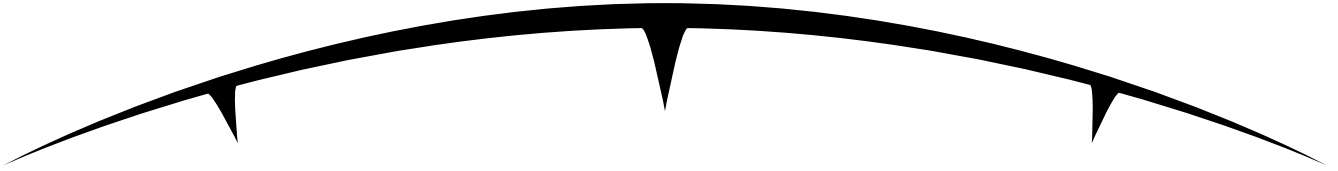


ids



IDS Installation Guide



Version 2.0 19 January 2016



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19 January 2016

This document refers to Release 2.18 onwards of the IDS Core

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IPE Products
Saxon Way
Melbourn
Royston
Herts.
SG8 6DN

tel: +44 (0)1763 269066
email: sales@ipe-products.com
web: www.ipe-products.com

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Welcome

Welcome

About IDS

IDS is a versatile IP-based display and control system consisting of configuration software and dedicated hardware devices. It uses your Ethernet LAN/WAN to synchronise, monitor and control equipment, and to manage and distribute media content, delivering dynamic information via custom-designed screens to networked display devices throughout your organisation.

What's in this guide?

This guide explains how to:

- Install IDS hardware (IDS Server, IDS SQuid, IDS Remora, IDS Touchscreen, IDS Lamps and Accessories)
- Perform initial configuration to get your system up and running
- Introduction to Logic Processor resilience.

At the end of this guide, you'll find reference material, such as:

- Pin-outs
- How to replace faulty hardware

Terminology

Please note that we sometimes use the terms IDS Core and IDS Server interchangeably. IDS Core software can run on a dedicated IDS Server, or a 3rd-party server of your own choosing, using the IDS Core USB stick.

Where to find more information

- For more information on configuring and managing your IDS equipment once installed, please see the IDS Core User Guide
- For more general information, please contact us:
email: idsinfo@ipe-products.com
tel: +44 (0)1763 269066

Introduction to Logic Processor resilience

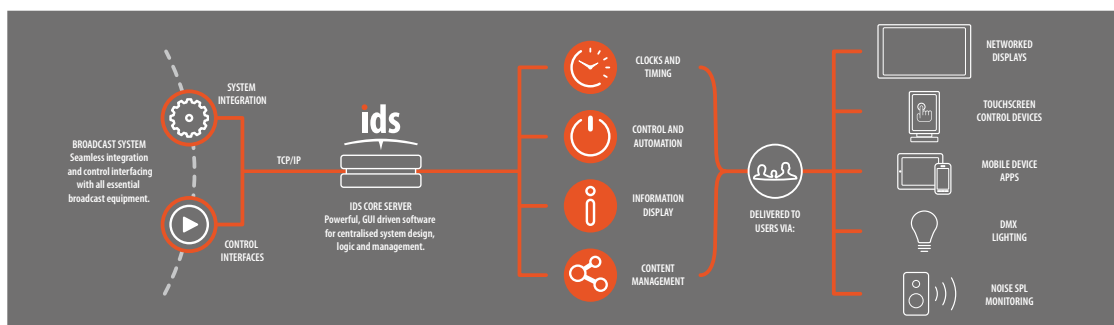
New from version 2.10: If your logic maps are mission critical, you can implement Logic Processor resilience:

1. Install at least one additional IDS Server, using the instructions on page 10. All IDS Cores on the same network are visible to each other. One IDS Core automatically becomes the 'master' to which all others connect. Failover is handled automatically.
2. Using the IDS Core software on one IDS Core, create one or more Resilience Groups; assign a logic map to each logic processor/group.
3. Apply the same Resilience Groups to logic processors on at least one other IDS Core.

