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LBJetNet385628G

## Introduction

The LBJetNet385628G is an Industrial Modular Managed Ethernet Switch, equipped with 3 modular slot for maximum 24 10/100 Base-TX Ports or 18 100Base-FX Fiber interfaces ports plus 4 Gigabit RJ45 / MINI GBIC combo ports.

The LBJetNet385628G, a special design for substation automation and industrial control room, meets the IEC61850-3, IEEE1613 high level environment certifications(pending). Dual high power, 85-264VAC/VDC and 18-48VDC power input are flexible for field power constructions.

The advantage of choosing the LBJetNet385628G is that the switch supports 4 gigabit ports which allow users to trunk up to 8G uplink bandwidth or to form 2 independent Gigabit rings. The 24 100M interface allows to form 12 100M rings for a reliable network redundancy. The switch also supports Jumbo Frame forwarding up to 9.2Kbytes. The large files transmitting in industrial environments becomes more efficient and solid.

To fulfill the advanced management, control and security in power substations and control rooms, the LBJetNet385628G supports various software features. The VLAN, QoS, IGMP, layer 2/4 Access Control List, 802.1x, SNMP V3, LLDP, etc. complete the demand and greatly satisfy technicians' requests.

## Features

- 3 modular slots design enables you to add up to 24 10/100-TX or 18 100Base-FX
- 4 On-Board Gigabit RJ-45/SFP combo ports support 10/100/1000 Base-TX, 1000 Base-X SFP
- 12.8G Non-Blocking Switching Performance and up to 16K MAC Address table
- Compliant with IEC61850-3, IEEE1613 Power Substation Standards
- Supports Jumbo Frame up to 9,216 bytes
- Korenix Multiple Super Ring (Rapid Dual Homing, MultiRing, TrunkRing, RSR, SR) and RSTP
- Supports 255 VLANs, 8 QoS priority and IGMP snooping
- Supports Link Layer Discovery Protocol (LLDP), SNMPv3, DHCP Server/Option 82 and JetView Discovering and Management
- Advanced Security by 802.1x and Access Control List
- Supports high voltage AC/DC input, 18-48VDC power input

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## Specifications

Technology	
Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-TX IEEE 802.3z Gigabit Ethernet Fiber IEEE 802.3x Flow Control and Back-pressure IEEE 802.1p class of service IEEE 802.1Q VLAN and GVRP IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) IEEE802.3ad LACP IEEE802.1X Port_based Network Access Control IEEE802.1AB Link Layer Discovery Protocol
Performance	
Switch Technology	Store and Forward Technology, 12.8Gbps Wire-Speed Switching
System Throughput	14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size	Typical: 64 bytes to 1536 bytes
Jumbo Frame Enabled	Up to 9,216bytes
MAC Address	16K MAC
Packet Buffer	32Mbits
Relay Alarm	Dry Relay output with 1A@24V ability
Management	
Configuration	Cisco-Like CLI, JetView, Web, HTTPS backup/restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time, Jumbo Frame Enable/Disable
Jumbo Frame Enabled	Up to 9,216bytes
LLDP	Link Layer Discovery Protocol to advertise system/port identity and capability on the local network
SNMP	SNMP v1, v2c, v3 and Traps.
SNMP MIB	MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
Port Trunk	Static Trunk and 802.3ad LACP , Up to 6 Trunk Group, 8 ports per trunk
VLAN	IEEE802.1Q VLAN, GVRP. Up to 255 VLAN groups
Quality of Service	Eight priority queues, adjustable ratio of QoS forwarding IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping	IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query
Rate Control	Ingress filtering for Broadcast, Multicast, Unknown DA or All packets, step by 64kbps
NTP	Network Time Protocol to synchronize time from Internet
IEEE1588 Precision Time Protocol (PTP)	Average convergence time is up to 100uS (micro-second)
Embedded Watchdog	Embedded hardware watchdog timer to auto reset system when switch system failure

