

CAMPUS & ACCESS

# CAMPUS AND ACCESS SWITCH

## SN-3848GP-6XG

L3HCX, 48\*1G ETH, 6\*10G, PoE, Single PSU 440w (PoE Budget 400w), USB+OOB+Console  
2GB DDR+4GB EMMC



## HIGHLIGHTS

- Full L3 Features with Commonly-Used Unicast and Multicast Routing
- Protocols, Redundant Routing Protocols, and DHCP Relay and Server
- Enhanced Security and IPv6
- Ports 48x1G RJ-45 Ports + 6x10G SFP+ Uplink Ports
- MAC/Port based security Syslog
- PoE 802.3af 802.3at 60W PoE Time Based PoE
- Enterprise access switching with high-speed fiber uplinks
- Advanced Layer 2 and Layer 3 network services
- Secure management, policy enforcement, and traffic control
- Flexible PoE, power, and cooling options across supported models

**3848GP-6XG**

MODEL

**CAMPUS & ACCESS**

PLATFORM

**CUSTOM CONFIGURATION**

AVAILABLE

## PRODUCT SPECIFICATIONS

SN-3848GP-6XG is a campus and access switch configured for L3HCX, 48\*1G ETH, 6\*10G, PoE, Single PSU 440w (PoE Budget 400w), USB+OOB+Console 2GB DDR+4GB EMMC.

|                      |                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------|
| Product              | SN-3848GP-6XG                                                                                     |
| Platform             | Campus and Access Switch                                                                          |
| Application          | L3HCX, 48*1G ETH, 6*10G, PoE, Single PSU 440w (PoE Budget 400w), USB+OOB+Console 2GB DDR+4GB EMMC |
| Source specification | Corresponding technical product series datasheet                                                  |

### Technical Characteristics

| Characteristic        | Specification                                |
|-----------------------|----------------------------------------------|
| MAC Address Table     | MAC Address Table 32 K                       |
| Forwarding Rate       | Packet forwarding rate 321.4 Mpps            |
| Dimensions            | Dimensions 440x280x44mm                      |
| Weight                | Net Weight 4.7kgs                            |
| Operating Temperature | Operating Temperature 0°C to 50°C            |
| Operating Humidity    | Operating Humidity 5% - 95% (non-condensing) |

*The product configuration and applicable interface, power, cooling, and software options are defined by the selected model and project requirements.*

# NETWORK FEATURES

## Quality of Service

|                                                   |                                             |
|---------------------------------------------------|---------------------------------------------|
| Traffic classification and prioritization         | Strict priority and weighted scheduling     |
| Rate limiting, traffic shaping, and policing      | Policy maps and class-based traffic actions |
| QoS based on IP, MAC, VLAN, and protocol criteria |                                             |

## Security

|                                           |                                             |
|-------------------------------------------|---------------------------------------------|
| RADIUS and TACACS+ authentication         | Port security and role-based access control |
| DHCP snooping and IP source protection    | Access-control lists and management ACLs    |
| DoS protection, secure copy, SSH, and SSL |                                             |

## Layer 2

|                                               |                                                   |
|-----------------------------------------------|---------------------------------------------------|
| 802.1Q VLANs, QinQ, and private VLAN services | STP, RSTP, and MSTP loop prevention               |
| Link aggregation and LACP                     | Port mirroring, isolation, and loopback detection |
| LLDP and LLDP-MED neighbor discovery          |                                                   |

## Layer 3

|                                                       |                                         |
|-------------------------------------------------------|-----------------------------------------|
| IPv4 and IPv6 dual-stack operation                    | Static routing and inter-VLAN routing   |
| Policy-based routing and route maps                   | DHCP server, relay, and client services |
| OSPF and RIP capabilities on supported configurations |                                         |

## Multicast

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| IGMP and MLD snooping       | PIM multicast routing on supported configurations |
| Multicast VLAN registration | Traffic containment and multicast policy control  |

## High Availability

|                                                             |                                                         |
|-------------------------------------------------------------|---------------------------------------------------------|
| Redundant network protocols and equal-cost multipath        | Virtual router redundancy                               |
| Storm control for broadcast, multicast, and unicast traffic | Stacking or redundant chassis operation where supported |

# MANAGEMENT & COMPLIANCE

## Management

|                                                  |                                                          |
|--------------------------------------------------|----------------------------------------------------------|
| Web-based graphical interface                    | Industry-standard command-line interface                 |
| SSH, Telnet, SNMP, and syslog integration        | Controller-based or standalone operation where supported |
| USB, console, and out-of-band management options |                                                          |

## Monitoring and Diagnostics

|                                                                |                                         |
|----------------------------------------------------------------|-----------------------------------------|
| System event, alarm, and operating logs                        | Port and traffic statistics             |
| Temperature, power-supply, and fan monitoring where applicable | Ping, traceroute, and cable diagnostics |
| Digital diagnostic monitoring on supported optical interfaces  |                                         |