This topic is dealt with in detail in the IDS Core User Guide.

Overview

Overview



System overview

A basic IDS system might comprise:

- Dedicated IDS Server, or your own server running the IDS Core software
- IDS SQuid (for GPIO and NTP)
- IDS Remora (for driving a display)

However it is more likely your system will comprise:

- Multiple IDS Cores for Logic Processor resilience
- Multiple IDS SQuids (for system management, expansion and redundancy)
- IDS Remoras (for driving multiple displays)
- IDS Accessories and Lamps, all connected to your Ethernet backbone.

The IDS system can be based around your existing Ethernet/IT infrastructure; all the IDS units communicate over IP.

IDS interfaces with third-party hardware and software, such as video streaming and OEM interfaces.

Installation overview

The basic installation steps are as follows:

1. Install an IDS Server, connect a keyboard, monitor and mouse (either locally, or via a KVM cable) and configure the IDS Server so it works on your IP network. See page 10.
2. Install an IDS SQuid, perform initial IP addressing and so on via a USB connection to the IDS Server, then connect to your LAN. See page 13.
3. Install and configure any Remoras and IDS Touchscreens. See page 15 onwards.
4. Install and configure any lamps and accessories. See page 23 onwards.

Overview

IDS Server/IDS Core



System configuration and control is managed via IDS Core software. You can run this on the dedicated IDS Server, or your own 3rd-party server booted from the IDS Core USB stick. With its integrated Logic Processors, you can create screen layouts and logic maps, and manage all your connected devices.

IDS Remora



These are compact processor units, designed to piggyback onto and drive a display device (such as an IDS Touchscreen a flat-screen monitor, projector or multi-viewer). Featuring powerful graphics processing, they are perfect for driving HDMI/DVI displays.

IDS SQuid



IDS SQuid is a 1U rack-mount unit. With dual-redundant hot-swappable power supplies, Ethernet and LTC/Alarm connections, it provides the perfect resilient link between your IDS system and the outside world. IDS SQuid can distribute accurate NTP time sync across an entire IDS network; multiple units can add NTP redundancy.

IDS Touchscreen



Sitting discretely on your desk, IDS Touchscreen gives you custom control and display options at your fingertips. Its powerful processor delivers all the graphical cues you need to keep your broadcasts running smoothly. IDS Touchscreen can deliver video feeds, along with multiple screen elements such as clocks, cue lamps and scrolling text. It uses standard NTP, keeping in perfect sync with your station time reference.

Overview

IDS Accessories



IDS Accessories extend IDS functions to include noise level monitoring, infra-red device control and further GPIO. PoE and IDS configuration are both via a single Ethernet port. The USB port can be used for initial configuration. All have inbuilt logic and are plug-and-play out of the box.

IDS Lamps

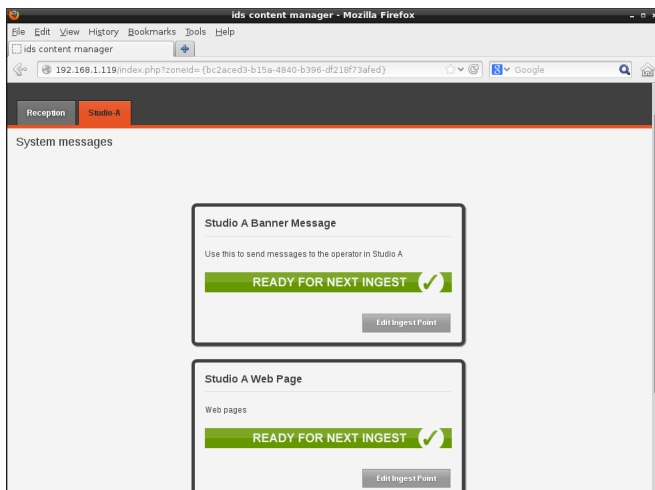


The IDS Lamp is a simple, elegant, 7-colour LED lamp. Available in four styles, it provides an instant visual indication of broadcast status. PoE and IDS connectivity are both via a single Ethernet port.