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Port Mirroring	Online traffic monitoring on multiple selected ports
Port Security	Assign authorized MAC to specific port
IP Security	IP security to prevent unauthorized access
802.1x	Port_based Network Access Control
Access Control List(ACL)	Layer 2+ ACL Security
DHCP Option 82	Relay DHCP Request to different IP subnet
DHCP server	Can assign 255IP address, support IP and MAC binding
E-mail Warning	Automatic warning by pre-defined events
System Log	Supports both Local mode and Server mode
<b>Network Redundancy</b>	
Rapid Spanning Tree Protocol	IEEE802.1D-2004 Rapid Spanning Tree Protocol, compatible with Legacy STP and IEEE802.1w
Multiple Super Ring (MSR)TM	New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing, MultiRing and backward compatible with legacy Super Ring
Rapid Dual Homing (RDH)	Multiple uplink paths to one upper switch or multiple upper switch
TrunkRing	Integrate port aggregate function in ring path to get higher throughput ring architecture
MultiRing	Couple or multiple up to 16 Rapid Super Rings
Legacy Super Ring	Backward compatible in client mode
<b>Interface</b>	
Number of Fixed Gigabit Ports	10/100/1000Base-TX: 4 x RJ-45, combo with SFP 1000Base-X: 4 x SFP with Hot Swappable
Number of Ports in Modules	LBJNM385-8TX: 8 x 10/100Base-TX, Auto MDI/MDI-X, Auto Negotiation LBJNM385-2SFP/4MSC: 2 x 100Base-FX SFP plus 4 x 100Base-FX Multi mode LBJNM385-2SFP/4SSC: 2 x 100Base-FX SFP plus 4 x 100Base-FX Single mode LBJNM385-4TX/4SFP: 4 x 10/100Base-TX plus 4 x 100Base-FX SFP
Cables:	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m) 100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m) 1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)
Diagnostic LED	System: Power 1/2(Green), RDY(Ready) (Green), Digital Input 1/2(Green), Ring Master(Green), Digital Output 1/2(Red), Ring Fail (Red) 10/100 RJ-45: Link/Activity (Green/Green Blinking) Gigabit Copper/SFP: Link/Activity (Green/Green Blinking)
RS232 Console	DB9 Connector, Pin3: TxD, Pin2: RxD, Pin5:GND
Power	LBJetNet385628G: 1 x AC+1 x LDC LBJetNet385628G-2AC: 2 x AC LBJetNet385628G-HDC: 1 x HDC + 1 x LDC LBJetNet385628G-2HDC: 2 x 2 HDC
Digital Input	2 sets of Digital Input logic low (0): 0-10VDC/Logic High(1):11-30VDC
Alarm	2 sets of Relay outputs for configurable events
Alarm Events	Power and Ports Failure, DI state, DO state, Ping Failure, Super Ring Topology Change

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## Power Requirements

Power	AC: 85-264VAC LDC (Low DC input): 18-48VDC HDC (High DC Input): 88-370VDC
Power Consumption	Maximum 35 Watts

## Mechanical

Installation	19-inch, 1U Rack Mount
Case	Aluminum metal case
Dimensions	44mm(H) x 431mm (W) x 375mm (D)
Weight	3.5-4 kg with package

## Environmental

Operating Temperature	-25 to 70°C
Operating Humidity	5% to 95% (non-condensing)
Storage Temperature	-40 to 85 °C
Hi-Pot	1.5KV for ports and power

## Regulatory Approvals

Power Automation	IEC 61850-3, IEEE 1613 (Pending)
EMI	FCC Class A, CE/EN55022. Class A
EMS	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety	UL, cUL, EN60950 (Pending)
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Free Fall	IEC 60068-2-32
MTBF	Above 200,000 Hours, MIL-HDBK-217F GB standard
Warranty	Global 5 years

## Modules

**LBJNM385-8TX:** 8 ports 10/100Base-TX module



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**LBJNM385-2SFP/4MSC:** 2 ports 100Base-FX SFP + 4 ports 100Base-FX/SC Multi-mode  
**LBJNM385-2SFP/4SSC:** 2 ports 100Base-FX SFP + 4 ports 100Base-FX/SC Single-mode