## Standards and Compliance

|                                                   |                                                       |
|---------------------------------------------------|-------------------------------------------------------|
| IEEE 802.1 and 802.3 Ethernet standards           | RoHS environmental compliance                         |
| CE and FCC regulatory conformity where applicable | Energy-efficient Ethernet on supported configurations |
| PoE and PoE+ standards on power-enabled models    |                                                       |

## Source-Specified Standards

|                                                                    |
|--------------------------------------------------------------------|
| Switching Performance                                              |
| FCC Class A/CE/Safety                                              |
| Compliance: CB/Safety                                              |
| Compliance: UL                                                     |
| LAG / LACP Flow Control 802.3x                                     |
| Quality of Service                                                 |
| Access Control and logging Radius Authentication/Accounting/802.1x |
| Ace priority DHCP Snooping                                         |

# DETAILED TECHNICAL SPECIFICATIONS

TECHNICAL DATA | 1 OF 4

## HARDWARE SPECIFICATIONS

|                        | 1G RJ45<br>Downlinks | 10G SFP+<br>Uplinks | PoE<br>Budget/<br>W | Internal PSU | Hot<br>Swappable<br>PSU | Hot<br>Swappable<br>Fans |
|------------------------|----------------------|---------------------|---------------------|--------------|-------------------------|--------------------------|
| SN-3848G-6XG           | 48                   | 6                   | -                   | 1            | -                       | -                        |
| SN-3848GP-6XG          | 48                   | 6                   | 400                 | 1            | -                       | -                        |
| SN-3848GMP-6XG         | 48                   | 6                   | 740                 | 1            | -                       | -                        |
| SN-3848G-6XG-RPS       | 48                   | 6                   | -                   | 2            | -                       | -                        |
| SN-3848G-6XG-2-HSP-HSF | 48                   | 6                   | -                   | -            | 2                       | 3+1                      |
| SN-3848GP-6XG-RPS      | 48                   | 6                   | 400                 | 2            | -                       | -                        |
| SN-3848GMP-6XG-RPS     | 48                   | 6                   | 740                 | 2            | -                       | -                        |

Each switch has USB, OOB, and Console interfaces.

## Switching Performance

|                        |                                             |
|------------------------|---------------------------------------------|
| Switch ASIC            | 98DX3510                                    |
| Ports                  | 48x1G RJ-45 Ports + 6x10G SFP+ Uplink Ports |
| Capacity               | 216 Gbps                                    |
| MAC Address Table      | 32 K                                        |
| Packet forwarding rate | 321.4 Mpps                                  |
| Buffer                 | 24 Mbit                                     |
| Jumbo Frame            | Support 10Kbytes                            |
| Forwarding delay       | <5us                                        |
| MDX/MIDX               | Support                                     |

## Hardware

|            |        |
|------------|--------|
| Nand Flash | 512 MB |
| DDR        | 2 GB   |

## Physical and Environmental

|                       |                           |
|-----------------------|---------------------------|
| Dimensions            | 440x280x44mm              |
| Net Weight            | 4.7kgs                    |
| Operating Temperature | 0 ° C to 50 ° C           |
| Operating Humidity    | 5% - 95% (non-condensing) |

## Approvals

|             |                       |
|-------------|-----------------------|
|             | FCC Class A/CE/Safety |
| Certificate | Compliance: CB/Safety |
|             | Compliance: UL        |

# DETAILED TECHNICAL SPECIFICATIONS

TECHNICAL DATA | 2 OF 4

## MARVELL ROS SOFTWARE FEATURES

### Basic Functions

|                               |                                                   |
|-------------------------------|---------------------------------------------------|
| Port Speed/duplex management  | VLANs (Protocol / MAC / IPv4 based)               |
| Port Auto management          | GVRP/GARP                                         |
| VCT Diagnostics Port features | Multicast/CPE(Triple Play) VLAN                   |
| Jumbo Frames (FE and GE)      | QinQ                                              |
| LAG / LACP                    | Flow Control 802.3x                               |
| Green Ethernet                | Back Pressure                                     |
| STP/RSTP/MSTP etc.            | Loopback and UDLD (Unidirectional link) detection |
| Optical Transceiver Analysis  |                                                   |

### Quality of Service

|                                      |                       |
|--------------------------------------|-----------------------|
| Basic / Advanced QOS (Port/Flow)     | CoS/QoS               |
| Ingress/egress Rate Limiting/Shaping | SP/WRR Queue settings |
| L2/L3 CoS->Queue mapping             | Per-Flow Actions      |

### Security

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| Access Control and logging              | Radius Authentication/Accounting/802.1x |
| Time based ACL                          | TACACS+ Client and Accounting           |
| MAC/Port based security                 | Syslog                                  |
| Ace priority                            | DHCP Snooping                           |
| 802.1x enhanced (all variants)          | ARP inspection                          |
| 802.1x MAC/Port/Web/Time based          | IP Source Guard                         |
| Secure Control Technology (protect CPU) | DoS Attack prevention                   |
| MACsec                                  |                                         |

### Monitoring

|                       |                                        |
|-----------------------|----------------------------------------|
| Mirroring SPAN/RSPAN  | Environmental PS/RPS, FAN, Temperature |
| RMON/SMON             | SFLOW v5                               |
| SNMP v1/2/3 with MIBs | Counters with History                  |