IDS Content Manager

IDS Content Manager is a versatile, web-based application for managing and distributing digital content to display devices situated anywhere on your IDS network. Create distribution zones with multiple displays, allocate users and manage their administration rights.

See the IDS Core User Guide.



Planning your IDS system

Things you need to think about when planning your IDS system include:

- Physical location and installation of kit:
 - Cabling requirements (Ethernet, GPIO, power)
 - Rack space for 1U devices (e.g. IDS Core, IDS SQuid)
 - KVM cabling/splitters
 - Remora/display locations/mounting
- Power over Ethernet (PoE) for IDS Lamps and Accessories; You will need one of the following for each device:
 - Single port PoE injector
 - PoE-enabled port on your Ethernet switch
- IP addressing (DHCP or static)
- GPIO signals
 - How to get your GPIO and other signals to IDS SQuid (via your distribution frame or hardwired links)
 - Alarms – where IDS alarm outputs go, and what they do
- Time source, e.g. NTP/Linear Time Code (LTC) into IDS SQuid

How IDS components work together

Here's how the IDS components work together:

- IDS Server / IDS Core lies at the heart of your IDS system. It deals with all your system configuration, including design and behaviour of any displays.
- IDS SQuid is a four-slot chassis – it handles your system GPIO. In addition, it can also handle NTP/LTC, adding resilience to your IDS system.
- IDS Remoras are your display drivers, implementing your screen designs. They also define the behaviour and layout of your displays (via the IDS Logic Processor), interacting with SQuids, with your GPIO, and with the outside world.
- IDS Accessories enhance your system's capabilities by adding:
 - Timecode referenced NTP server (SQ-NTP); used when no IDS SQuid or NTP source is available
 - DMX driver (SQ-DMX)
 - Noise level monitoring (SQ-NLM)
 - IR device control (SQ-IRQ)
 - GPIO extension (SQ-GPIO3)
 - Dual-channel timecode interfacing (SQ-DTC); used to display timecode on any display on the system
- IDS Wall and Desk Lamps let you configure colour-coded cues to suit your needs.

Planning your IDS system

Time references within the IDS system

IDS uses the NTPv4 (Network Time Protocol version 4) for time synchronisation. NTP allows for very accurate time sync between network devices. It also allows for a resilient system that can reference multiple sources, so if one is lost, another can be referenced to continue the sync.

External time references into the IDS system

IDS can get its time reference from several external sources:

- LTC (Linear Time Code): All IDS SQuid units feature an LTC input that allows them to become an NTP server for the IDS system. Multiple units can be used to create multiple NTP sources for resilience. The LTC input on these units is balanced and accepts frame rates of 24, 25 and 30Hz. The date format can be altered to match the format of the source.
- NTP: IDS can directly reference another NTP server on the same network. If you already have an NTP server on your network then you simply need to use that device's IP address to achieve time synchronisation.

IDS Health Indicator

Some IDS units have a health indicator, that shows the current status of the unit. System health indicators are as follows:

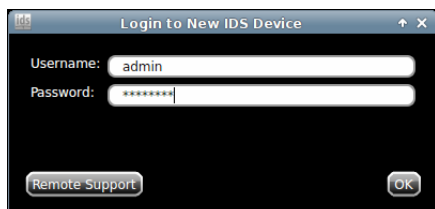
- Blue: Unit is operating normally, and is properly configured
- Green: Rebooting
- Alternating Red, Green, Blue: Unit is in Identify mode
- Red: System warning or error. This could be a configuration error (such as loss of network), or a hardware issue; on IDS SQuid units, the alarm relay will also close to alert any connected equipment
- Yellow: System warning (e.g. loss of NTP).



You can also include elements that display the health of IDS units when creating screen designs. So, you could monitor them from a screen in your office.

