LLD8021u.DOC
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Issue 1.1

PRODUCT – LLD8021

DIN Rail Mountable
Video TX / Data RX on Fibre

USER MANUAL

VERSION 1.0

06 November 2009

Product: LLD8021AB		**Model:**	
Serial Number:		**JOB No :**	
TEST	**CRITERIA**	**RESULT**	
Power Indicator	Functional		
Video Indicator	Functional		
RX Data Indicator	Functional		
RS422 Operation	Functional		
Video TX Optic Level	- dBm		
Data RX Optic Level	- dBm		
Budget			

Date: ……. Tested By: ……..

USER MANUAL

1 PRODUCT DESCRIPTION

1.1 General

The LLD8021 is a Single Channel DIN Rail-mountable Data Receiver and Video Transmitter. Two LLD8021's can be connected via optical fibre to a single LL8023 rack-mount card - which is a two channel Data Transmitter and Video Receiver.

The Data Receiver is used in Video Telemetry Systems, for low speed RS422 data communication over fibre to PTZ cameras. It is also compatible with the LL232, which is an RS232 to fibre interface; with the LL422 or LL8422, which is an RS422 or RS485 to fibre interface; and with the LL8023 two channel data transmitter and video receiver card.

The Video Transmitter converts a composite video signal, received on a BNC connector, to an optical signal that is transmitted onto fibre. When the video signal is present, an led indicator will light up. It is compatible with LL803R three channel video receiver card. The unit can be mounted on a DIN Rail at the PTZ Camera in the field.

1.2 Basic System Description

The main purpose of this unit is to provide a cost effective fibre optic interface for PTZ (Pan Tilt Zoom) camera installations. It basically receives PTZ information for the camera, and transmits the video signal from the camera.

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Features

- Repeat data without interference
- Interface directly to LL8023 Dual Channel Data Transmitter and Video Receiver.
- Compatible with standard composite video.

Uses

- Ideally suited for Pan Tilt Zoom camera systems in video applications.

1.3 Indications

Data - Data Received from the fibre
Video - Video Signal Transmitted onto the fibre
Power - Unit is Powered

2 PRODUCT STOCK CODES

LLD8021ABA - Single Channel RS422 Data Receiver and Video Transmitter on Fibre, 220Vac.

LLD8021AB - Single Channel RS422 Data Receiver and Video Transmitter on Fibre, +12Vdc.

3 PREPARATION FOR USE

3.1 Unpacking

Each LLD8021 is shipped factory tested, and packed in a protective packaging. Inspect the packaging for any visual damage.
The manufacturer is not liable for damage during shipment.

3.2 Connecting to Fibre and Copper Cables

Connect the TX and RX optical fibres to the unit at the appropriate connectors, taking care not to bend the fibres too much.

For the RS422 data link connect the 2pin screw connector with the positive line to the right hand side of the connector and the negative to the left hand pin.

For the video link connect the signal to the BNC connector.

Use Figure 1 for indication of connections and indications.

3.3 Installation

Ensure that the link loss over the fibre cable is within the power budget of the equipment.

4 OPERATOR'S INSTRUCTION

The unit needs no operator intervention to function. If a fault arises, it is necessary to observe the LED indications, and to perform the procedures outlined in First Line Maintenance, as described in the next chapter.

5 MAINTENANCE INSTRUCTIONS

No routine maintenance is required on this equipment.

5.1 First Line Maintenance

5.1.1 Instrument and tools required

Optic power meter
Multi-meter
Oscilloscope.

5.1.2 Maintenance Procedure

When arriving at a suspect unit it is necessary to check that all copper connections are correctly made. Check that all fibre connectors are plugged in correctly, and that the fibre is undamaged.

The first thing to check after that is the power supply. Use the multimeter to ensure that there is power being supplied to the unit at the power connector. The Power LED should be lit.

Next, observe the Video LED indicator. Then use the optic power meter and measure the optic level coming out of the Video TX fibre port. Do this by disconnecting the ST connector and connect the Optic power meter using a short patch cord and check the optic emission level. If this level is too low, or not present, the unit must be faulty.

Next, observe the Data LED indicator. Check that the data is being transmitted onto the copper cables. Connect the oscilloscope to the data lines and monitor them for data activity when the PTZ controller is sending commands to the camera.

If all these tests have been done and the system is still not operational the supplier must be notified.

6 ORDERING INFORMATION

LLD8021 [Optic Option][Optic Connector Option]/Data Format Option

Optic Option	Wavelength	Range	Budget distance	Connector
AB	850nm	Short	3.5km	ST

7 SPECIFICATIONS

7.1 Electrical Characteristics

Power Supply

Power Connector - 2 Pin Screw Terminal
Supply Voltage - 9 to 18Vdc
Supply Current - 100mA (max)

Video

Video Input Connector - BNC Female
Input Impedance - 75 Ohms
System Bandwidth - 10Hz to 10MHz
Signal/Noise Ratio - 52 dB minimum

Data

Data Output Connector- 2Pin Screw Terminal
Data Transmition Standard- RS422 / RS485 (Received Data)
RS232 (Received Data)

7.2 Optical Characteristics

Connector Type - ST
Wavelength - 850nm
Responsivity - 7 mV/µW Typical or 13mV/µW
Fibre Compatibility - 50/125 µm diameter
Minimum Data Receive Level- -32dBm
Minimum Video Transmit Level- -18dBm

7.3 Physical Characteristics

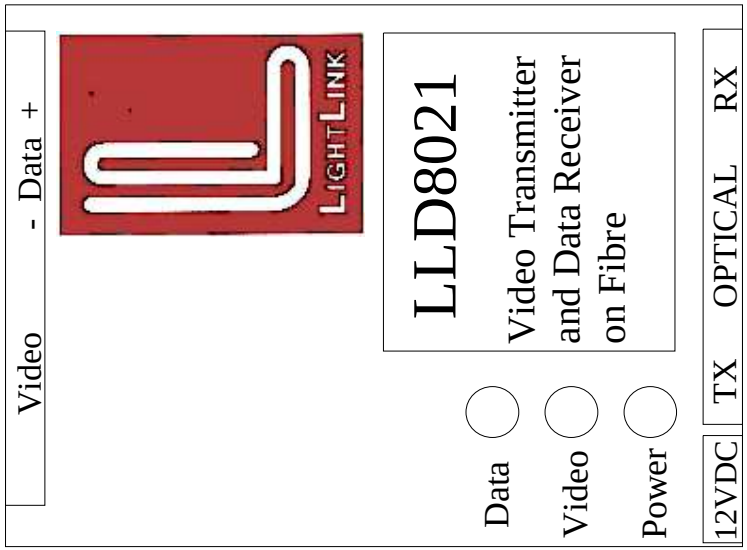
Overall Unit Dimensions - Length - 100mm
Width - 70mm
Height - 50mm

Weight - 150 g (max)

8 NOTES

None.

9 Figure 1



10 Contact Details

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