

| Feature  | BLACKDIAMOND                            |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|
|  | 20808                                   | 10808                                   | 12804R                                  | 12802R                                  | 12804C                                  | 8810                                    | 8806                                    |
| Max Auto-Negotiating 10/100/1000BASE-T Ports   | –                                       | 480                                     | 80                                      | 40                                      | 80                                      | 864                                     | 480                                     |
| Max 1 Gigabit Ethernet Ports (SFP)             | 320                                     | 480                                     | 80                                      | 40                                      | 80                                      | 440                                     | 248                                     |
| Max 10 Gigabit Ethernet Ports                  | 64                                      | 48                                      | 8                                       | 4                                       | 8                                       | 216                                     | 120                                     |
| Form Factor/<br>Footprint                      | Chassis/<br>14.5RU                      | Chassis/<br>22RU                        | Chassis/<br>10RU                        | Chassis/<br>3RU                         | Chassis/<br>10RU                        | Chassis/<br>14RU                        | Chassis/<br>10RU                        |
| Total Switching Capacity                       | 2 Tbps                                  | 1.28 Tbps                               | 160 Gbps                                | 80 Gbps                                 | 160 Gbps                                | 1.45 Tbps                               | 816 Gbps                                |
| Programmable ASICs                             | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | No                                      | No                                      |
| Redundant Power                                | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Power over Ethernet (802.3af)                  | No                                      | No                                      | No                                      | No                                      | No                                      | Yes                                     | Yes                                     |
| Wire-Speed Layer 2/<br>Layer 3 Switching       | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Routing - IPv4                                 | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP |
| Routing - IPv6                                 | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    |
| Policy-Based Routing/Switching                 | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Policy-Based Quality of Service (QoS)          | Yes/Three Tier                          | Yes                                     | Yes/Three Tier                          | Yes/Three Tier                          | Yes                                     | Yes                                     | Yes                                     |
| Network Login                                  | –                                       | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Access Control Lists                           | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Universal Port                                 | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| CLI Scripting                                  | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Widgets  | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Layer 3 Virtual Switching                      | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | No                                      | No                                      |
| vMANs (802.1ad)                                | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| MAC-in-MAC (802.1ah)                           | –                                       | Yes                                     | Yes                                     | Yes                                     | Yes                                     | No                                      | No                                      |
| CLEAR-Flow                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes (c series)                          | Yes (c series)                          |
| sFlow®   | –                                       | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| EAPS   | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Advanced Spanning Tree (802.1w, 802.1s, PVST+) | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Link Aggregation                               | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Switch Management Capabilities                 | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      |
| License - Upgrades                             | MPLS, H-QoS                             | MPLS, H-QoS                             | MPLS, H-QoS                             | –                                       | MPLS                                    | Core                                    | Core                                    |
| License - Default                              | Core                                    | Core                                    | Core                                    | Core                                    | Core                                    | Advanced Edge                           | Advanced Edge                           |
| BLACKDIAMOND<br>F E A T U R E S                |   |   |   |   |   |   |   |