Logging into an IDS device

You will normally need to log into an IDS Server with admin privileges. Depending on current security settings, users may also need to log in to an IDS client device (such as a Remora, Touchscreen) when they press ESC on a keyboard connected to the device's USB port, in order to be able to make configuration changes. In such cases, they will be presented with a login screen:



If the login screen appears:

1. Enter your Username and Password. If appropriate, these will be allocated by your IDS system administrator. The default settings are **admin** and **password**.
2. Click **OK**.

See the IDS Core User Guide for details of password control and session timeout).

Installing an IDS Server/Core

Installing an IDS Server/Core



As well as supplying a dedicated hardware IDS Server, we sell the software on a bootable IDS Core USB stick. This enables you to run IDS Core in one of the following ways:

- Use the dedicated IDS Server, pre-installed with the IDS Core software
 - This is a standard 1RU (19") single PSU server, or a Dell PowerEdge* server fitted with RAID 1 HDD and dual hot-plug redundant PSUs
 - In this case, the USB stick is a hardware licensing dongle and **must remain inserted at all times** for IDS Core to run
- Boot a 3rd-party server of your choosing from the IDS Core USB stick; The USB stick **must remain inserted at all times** for IDS Core to run
- Install the IDS Core software from the IDS Core USB stick onto a 3rd-party server of your choosing; In this case, the USB stick is a hardware licensing dongle and **must remain inserted at all times** for IDS Core to run.
Note: Using this method, the server's hard drive will be formatted and all data will be lost!

Note: If you want to implement Logic Processor resilience, you will need to install more than one IDS Server. Please see the IDS Core User Guide for configuration details.

Before you start

Make sure you have the following:

- Rack space – 1U 19" rack unit, 325mm deep (excluding connectors)
- 1 or 2 x 110–240V, 50/60Hz power connectors
- RJ45 network connection
- USB keyboard and mouse, and a monitor (DVI or VGA); can be connected directly to the IDS Server, or via KVM
- Configuration details – IP settings, NTP settings
- USB to Mini USB cable – Needed for initial configuration on IDS Squid or IDS Accessories

Installing an IDS Server/Core

Install and power on

1. Install the IDS Server into your rack.
2. Insert the IDS Core USB stick into a USB port on the server.
3. Connect mains power to the IEC-type connector(s).
4. Connect the IDS Server to your LAN using a standard RJ45 Ethernet cable.
Note: By default, the IDS Server uses DHCP. You can change this later if necessary.
5. Connect a monitor and USB keyboard/mouse (either directly, or via KVM).
6. Power on the IDS Server.
Note: If you are not using a dedicated IDS Server, you may need to refer to the documentation that came with your server to learn how to boot from a USB stick.
7. The IDS Server starts up automatically, running IDS Core software. Display the **Connected Devices** panel.



8. When prompted, enter your Username and Password. The default settings are **admin** and **password**. You should change these as soon as possible to prevent unauthorised access; see the IDS Core User Guide.

Note: Shutting down an IDS Server

If you ever need to shut down an IDS Server press the power switch on the front panel.

Warning! Do **not** attempt to shut down the machine by switching off at the mains, or by removing the power cable.

Installing the IDS Core software onto a 3rd-party server

Warning! The server's hard drive will be formatted and all data will be lost!

1. Ensure the IDS Core USB stick is inserted in the server's USB port.
2. Boot the server from the IDS Core USB stick.
Note: If necessary, consult the server manufacturer's instructions on booting from a USB device.
3. At the relevant point in the boot process, choose **Start from IDS Core Drive** from the on-screen menu.
4. If the server is connected to your LAN, you may need to log in (username: **admin**; password: **password**).
5. Display the Connected Devices tab.
6. Click **Install to disk** in the panel on the left.
7. Follow the on-screen instructions.
8. The system will reboot on completion.

