

Application note – OTT netDL 1000 with IP Camera D-Link DCS 7110



1 Introduction

The datalogger OTT netDL 1000 allows to integrate an IP camera into the measurement network. This paper explains the functionality with the IP camera D-Link DCS 7110. It describes the application, how it works and what is needed to set up an IP camera system with the OTT netDL 1000.

For information on how to configure the camera and the datalogger OTT netDL 1000, please visit our blog post "[Tech Tip: Images from your measuring site ...](#)". You will find several configuration examples for various connection types.

2 Content

1	Introduction.....	1
2	Content.....	2
3	Application.....	2
4	Camera Power.....	3
5	LAN Connection between camera and netDL1000	4
6	Transmission of images.....	4
7	Equipment	5
8	Camera mounting examples	6
9	Other IP camera types.....	7
10	Attachments	8
	10.1 Data Sheet D-Link DCS 7110.....	8
	10.2 Technical Drawing Pole Mount 3-4”	9
	10.3 Technical Drawing Pole Mount 1-2” vertical.....	10

3 Application

The IP Camera D-Link DCS 7110 can be connected to an OTT netDL 1000. The data logger offers the possibility to retrieve images from the camera and perform the following actions:

- Retrieve an image on a defined schedule and forward it via IP.
- Trigger to retrieve an image based on an event and forward it via IP.
- Retrieve an image on a defined schedule and forward it via IP – change interval based on an event.
- Display an image in OTT Hydras 3 net.
- Retrieve an image and display it in a Web Browser.
- Request an image from a server – via Hydras 3 net or the „Data Logger Operating Program“.
- Display an image in the WEBUI of the netDL 1000 (planned feature).

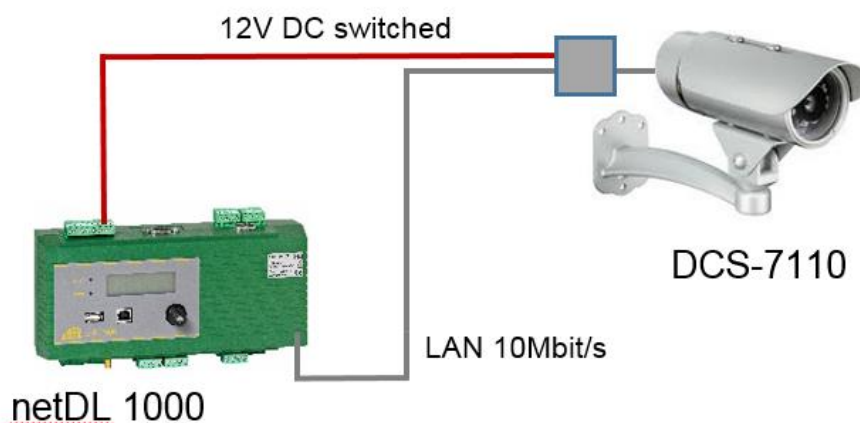
The application can be used to get a fast and easy visual impression of the local situation. The OTT netD 1000 acts here as a gateway for the connected IP camera. The mode is always “shot and forward”, so no images are stored in the data logger. The application requires the OTT netDL 1000.

4 Camera Power

The D-Link DCS 7110 offers two ways for power supply:

