grid, CH. 54, 1534.25 nm, Analog, SC/APC | 4022938.54 |
| DWDM, ITU Grid, CH. 55, 1533.47 nm, Analog, SC/APC | 4022938.55 |
| DWDM, ITU Grid, CH. 56, 1532.68 nm, Analog, SC/APC | 4022938.56 |
| DWDM, ITU Grid, CH. 57, 1531.90 nm, Analog, SC/APC | 4022938.57 |
| DWDM, ITU Grid, CH. 58, 1531.12 nm, Analog, SC/APC | 4022938.58 |
| DWDM, ITU Grid, CH. 59, 1530.33 nm, Analog, SC/APC | 4022938.59 |

Ordering Information, continued

| | |
|--|---------|
| Optical Interface Board | |
| 8-position, Optical Interface Board, 4Rx / 4Tx | 4011927 |
| 6-position, Optical Interface Board, 4Rx / 2Tx / bdr | 4011928 |
| Power Supply | |
| Node Power Supply | 4011930 |
| Local Control Modules & Status Monitoring Module | |
| Local Control Module, with craft port | 4011932 |
| Local Control Module, with <i>status monitor module</i> & craft port | 4011931 |
| Local Control Modules & Transponder (with USB interface) | |
| Local Control Module with Transponder | 4025871 |
| Local Control Module without Transponder | 4027114 |
| Test Point Cable Kit | |
| Test Point Cable Kit, (includes the 6 cables required to enable GS7000 housing external test points) | 4025059 |
| Optical Fiber Tray Kit | |
| Standard Fiber Tray | 4027376 |
| Expanded Fiber Tray (additional fiber handling/routing capacity) - includes brackets for passives and 4 SC APC bulkheads | 4026885 |
| Expanded Fiber Tray (additional fiber handling/routing capacity) - includes brackets for passives and 4 SC UPC bulkheads | 4028274 |
| Brackets for passives used in Expanded Fiber Tray | 4027000 |
| SC APC bulkheads, package of 10 | 4027740 |
| SC UPC bulkheads, package of 10 | 4027741 |
| Optical Amplifiers and Switch | |
| 17 dBm Broadcast Amplifier | 4027007 |
| 20 dBm Broadcast Amplifier | 4027008 |
| 22 dBm Broadcast Amplifier | 4027009 |
| 17 dBm Narrowcast Gain Flattened Amplifier - Low Gain | 4027010 |
| 17 dBm Narrowcast Gain Flattened Amplifier - High Gain | 4027011 |
| 20 dBm Narrowcast Gain Flattened Amplifier - Low Gain | 4027012 |
| 20 dBm Narrowcast Gain Flattened Amplifier - High Gain | 4027013 |
| Optical Switch | 4027014 |



Cisco, Cisco Systems, the Cisco logo, the Cisco Systems logo, GainMaker, and ROSA are registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

All other trademarks mentioned in this document are property of their respective owners.

Specifications and product availability are subject to change without notice.

© 2010 Cisco Systems, Inc. All rights reserved.

Cisco Systems, Inc.
1-800-722-2009 or 678-277-1120
www.cisco.com

Part Number 7011571 Rev D
March 2010