Note: The USB stick is a hardware licensing dongle and **must remain inserted at all times** for IDS Core to run

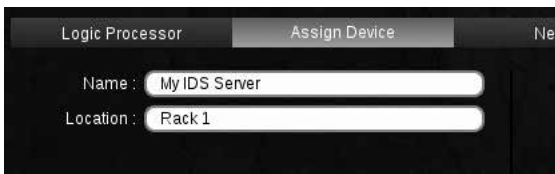
Installing an IDS Server/Core

Configure the IDS Server

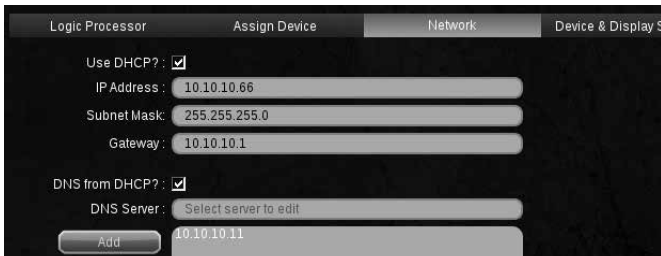
1. In the Connected Devices panel in IDS Core, expand the tree view on the left. The IDS Server will be listed as **Unknown Location > New IDS Device**
2. Select the IDS Server in the tree view.



3. Display the **Assign Device** tab and enter a **Name** and **Location**. You can use up to 16 standard alphanumeric characters, including spaces. You will use these details later to allow the IDS Server to control other IDS devices, and group them by location.



4. Display the **Network** tab and set up IP addressing to suit your LAN, then click **Apply**. (You can also specify DNS servers and Proxy settings.)



5. Display the **Time & Date** tab, select a Timezone, enter details for your NTP server and click **Apply**.



For more information on configuration changes, see the IDS Core User Guide.

Installing an IDS SQuid V3

Installing an IDS SQuid V3



Before you start

Make sure you have the following:

- Rack space – 1U 19" rack unit, 325mm deep (excluding connectors)
- 2 x 110–240V, 50/60Hz power – IDS SQuid has dual-redundant, hot-swappable power supplies
- Male and female 25-way D-type connections – Access to, and cabling for GPIO; IDS SQuid connects to your existing distribution frame, or you can hard-wire the connections directly. See “IDS SQuid rear panel connections” on page 35.
- RJ45 network connection
- 9-way D-type connection – IDS SQuid accepts SMPTE LTC and transmits alarm signals via the LTC/Alarm connector on the rear panel; see “LTC/Alarm connector: 9-way D-type female” on page 35.
- USB to Mini USB cable – Use this to connect directly to an IDS Server
- Configuration details – IP settings, GPIO requirements, SMPTE LTC type/source, NTP server (if you use an LTC generator, IDS SQuid will recognise this type of input automatically, although you may need to configure the date format to fit in with your LTC format).

See also “IDS SQuid Power supply” on page 40 and “Replacing an IDS SQuid or Lamp” on page 41.

Install the IDS SQuid

1. Install the unit into your rack.
2. Connect mains power supplies to the two IEC-type connectors.
 - The SQuid should power on automatically.
 - If only one power supply is connected, an audible alarm sounds; the same is true if a power supply develops a fault; press the red **PReset** button on the rear panel to cancel the alarm.
 - The IDS Health Indicator will glow red or yellow to start with; see “IDS Health Indicator” on page 9.
3. Connect a USB to Mini USB cable from the IDS SQuid rear panel to an IDS Server

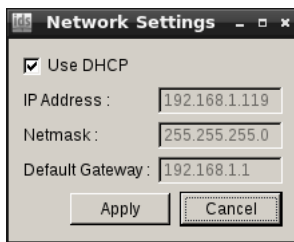
Installing an IDS SQuid V3

Configure the IDS SQuid from the IDS Server

1. In the Connected Devices panel in IDS Core, expand the USB tree view.
The IDS SQuid should appear in the USB tree view.