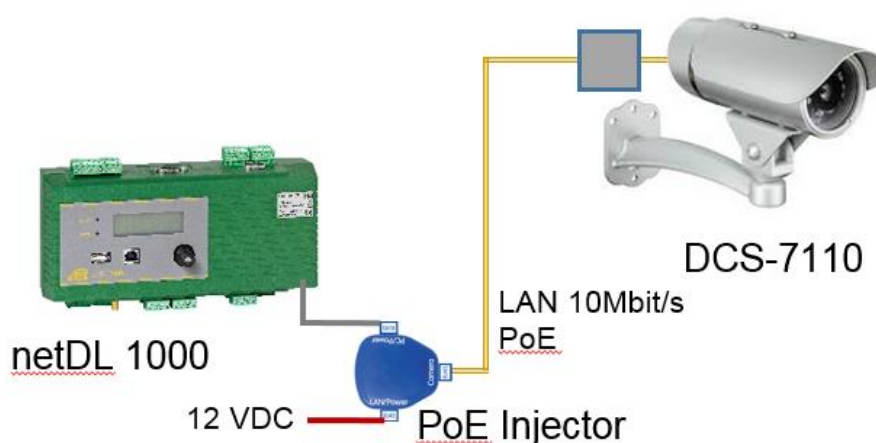
1) 12 V DC power

A power cable besides the LAN cable is required to power the camera.



2) Power over Ethernet (PoE)

The power is supplied via the LAN cable so no additional cable is required but either a PoE injector or a PoE enabled switch.



Notes:

The camera has a power consumption of max. 6 W.

If the camera is switched on via the switching contact of the netDL 1000, consider in the configuration a boot time of 40 s for the camera.

The PoE injector can be connected to the switched 12 V output of the netDL.

5 LAN Connection between camera and netDL1000

Required cables:

- 1) If the camera is connected to the netDL 1000 via a Switch, Router or the PoE injector, a 1:1 patch cable is required.
- 2) If the camera is connected directly to the netDL 1000 (10Mbit/s), e.g. when the image is transmitted via the internal modem, a cross-over cable is required.

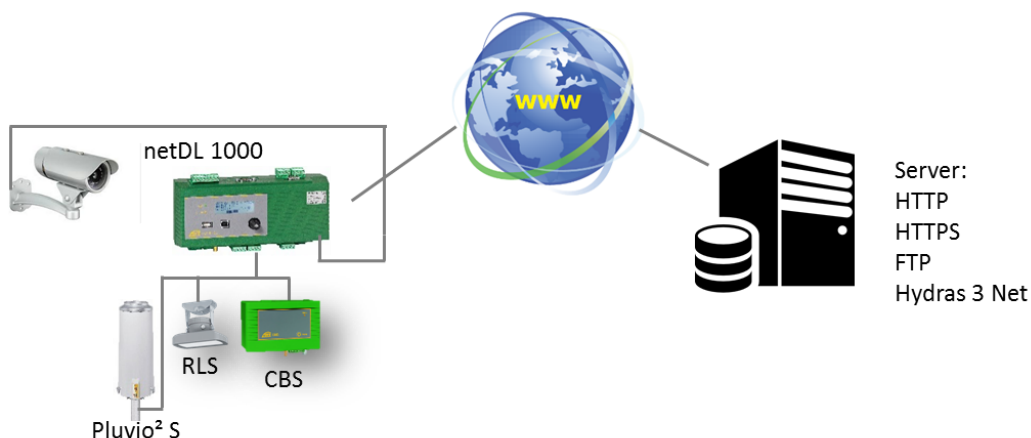
Note: this is standard Ethernet, max. cable length for the LAN cable is 100 m.

6 Transmission of images

The transmission is always an IP transmission and can be done with any available IP transmission.

Servers could be:

- FTP-Server
- HTTP-Server
- HTTPS-Server
- Hydras 3 net (HTTP/HTTPS)



Notes:

The transmission is a shot and forward transmission, no image is stored in the data logger.

No video sequences are transmitted – single images up to a size of 500k.

7 Equipment

Component	Article	Note
D-Link DCS 7110	97.960.385.9.5	incl. wall mount
OTT netDL 1000	55.552.001.9.0	
Software option external IP device for netDL	55.552.308.9.3	mandatory
Connection box for D-Link DCS 7110 IP Cam	65.000.035.9.2	required, cable of IP cam only 0,4 m
Pole mount camera 1-2" vertical or 3/4-5/4" horizontal	65.000.034.9.2	
Pole mount camera 3-4" vertical	65.010.054.9.2	
PoE Power Injector with 12V connection cable	65.000.036.9.2	if PoE power option is used
Overvoltage protection Ethernet	97.750.225.9.5	optional

8 Camera mounting examples



Pole mount 1-2"
vertical

Connection box

Pole mount 3-4"
vertical



9 Other IP camera types

The application “IP camera” is based on the feature “external IP device” in the netDL. This functionality allows to connect to an external IP device which could be another netDL or other IP cameras as well.