### Multicast

|                      |                    |
|----------------------|--------------------|
| IGMP Snooping v1/2/3 | *PIM-SM (optional) |
| MLD Snooping v1/2    | IGMP/MLD Proxy     |
| MLD Querier          | Ports, Flows, CP   |
| Unregistered Mcast   |                    |

# DETAILED TECHNICAL SPECIFICATIONS

TECHNICAL DATA | 3 OF 4

## Management

|                                                                            |                                          |
|----------------------------------------------------------------------------|------------------------------------------|
| OOB & serial Console support                                               | DNS, DHCP, SNTP, LLDP-MED, UpnP          |
| CLI/SNMP management (IPv4,IPv6) over Telnet or SSH LLDP 802.1ab + LLDP MED |                                          |
| USB/SD flash storage support                                               | WEB-GUI interface for basic management   |
| DHCP based Self-Configuration/Update                                       | Time based scheduled features            |
| Multi-File Configs, Dual-Firmware                                          | *Detailed REST compatible API (Optional) |
| RMON, Syslog, Radius, TACACS+                                              |                                          |

## Power Over Ethernet

|                                  |                         |
|----------------------------------|-------------------------|
| PoE 802.3af 802.3at 60W PoE      | Time Based PoE          |
| PoE Budget with LLDP negotiation | PoE Consumption monitor |
| PSE/PD if HW supported           |                         |

## \*IP Routing (Optional)

|                                 |                                                  |
|---------------------------------|--------------------------------------------------|
| L3 DHCP Relay                   | IP SLA                                           |
| Proxy ARP for IP Routing        | Loopback IP interface (Source Address Selection) |
| OSPF / RIP                      | Directed Broadcast                               |
| Equal Cost Multiple Path (ECMP) | UDP Relay                                        |
| VRRP                            | IPv6 static unicast routing                      |

## \*Stacking (Optional)

|                                                   |                                               |
|---------------------------------------------------|-----------------------------------------------|
| Optional Stacking up to 8(16) units using uplinks | Real cross-unit features, not just Management |
| Stand-alone and Stack-mode operation              | Stack Master Election process                 |
| Firmware Version Control                          | Stack Backup capabilities                     |
| Unit joining or leaving the stack                 | Stacking Fast Failover                        |
| Stacking LAG                                      |                                               |

## \*Optional Features for ROS

|                                             |            |
|---------------------------------------------|------------|
| Ring protection                             | VxLAN      |
| WEB-GUI with flexible configuration options | Radius COA |
| PTP                                         | BGP        |

# DETAILED TECHNICAL SPECIFICATIONS

TECHNICAL DATA | 4 OF 4

## ORDERING INFORMATION

| Model                  | Description                                                                                       |
|------------------------|---------------------------------------------------------------------------------------------------|
| SN-3848G-6XG           | 48x1G ETH, 6x10G Uplinks, Non-PoE, Single PSU 36w, 2GB DDR+512MB Nand Flash                       |
| SN-3848GP-6XG          | 48x1G ETH, 6x10G Uplinks, PoE, Single PSU 440w (PoE Budget 400w), 2GB DDR+512MB Nand Flash        |
| SN-3848GMP-6XG         | 48x1G ETH, 6x10G Uplinks, PoE, Single PSU 850w (PoE Budget 740w), 2GB DDR+512MB Nand Flash        |
| SN-3848G-6XG-RPS       | 48x1G ETH, 6x10G Uplinks, Non-PoE, RPS Internal 2 PSU, 36w, 2GB DDR+512MB Nand Flash              |
| SN-3848G-6XG-2-HSP-HSF | 48x1G ETH, 6x10G Uplinks, Non-PoE, Hot-swap 1+1 PSU 350w, Hot swappable 3+1 fans, 2GB RAM+4G EMMC |
| SN-3848GP-6XG-RPS      | 48x1G ETH, 6x10G Uplinks, RPS Internal 2 PSU 440w (PoE Budget 400w), 2GB DDR+512MB Nand Flash     |
| SN-3848GMP-6XG-RPS     | 48x1G ETH, 6x10G Uplinks, RPS Internal 2 PSU 850w (PoE Budget 740w), 2GB DDR+512MB Nand Flash     |

Models include a 1-year HW Warranty.





# SUPPORT & CUSTOM ENGINEERING

| Service Area          | SIDERA Intelligent Systems Capability                                         |
|-----------------------|-------------------------------------------------------------------------------|
| Technical support     | Pre-sales, deployment, configuration, and operational assistance              |
| Product customization | Customer-specific hardware, software, interface, and mechanical modifications |
| Project engineering   | Application review, design adaptation, validation, and implementation support |
| Lifecycle support     | Documentation, troubleshooting, maintenance guidance, and upgrade planning    |

## TECHNICAL SUPPORT & CUSTOM ENGINEERING

SIDERA Intelligent Systems provides comprehensive technical support and customer-specific product customization, tailored to individual operational and project requirements.

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Technical specifications are subject to change without notice.