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JetNet 6910G/7714G M12 Railway Ethernet Switch
Quick Installation Guide V1.1

Overview

The JetNet 6910G/7714G series are Managed Ethernet Switch with rugged connection for Railway communication. It adopts M12 connector to make well connection with Enclosure interface for In-Train application, including Power, Ethernet and console/USB interfaces. This Quick Installation Guide will guide you on system installation and wiring the interfaces.

Package Check List

▸ M12 Switch
▸ Console (M12-A/DB9 RS232) cable
▸ Mounting Kits
▸ Quick Installation Guide

Powering System

The JetNet Railway M12 Switch is designed for Train on-board IP Surveillance application. The Switch's power input voltage is fully compliant with train's power system. The specification of power input voltage shows in table following.
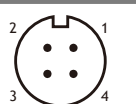
Specification of System Power

Power Type	HVDC	LVDC
Typical Input Voltage	DC 110V	DC 24V
Voltage Variation (V)	77–137.5	16.8–30
Power Redundant	√	√
Reverse Protection	√	√

System Wiring

The railway Ethernet Switch adopts several type of M12 connectors for the power, Ethernet signal, management &USB Flash Disk for management and system backup. Therefore, the connection is different from the traditional Ethernet connector. The figures as following describe the definition of each conductor.
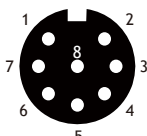
Power Connector – M12 A-Code 4-PIN, Male

Pin Assignment drawing	Pin	Description
	1	Power-2, DC+
	2	Power-1, DC+
	3	Power-1, DC -
	4	Power-2, DC -

Specification of Power Cable – AWG/ mm²			
Model	AWG	mm²	Current (A)
HVDC (DC 110V version)	18	0.82	2.3 (Max)
LVDC (DC 24V version)	13	2.62	7.4 (Max)

JetNet 6910G GbE – M12 X-Code 8-PIN, Female

Cat-6, Cat-7 Shielding Twisted Cable, 24–26AWG			
Pin Assignment drawing	Pin	Description	PoE
	1	Bidirectional (0)+	PoE V+ / P
	2	Bidirectional (0)-	PoE V+ / P
	3	Bidirectional (1)+	PoE V- / N
	4	Bidirectional (1)-	PoE V- / N
	5	Bidirectional (3)+	
	6	Bidirectional (3)-	
	7	Bidirectional (2)-	
	8	Bidirectional (2)+	
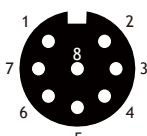
JetNet 7714G GbE – M12 A-Code 8-PIN, Female

Cat-6, Cat-7 Shielding Twisted Cable, 24–26AWG		
Pin Assignment drawing	Pin	Description
	1	Bidirectional (3)-
	2	Bidirectional (3)+
	3	Bidirectional (2)-
	4	Bidirectional (2)+
	5	Bidirectional (1)-
	6	Bidirectional (1)+
	7	Bidirectional (0)-
	8	Bidirectional (0)+

JetNet 6910G/7714G FE – M12 D-Code 4-PIN, Female

Cat-6, Cat-7 Shielding Twisted Cable, 24–26AWG			
Pin Assignment drawing	Pin	Description	PoE
	1	TX+	PoE V+ / P
	2	RX+	PoE V- / N
	3	TX-	PoE V+ / P
	4	RX-	PoE V- / N

Console/ USB Backup Port – M12 A-Code 8 PIN, Female

RS-232 Console		
Pin Assignment drawing	Pin	Description
	1	RS232_TX
	2	RS232_RX
	3	RS232_GND
	4	N/A
	5	USB Data+
	6	USB Data-
	7	USB power (5V)
	8	USB Ground

Software Setup

You can configure the switch via the RS-232 console interface with the attached console cable. Or you can remotely manage the switch via network. You can choose Telnet/SSH, Web/HTTPS management.

Preparation for console management

Attach the RS-232 DB9 connector to your PC's COM port. Connect the M12-A connector to the console port of the JetNet Switch.

1. Go to Start ▸ Program ▸ Accessories ▸ Communication ▸ Hyper Terminal
2. Give a name to the new console connection.
3. Choose the COM name and select the correct serial settings. The serial port settings of Switch are as blow:

JetNet 6910G: 9600bps, No parity check, 8 Data bits, 1 stop bit
JetNet 7714G: 115200bps, No parity check, 8 Data bits, 1 stop bit

After connected, you will see the Switch login request. Type the username and password and then you can login. The default username is "admin", password is "admin".
Follow the manual to configure the software features.

Preparation for Web management

Before you attempt to use the embedded web interface to manage switch operation, verify that JetNet Switch is properly installed on your network and that every PC on this network can access the switch via the web browser.

Launch the web browser (Internet Explorer or Mozilla Firefox) on the PC.

Type http://JetNet Managed Switch_IP_Address (The default IP address is 192.168.10.1.), then press Enter. The login screen will appear next.

Type in the user name and password and click "OK" button. The welcome page of the Web-Based management interface will appear then. The default user name and password is admin/admin
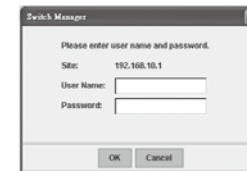
Support

5 Years Warranty

Each of Korenix's product is designed, produced, and tested with high industrial standard. Korenix warrants that the product(s) shall be free from defects in materials and workmanship for a period of five (5) years from the date of delivery provided that the product was properly installed and used.