Other cameras which have been successfully connected with the netDL are:

- D-Link DCS-6915
- D-Link DCS 7010L
- Mobotix M25
- Mobotix M1M
- Panasonic WV-SW558

Note: for unknown cameras it is recommended to test the setup prior to their application.


10 Attachments





10.1 Data Sheet D-Link DCS 7110



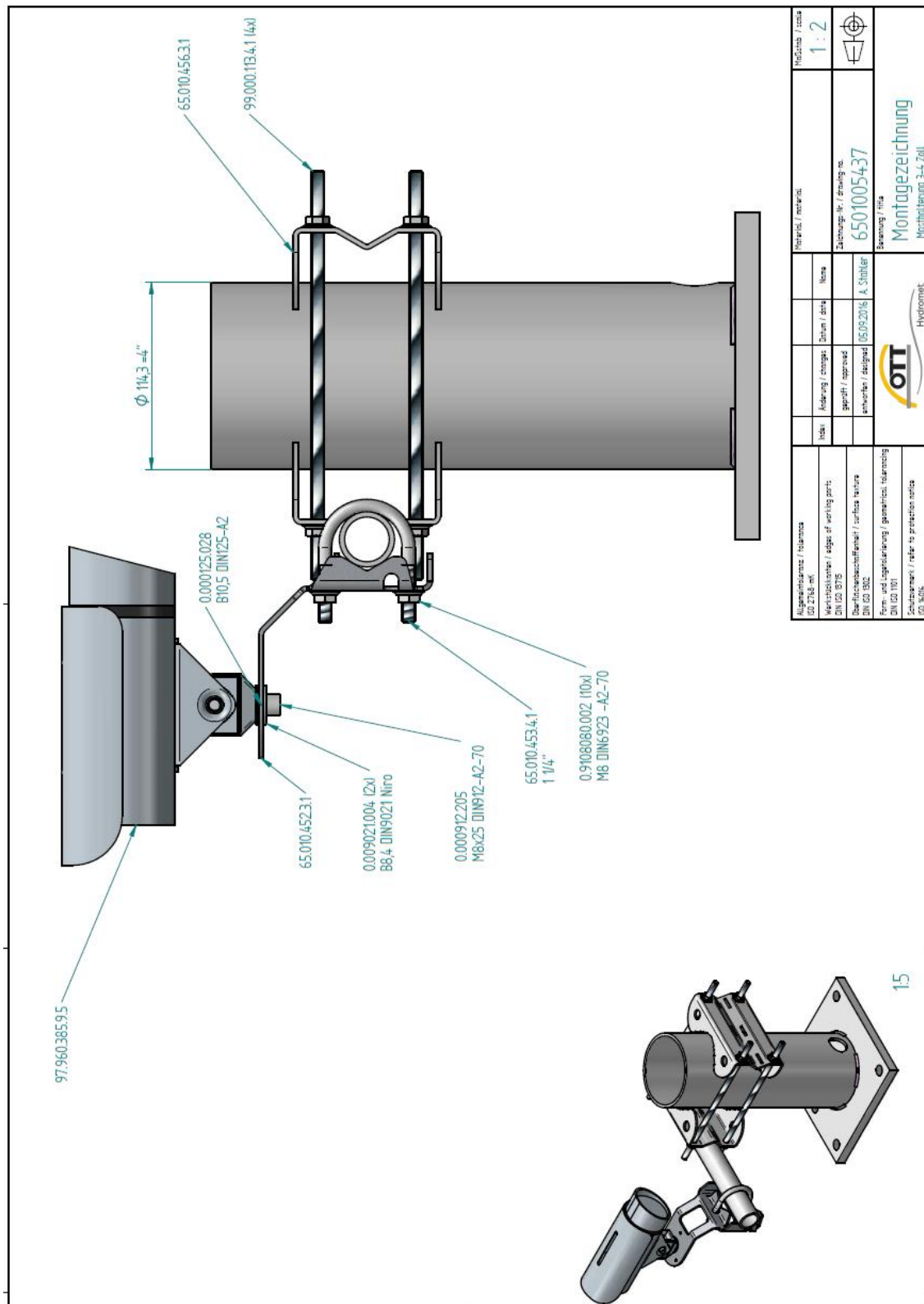
DCS-7110

HD Outdoor Day & Night IP Camera

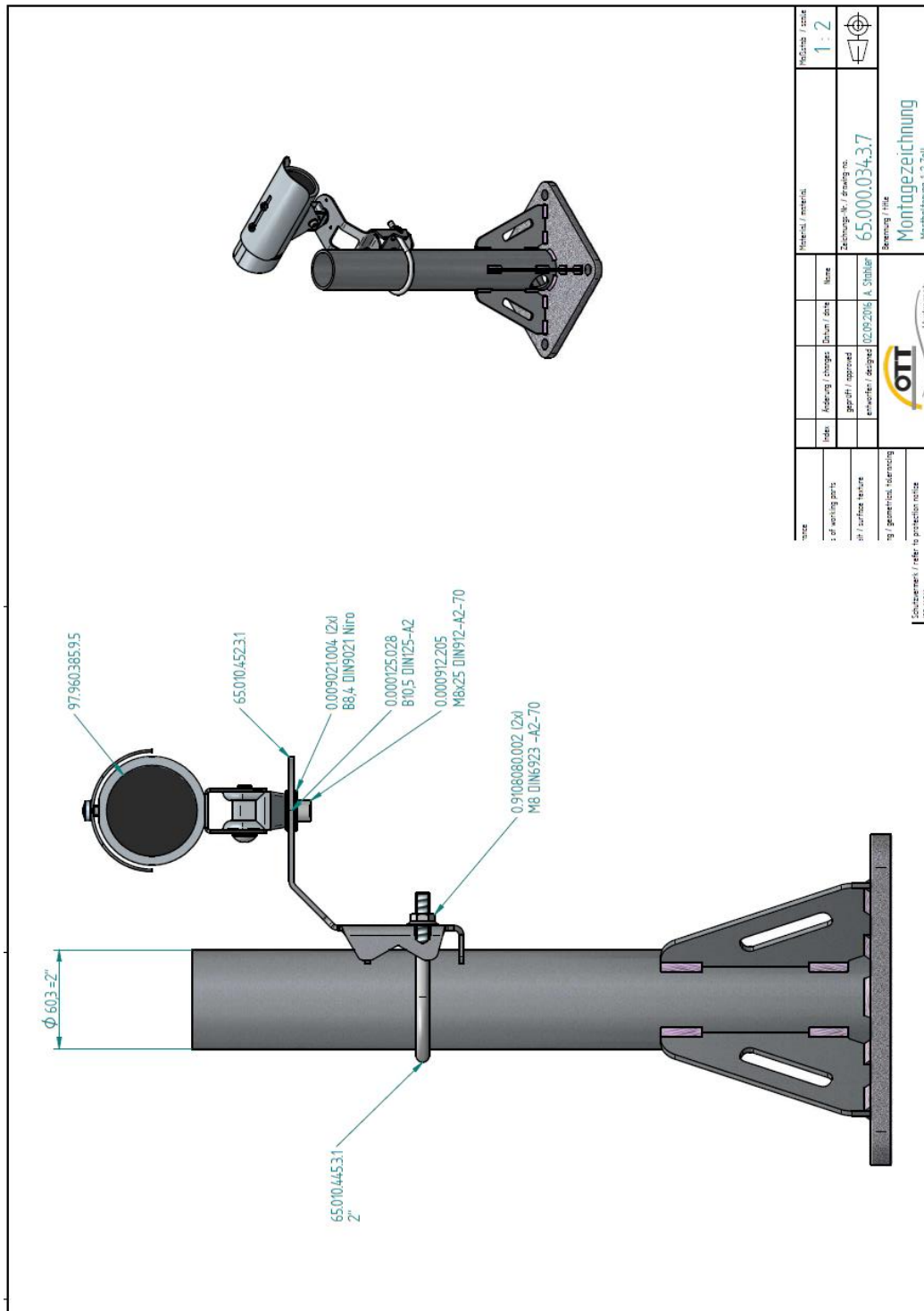
Technical Specifications		
Video Algorithms Supported	<ul style="list-style-type: none"> • H.264/MPEG4/MJPEG format compression simultaneously • JPEG for still image • H.264/MPEG-4 multicast streaming 	
Hardware Profile	<ul style="list-style-type: none"> • Sensor: 1/4" megapixel progressive CMOS sensor • SDRAM: 256 Mbytes • Flash Memory: 128 Mbytes • ICR: Built-in Infrared-Cut filter Removable module 	<ul style="list-style-type: none"> • Lens: 4 mm fixed lens, F1.5 • View Angle: Horizontal 65.4 degrees • IR LED: 15 meter illumination distance and light sensor