2. Select the device and click **Network Settings**.
3. Set up IP addressing to suit your LAN and click **Apply**.



4. Set the **Machine ID** and **Location** and click **Apply**.
It's not strictly necessary to do this now, but it will help to identify the unit once it is on your network.
 - The Machine ID is limited to 16 alphanumeric characters (no punctuation or spaces) and is case sensitive.
 - The Location is limited to 16 alphanumeric characters (including spaces) and is case sensitive.You will need to know the Machine ID when designing screen layouts and logic maps later on, so it's a good idea to keep a list of all Machine IDs and locations somewhere to hand.
5. Remove the USB cable connecting the IDS SQuid to the IDS Server.
6. Connect the IDS SQuid to your local network via the RJ45 Ethernet port.
The IDS Health Indicator should glow blue; see "IDS Health Indicator" on page 9.
7. Make any GPIO connections to the **Slot Inputs/Outputs** on the rear panel (see page 35).
8. Connect to the **LTC/Alarm** port using a 9-way D-type connector (see page 35).

For more information on configuration changes, see the IDS Core User Guide.

Installing an IDS Remora

Installing an IDS Remora



For multiple Remoras, it pays to set them all up before performing the physical installation. Make sure you give them meaningful names and location details, so you can identify them later when you use the IDS Core software

Tip: A Remora's serial number is printed on the unit's label and reflected in the IDS Core software, so you'll know it is installed in the right location.

Before you start

Make sure you have the following:

- IDS Remora
 - Bracket (for fixing a Remora and its power supply to a flat panel monitor's mounting bracket)
 - Ethernet and power; one of the following:
 - Standard RJ45 Ethernet network connection (in this case, use the supplied 12v DC PSU to power the unit)
 - PoE connection (in this case, use a separate PoE splitter to power the unit)
 - One or two spare mains outlets, to power a display (and the Remora, if not using PoE)
 - Details of network settings (IP addressing, NTP servers and IDS SQuids)
 - Display (e.g. flat panel monitor, projector, multi-viewer), including:
 - 75/100mm VESA mounting system
 - HDMI cable (the unit is DVI-compatible with a suitable adaptor – not supplied)
 - Mains power cable
- Note:** For an IDS Remora the connected display should be of 1080P resolution or below.
- USB keyboard and mouse for initial configuration

See also "Replacing an IDS Remora" on page 41.

Installing an IDS Remora

Mounting an IDS Remora



The Remora can be mounted vertically or horizontally behind a monitor and can accept either 75mm or 100mm mounting formats.

1. Slot the Remora onto the mounting bracket.
2. Remove two of the screws from the existing VESA mount on the rear of the monitor.
3. Attach the Remora by its VESA Mounting Plate to the rear of the monitor using the two screws you just removed.

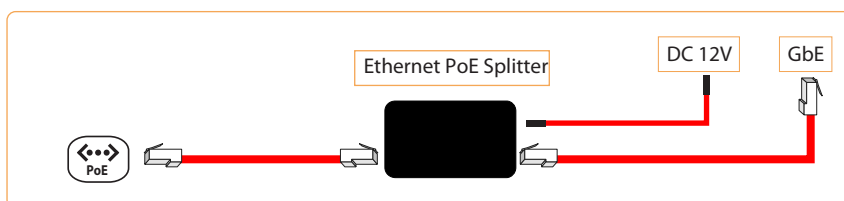
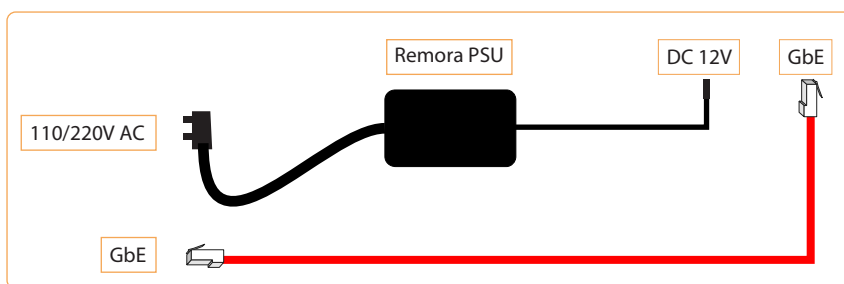
If you want, you can use another mounting bracket to attach the power supply to the other side of the monitor:

1. Remove the plastic swivel from the bracket.
2. Attach the power supply to the bracket using a cable tie.
3. Mount the power supply on the monitor.