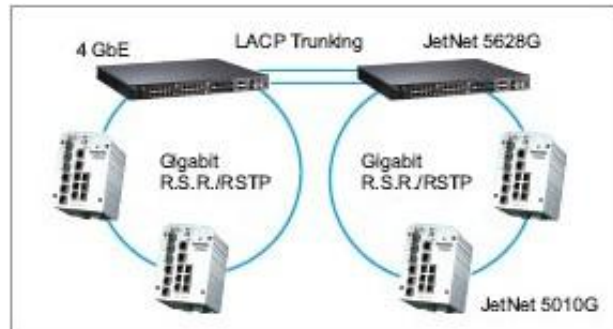
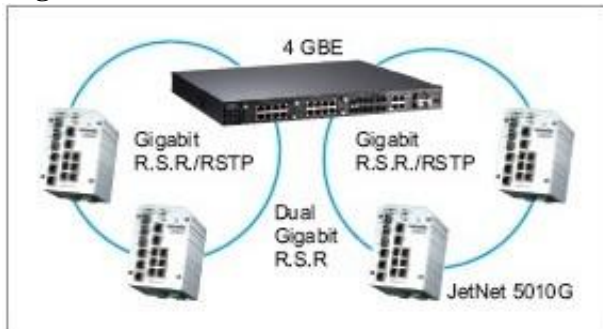


**LBJNM385-4TX/4SFP:** 4 ports 10/100Base-TX + 4 100FX-SFP

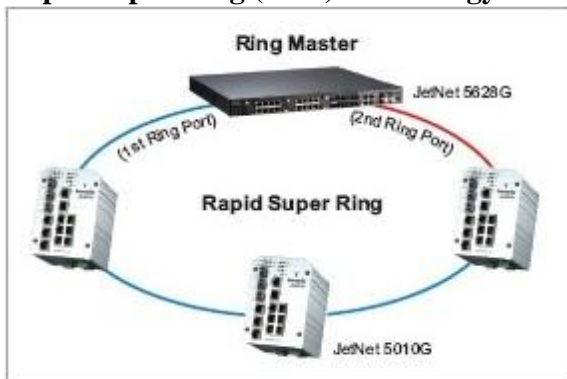


## Applications

### High Bandwidth and Performance



### Rapid Super Ring (RSR) Technology

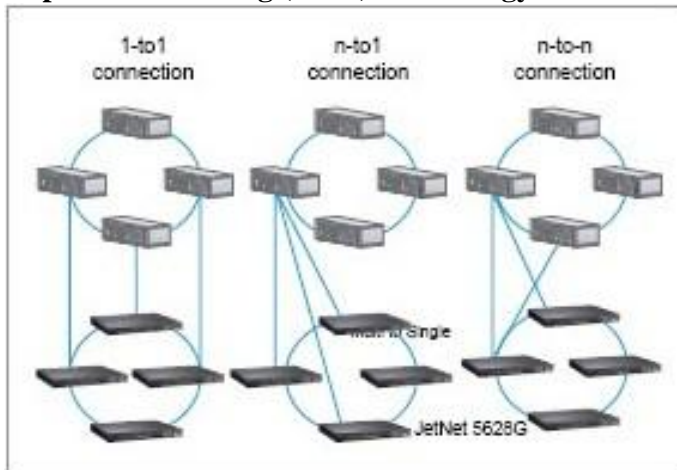


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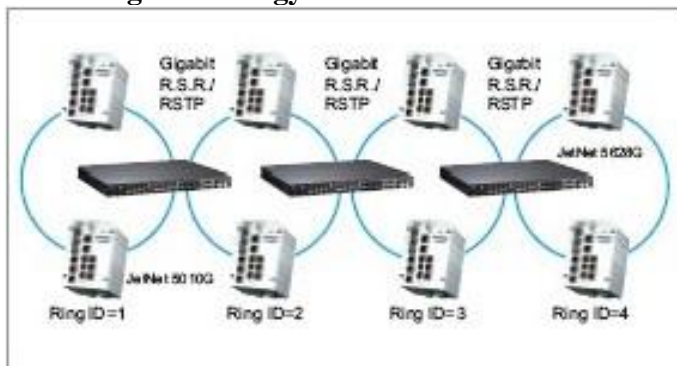
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## Rapid Dual Homing (RDH) Technology



## MultiRing Technology



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