Image Features	<ul style="list-style-type: none"> • Adjustable image size, quality, and bit rate • Time stamp and text overlays • 3 configurable motion detection windows 	<ul style="list-style-type: none"> • 5 configurable privacy masks • Flip & mirror • Configurable brightness, saturation, contrast, sharpness
Number of Ports	<ul style="list-style-type: none"> • 176x144 @ 30 fps • 320x240 @ 30 fps • 640x480 @ 30 fps 	<ul style="list-style-type: none"> • 1280x720 @ 30 fps • 1280x800 @ 30 fps
Network Protocols	<ul style="list-style-type: none"> • IPv4, IPv6 • TCP/IP, UDP, ICMP • DHCP Client • NTP Client (D-Link) • DNS Client, DDNS Client (D-Link) • SMTP Client • FTP Client • HTTP / HTTPS • Samba Client • PPPoE • UPnP Port Forwarding 	<ul style="list-style-type: none"> • RTP / RTSP / RTCP • IP filtering • 3GPP • LLTD • CoS/QoS • SNMP/IGMP • SNMP • IGMP • 802.1x • ONVIF Compliant
3GPP Mobile Surveillance	<ul style="list-style-type: none"> • Packet Video Player 3.0 • QuickTime 6.5 • Real Player 10.5 	