Power/Ethernet options

You can power an IDS Remora using the following methods:

- 12v DC PSU (supplied) / Standard RJ45 Ethernet network connection
- PoE using PoE splitter (not supplied)



Installing an IDS Remora

Connect the Remora and switch on

1. Connect the display to the HDMI port; use a DVI-D adaptor if necessary). The connected display should be of 1080P resolution or below.
2. Connect the Remora's **GbE** port to your Ethernet network.
3. Connect the display to a mains outlet and switch it on.
4. Connect the Remora to a mains outlet using the 12V DC Power Supply (or the 12V feed from an Ethernet PD splitter, if using PoE).

Note: The DC power connector is twist-to-lock.

The Remora will power up automatically and the Power LED will glow.

Once the Remora has powered up, the display will show an "Identify" screen, with Name, IP settings, ID and NTP status.

Initial setup

Now you need to make some configuration changes, so that the Remora will operate on your network.

Note: By default the units are set to DHCP, so if a DHCP server is present on the network the unit will automatically be given an IP address and will show up in the IDS Core software.

Note: You only need to make the basic IP address settings here, but we've included the other settings for completeness – you can also make them later using the IDS Core software

1. Connect a USB keyboard and mouse to the IDS Remora The mouse is optional: you can Tab between fields and press Space to enter settings and dismiss dialog boxes.
2. Press **Esc** on the keyboard to display the Setup (IDS Client) screen on the IDS Remora.
3. (If Client Access Control has been implemented on your IDS system, a login screen will be displayed. You must enter the Username and Password supplied by your IDS system administrator before you can make any configuration changes.)
4. Enter a **Name** and **Location** for the IDS Touchscreen. This will enable you to identify it later, when using IDS Core software.

Name:	R4	IP Address:	10.10.4.34
Location:	CR1	Netmask:	255.255.255.0
Unique ID:	{4738a9c3-20a3-41ec-bf4a-40a3a42eed2}	Gateway:	10.10.4.1
NTP Status:	Synced to 10.10.10.14	Broadcast:	10.10.4.255
Timezone:	Europe/London		

Installing an IDS Remora

5. Click **Network Settings**, make any changes and click **Apply**.

Use DHCP

IP Address : 10.10.4.34

Netmask : 255.255.255.0

Default Gateway : 10.10.4.1

Use Proxy Server for HTTP Traffic

Server Address : _____

Server Port : _____

User : _____

Password : _____

Core Address : _____ Select core to edit

Add

Delete

Automatically Discover Cores?

Apply Cancel

- DHCP or Static (including static IP address settings)
- Proxy server details
- Core Address: **Add** the IP address of any IDS Core machines on your network; you can also set the unit to **Automatically Discover Cores**.

6. Click **NTP Settings**, make changes and click **Apply**.

Timezone: Europe/London

NTP Server: Select entry to edit

Add

Remove

10.10.10.14

Apply Cancel

In this dialog, you can add and remove NTP servers; to use another IDS device (Remora or Squid) as an NTP server, add its IP address to the server list.

7. Click **Apply** in the main IDS Client window when you're done.

The IDS Remora is now ready to be integrated into your IDS network. Please refer to the IDS Core User Guide.

Note

- After initial installation, Remoras can operate in a 'standalone mode': when not connected to a network switch or IDS Squid, if the network connection is lost, the Remora will still output the correct time, even though real-time GPIO control will not work.