# SUMMIT

|   | X650                                    | X450a                                   | X450e                              | X250e                              | X350                               | X150                               |
|---|---|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Max Auto-Negotiating 10/100BASE-TX Ports          | –                                       | –                                       | –                                  | 24 (SFP available) or 48           | –                                  | 24 or 48                           |
| Max Auto-Negotiating 10/100/1000BASE-T Ports      | –                                       | 24 or 48                                | 24 or 48 (both with PoE)           | 2                                  | 24 or 48                           | 2                                  |
| Max 1 Gigabit Ethernet Ports (SFP)                | 4                                       | 4                                       | 4                                  | 2                                  | 4                                  | 2                                  |
| Max 10 Gigabit Ethernet Ports (XFP, XENPAK, SFP+) | 24 (default), 32 (with VIM1-10G8X)      | 2                                       | 2                                  | –                                  | 2                                  | –                                  |
| Form Factor/ Footprint                            | Fixed/ 1RU                              | Fixed/ 1RU                              | Fixed/ 1RU                         | Fixed/ 1RU                         | Fixed/ 1RU                         | Fixed/ 1RU                         |
| Stacking Support                                  | Yes, SummitStack                        | Yes, SummitStack                        | Yes, SummitStack                   | Yes, SummitStack                   | No                                 | No                                 |
| Total Switching Capacity                          | 488-680 Gbps                            | 128-256 Gbps                            | 128-256 Gbps                       | 48.8-97.6 Gbps                     | 88-176 Gbps                        | 8.8-13.6 Gbps                      |
| Redundant Power                                   | Yes/ Hot Swappable                      | Yes/ External                           | Yes/ External                      | Yes/ External                      | Yes/ External                      | Yes/ External                      |
| Power over Ethernet (802.3af)                     | No                                      | No                                      | Yes                                | Yes                                | No                                 | Summit X150-24p                    |
| Wire-Speed Layer 2/ Layer 3 Switching             | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Routing - IPv4                                    | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | BGP4, IS-IS, OSPF, RIP v1/v2, PIM, MSDP | OSPF, RIP v1/ v2, PIM              | OSPF, RIP v1/ v2, PIM              | No                                 | No                                 |
| Routing - IPv6                                    | RIPng, OSPFv3, IS-IS                    | RIPng, OSPFv3, IS-IS                    | RIPng                              | RIPng                              | No                                 | No                                 |
| Policy-Based Routing/Switching                    | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes/ Policy-Based Switching        | Yes/ Policy-Based Switching        |
| Policy-Based Quality of Service (QoS)             | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Network Login                                     | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Access Control Lists                              | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Universal Port                                    | Yes                                     | Yes                                     | Yes                                | Yes                                | No                                 | No                                 |
| CLI Scripting                                     | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Widgets   | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| vMANs (802.1ad)                                   | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| CLEAR-Flow  | Yes                                     | Yes                                     | No                                 | No                                 | No                                 | No                                 |
| sFlow   | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| EAPS  | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Advanced Spanning Tree (802.1w, 802.1s, PVST+)    | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Link Aggregation                                  | Yes                                     | Yes                                     | Yes                                | Yes                                | Yes                                | Yes                                |
| Switch Management Capabilities                    | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups      | SNMP, XML, Web, CLI, 4 RMON groups | SNMP, XML, Web, CLI, 4 RMON groups | SNMP, XML, Web, CLI, 4 RMON groups | SNMP, XML, Web, CLI, 4 RMON groups |
| License - Upgrades                                | Core                                    | Core                                    | Advanced Edge                      | Advanced Edge                      | –                                  | –                                  |
| License - Default                                 | Advanced Edge                           | Advanced Edge                           | Edge                               | Edge                               | Layer 2-Edge                       | Layer 2-Edge                       |

# LEGACY

|  | Alpine 3808                       | Alpine 3804                       | Summit48si                        |
|--|-----------------------------------|-----------------------------------|-----------------------------------|
| Max Auto-Negotiating 10/100BASE-TX Ports       | 256                               | 128                               | 48                                |
| Max Auto-Negotiating 10/100/1000BASE-T Ports   | 128                               | 64                                | 0                                 |
| Max Gigabit Ethernet Ports (GBIC or Mini-SFP)  | 128                               | 64                                | 2                                 |
| Form Factor/Footprint                          | Chassis/12RU                      | Chassis/6RU                       | Fixed/1RU                         |
| Total Switching Capacity                       | 64 Gbps                           | 32 Gbps                           | 17.5 Gbps                         |
| Redundant Power                                | Yes                               | Yes                               | Yes                               |
| Wire-Speed Layer 2/<br>Layer 3 Switching       | Yes                               | Yes                               | Yes                               |
| Routing - IPv4                                 | BGP4, DVMRP, OSPF, RIP v1/v2, PIM | BGP4, DVMRP, OSPF, RIP v1/v2, PIM | BGP4, DVMRP, OSPF, RIP v1/v2, PIM |
| Policy-Based Routing/Switching                 | Yes                               | Yes                               | Yes                               |
| Policy-Based Quality of Service (QoS)          | Yes                               | Yes                               | Yes                               |
| Network Login                                  | Yes                               | Yes                               | Yes                               |
| Access Control Lists                           | Yes                               | Yes                               | Yes                               |
| vMANs (802.1ad)                                | Yes                               | Yes                               | Yes                               |
| sFlow  | Yes                               | Yes                               | Yes                               |
| EAPS   | Yes                               | Yes                               | Yes                               |
| Advanced Spanning Tree (802.1w, 802.1s, PVST+) | Yes                               | Yes                               | Yes                               |
| Link Aggregation                               | Yes                               | Yes                               | Yes                               |
| Switch Management Capabilities                 | SNMP, Web, CLI, 4 RMON groups     | SNMP, Web, CLI, 4 RMON groups     | SNMP, Web, CLI, 4 RMON groups     |
| License - Upgrades                             | Full Layer 3                      | Full Layer 3                      | Full Layer 3                      |
| License - Default                              | Basic Layer 3                     | Basic Layer                       | Basic Layer                       |