System Requirements for Viewing	<ul style="list-style-type: none"> • Internet Explorer 6 or later 	
D-ViewCam™ System Requirements	<ul style="list-style-type: none"> • Operating System: Microsoft Windows® 7 / Vista / XP 	<ul style="list-style-type: none"> • Web Browser: Internet Explorer 6 or higher • Protocol: Standard TCP/IP
Power Input	<ul style="list-style-type: none"> • 12 VDC 1.25 A, 240 VAC 50/60 Hz 	<ul style="list-style-type: none"> • PoE: IEEE 802.3af
Maximum Power Consumption	<ul style="list-style-type: none"> • 6W 	
Operating Temperature	<ul style="list-style-type: none"> • -20 to 50 °C (-4 to 122 °F) 	
Storage Temperature	<ul style="list-style-type: none"> • -20 to 70 °C (-4 to 158 °F) 	
Humidity	<ul style="list-style-type: none"> • 78% g 	
Certifications	<ul style="list-style-type: none"> • CE (Class A) • CE LVD (EN60965-1) • FCC (Class A) • ICES-003, ICES-006 • C-Tick 	
Camera Dimensions		

10.2 Technical Drawing Pole Mount 3-4"



10.3 Technical Drawing Pole Mount 1-2" vertical



Note: this pole mount is used for D-Link 3/4-5/4" horizontal as well.