This warranty is voided if defects, malfunctions or failures of the warranted product are caused by damage resulting from force measure (such as floods, fire, etc.), other external forces such as power disturbances, over spec power input, or incorrect cabling; or the warranted product is misused, abused, or operated, altered and repaired in an unauthorized or improper way.

Attention! To avoid system damage caused by sparks, please DO NOT plug in power connector when power is on.

The product is in compliance with Directive 2002/95/EC and 2011/65/EU of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronics equipment (RoHS Directives & RoHS 2.0)

Korenix Customer Service

KoreCARE is Korenix Technology's global service center, where our professional staffs are ready to solve your problems at any time.

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JetNet6910G/7714G系列网管型以太网交换机具有坚固的接头专为铁路应用设计。它们采用M12连接器，可以稳定连接列车车载应用的界面，如电源，以太网和控制台/管理接口。本快速安装指南将引导您简单的系统安装和连接接口。

产品清单

‣ M12 交换机
‣ 控制 (M12-A/DB9 RS232) 电缆
‣ 安装配件
‣ 快速安装指南

供电系统

JetNet铁路用M12交换机是专为列车车载IP监控应用设计的。交换机电源的输入电压完全符合列车电源系统。电源输入电压的规格说明表如下：

电力系统规格

输入电源形式	HVDC	LVDC
典型输入电压	DC 110V	DC 24V
电压范围(V)	77~137.5	16.8~30
冗余电源	√	√
极性反转保护	√	√

系统接线

铁路以太网交换机采用了不同类型M12连接器给电源及以太网信号，管理和用于管理和系统的备份的USB接口。如下说明各连接器接点的定义。

电源接头 – M12 A-Code 4-PIN, 公头：

针脚分布图	针脚	描述
	1	Power-2, DC+
	2	Power-1, DC+
	3	Power-1, DC -
	4	Power-2, DC -

电源线规格 – AWG/ mm²

Model	AWG	mm²	电流 (A)
HVDC (DC 110V 版本)	18	0.82	2.3 (Max)
LVDC (DC 24V 版本)	13	2.62	7.4 (Max)

JetNet 6910G/7714G 快速以太网 – M12-D 4-PIN, 母头

针脚分布图	针脚	描述	PoE
Cat-6, Cat-7 Shielding Twisted Cable, 24-26AWG			
	1	TX+	PoE V+ / P
	2	RX+	PoE V- / N
	3	TX -	PoE V+ / P
	4	RX -	PoE V- / N

JetNet 6910G 千兆以太网 – M12 X-Code 8-PIN, 母头

针脚分布图	针脚	描述	PoE
Cat-6, Cat-7 Shielding Twisted Cable, 24-26AWG			
	1	Bidirectional (0)+	PoE V+ / P
	2	Bidirectional (0)-	PoE V+ / P
	3	Bidirectional (1)+	PoE V- / N
	4	Bidirectional (1)-	PoE V- / N
	5	Bidirectional (3)+	
	6	Bidirectional (3)-	
	7	Bidirectional (2)-	
	8	Bidirectional (2)+	

JetNet 7714G 千兆以太网 – M12 A-Code 8-PIN, 母头

针脚分布图	针脚	描述
Cat-6, Cat-7 Shielding Twisted Cable, 24-26AWG		
	1	Bidirectional (3)-
	2	Bidirectional (3)+
	3	Bidirectional (2)-
	4	Bidirectional (2)+
	5	Bidirectional (1)-
	6	Bidirectional (1)+
	7	Bidirectional (0)-
	8	Bidirectional (0)+

串口 / USB端口 – M12 A-Code 8 PIN, 母头

针脚分布图	针脚	描述
RS-232 Console		
	1	RS232_TX
	2	RS232_RX
	3	RS232_GND
	4	N/A
	5	USB Data+
	6	USB Data-
	7	USB power (5V)
	8	USB Ground

设备管理

通过使用附带的RS232电缆通过RS232控制界面配置交换机，或者通过远程网络，您可以选择Telnet/ SSH，Web Browser/ HTTP管理交换机。

控制界面管理准备

附带的 RS-232 DB9 接头连到PC's COM端口。连接M12-A接头到交换机的控制接口。

1. 打开 Start ‣ Program ‣ Accessories ‣ Communication ‣ Hyper Terminal
2. 给新的控制结构命名
3. 选择COM名并选择正确的串口设置。交换机的串口设置是：

JetNet 6910G: 9600bps, No parity check, 8 Data bits, 1 stop bit
JetNet 7714G: 115200bps, No parity check, 8 Data bits, 1 stop bit

连接后，你会看到交换机登录请求。输入用户名和密码，然后就可以登录。默认用户名为"admin"，密码为"admin"。
按照手册进行配置软件功能。

Web的管理准备

在您使用嵌入式web界面管理交换机操作之前，请验证JetNet交换机已正确安装在网络上，而这个网络上的每一台PC可以通过Web浏览器访问交换机。

启动PC上的网页浏览器（Internet Explorer或Mozilla Firefox）。
键入http：// JetNet交换机的IP地址（默认IP地址是192.168.10.1），然后按Enter键。
登录屏幕会出现。在键入用户名和密码后，单击"OK"按钮。基于Web的管理界面的欢迎页面将出现。默认的用户名和密码是admin/admin

客户服务

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注意! 请勿于电源开启时插拔接线端子，避免产生火花造成系统损坏。

此产品保证完全符合欧盟2003年1月27日电气和电子设备危害物质限制委员会限用指令2002/95/EC (RoHS)及2011/65/EU(RoHS 2.0)。

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