



DISAGGREGATED CELL SITE GATEWAY LN-3604G8GF-6Y

As the internet data are growing at unprecedented rate due to advancements of 5G, IoT and always connected device, the capacity demand for telecom network is soaring. Locating at the edge of the network, the cell site gateway is high volume deployment product and an ideal location for mobile operators for high-volume cell site and aggregation routing applications.



Product Highlights

- Temperature hardened design for harsh environments
- Precision Timing and Synchronization (IEEE1588v2 & SyncE)
- Compact 1RU design at 250mm depth
- High availability in redundant design: 1+1 PSU Module, and 4+1 Fan Tray
- Serviceability: all I/O and replaceable FRUs are front access for easy maintenance
- Hardware support MACsec IEEE 802.1AE for strong cryptographic protection at Layer 2 data transmission
- Hardware support TSN IEEE 802.1CM Profile B Frame Preemption
- Hardware support SRv6

Open and disaggregated hardware and software solution can reduce CSPs' costs, increase choice, and speed up the pace of innovation to meet the dynamic of market demands. LN-3604G8GF-6Y is engineered with the latest Marvell Prestera™ Family with diverse connectivity, timing synchronization capability, and temperature hardened design all integrating into a compact 1RU design for telecommunications network.

LN-3604G8GF-6Y is an open hardware design that support the Open Network Install Environment (ONIE) that provides options of installation of alternate



APPLICATIONS

- X-Haul Ethernet Transport Switch in Private Networks
- Mobile Backhaul Router
- Carrier Access Switch

HARDWARE SPECIFICATION

Function/parameter	Value
Interfaces	4 x 1G RJ45 ports 8 x 1G SFP ports 6 x 10/25G SFP28 ports 1 x RJ45 Mgmt port 1 x RJ45 Console port 1 x USB Type A Mgmt port
Timing Interfaces	1 x ToD Input/Output 1 x 10MHz Input/Output 1 x 1pps Input/Output
GNSS	1 x GNSS Antenna Receiver
CPU	ARM Cortex-A55 2C/1.6GHz
Switch Silicon	Marvell 98DX3500M+88E1548P
Memory	4GB DDR4 w/ ECC
Storage	32GB eMMC
Hardware	Performance
Forwarding Bandwidth	162 Gbps
MACsec Forwarding	162 Gbps
OAM Support	Hardware-based OAM engine
Buffer Size	3MB
Hardware Timing Capability	ITU-T Synchronous Ethernet (SyncE) ITU-T G.8262 IEEE 1588v2 T-TC,T-BC Class C ITU-T G.8275.1
TSN	IEEE 802.1CM TSN for Fronthaul Profile B Frame Preemption
SRv6	Yes
Power Supply	
AC input	100 ~ 240V, 50 ~ 60Hz
DC input	36 ~ 75V
Power	140 Watts (Typical)
Consumption	170 Watts (Max) Redundant 1+ 1 fixed PSU
Environment Conditions	
Operating	Operating temperature: -40°C to 65°C (-40°F to 149°F) Operating humidity: 5% to 95% (RH), noncondensing
Non-Operating	Storage temperature: -40°C to 70°C (-40°F to 158°F) Storage humidity: 5% to 95% (RH), non-condensing
Regulatory Compliance	
Safety	UL 62368-1 IEC/EN 62368-1 IEC/EN 60950-1
EMC	FCC, Part 15, Class A CE EN55032 – Class A EN60801 ETS 300 386-2-2 IEC 1000-4-3 ETSI EN 300 132-1 ETSI 300 386-2
Physical	
Cooling	Side-to-side, Fixed 4+1 Fans
Dimension	440mm(W) x 250mm(D) x 44mm(H)
Weight	3.5KG (NW)

Marvell ROS SOFTWARE FEATURES

Basic Functions

- Port Speed/duplex management
- Port Auto management
- VCT Diagnostics Port features
- Jumbo Frames (FE and GE)
- LAG / LACP
- Green Ethernet
- STP/RSTP/MSTP etc.
- VLANs (Protocol / MAC / IPv4 based)
- GVRP/GARP
- Multicast/CPE(Triple Play) VLAN
- QinQ
- Flow Control 802.3x
- Back Pressure
- 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
- Time based ACL
- MAC/Port based security
- Ace priority
- 802.1x enhanced (all variants)
- 802.1x MAC/Port/Web/Time based
- Radius Authentication/Accounting/802.1x
- TACACS+ Client and Accounting
- Syslog
- DHCP Snooping
- ARP inspection
- IP Source Guard
- Secure Control Technology (protect CPU)
- DoS Attack prevention

Monitoring

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

*Optional Features for ROS

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

Multicast

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

Management

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

Power Over Ethernet

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

*IP Routing (Optional)

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

*OpenROS Concept (Optional features)

- Linux inside switch CPU (Debian/Ubuntu)
- All ROS functions as Linux process
- Support of any linux compatible devices, binary kernel modules supported.
- Virtual interfaces to flow traffic switch<->linux
- Internal virtual loopback to allow switch control
- Works on ARM and x86