Installing an IDS Touchscreen

Installing an IDS Touchscreen



The IDS Touchscreen (IDS-TS4) requires an IDS Remora (IDS-R4) to be connected in order to operate. The Remora drives the Touchscreen display and enables its touchscreen capabilities.

For multiple Touchscreens, it pays to set them all up before performing the physical installation. Make sure you give them meaningful names and location details, so you can identify them later when you use the IDS Core software

Tip: The serial number is printed on the unit's label and reflected in the IDS Core software so you'll know it is installed in the right location.

Before you start

Make sure you have the following:

- IDS Touchscreen and power supply
- IDS Remora and associated cables
- Access to a wired Ethernet connection
- Mains power outlet
- Details of network settings (IP addressing, wireless network ID/password, NTP servers and IDS SQuids)
- USB keyboard for initial configuration

See also "Replacing an IDS Remora" on page 41.

Installing an IDS Touchscreen

Assembling the Touchscreen

Since the IDS Remora drives the IDS Touchscreen display, you need to mount them both on the supplied stand and connect them using the supplied cables. As well as a 2.1mm 12V DC IN connector, the IDS-TS4 has a 2.5mm 12V DC OUT connector that can be used to feed the IDS-R4's 2.1mm power connector. The IDS-TS4 can be powered off using its dedicated ON-OFF switch on the top of the unit, leaving the IDS-R4 running.

1. Attach the stand to the IDS-TS4 using the four M4 bolts. The M4 holes are 75mm VESA pitch, allowing you to attach the IDS-TS4 in portrait or landscape orientation, and at different heights.
2. Remove the cable cover from the stand by undoing the single cross-head bolt.
3. Feed the IDS-R4 USB, DC power and HDMI connection cables through the stand. Note the following:
 - The DC connection cable has 2.5mm and 2.1mm connectors; the 2.1mm connector will go into the rear of the IDS-TS4
 - If touchscreen operation is not required (i.e. you are simply using the IDS-TS4 as a display device) you can omit the USB type A-to-type B cable.
4. Connect the cables to the **USB**, **12V DC OUT** and **HDMI IN** connectors on the IDS-TS4.
5. Refit the cable cover to the stand.
6. Remove the existing screw from the IDS-R4 mounting plate and fit the long screw and spacer provided.
7. Fit the IDS-R4 mounting plate to the stand and slot the IDS-R4 onto the mounting plate.
8. Connect the cables from the IDS-TS4 to the IDS-R4.
9. Connect the DC power adaptor to the IDS-TS4's **12V DC IN** connector.
10. Attach the stand to its base using the captive bolt on the underside of the base.



Installing an IDS Touchscreen

Connect and switch on

Proceed as follows:

1. Connect the IDS-R4's Ethernet (RJ45) port to your Ethernet network.
2. Using the supplied power adaptor and cable, connect the IDS-TS4 to a mains outlet and switch it on.

Once the unit has powered up, it will show an "Identify" screen, with Name, IP settings, ID and NTP status.



Initial setup

Now you need to make some configuration changes, so the IDS-TS4/IDS-R4 will operate on your network.

Note: You only need to make the basic IP address settings here, but we've included the others for completeness – you can also make them later using IDS Core software

1. Connect a USB keyboard and mouse to the IDS-R4. Note the following:
 - The mouse is optional: you can Tab between fields and press Space to enter settings and dismiss dialog boxes.
 - If you previously enabled touchscreen capability by connecting the USB type A to type B cable between the IDS-TS4 and the IDS-R4, you can move between fields and dismiss dialog boxes by tapping the display.
2. Press **Esc** on the keyboard to display the Setup (IDS Client) screen on the IDS-TS4.
3. (If Client Access Control has been implemented on your IDS system, a login screen will be displayed. You must enter the Username and Password supplied by your IDS system administrator before you can make any configuration changes.)
4. Enter a **Name** and **Location** for the IDS Touchscreen. This will enable you to identify it later, when using IDS Core software.

Name:	TS4	IP Address:	10.10.4.34
Location:	CR1	Netmask:	255.255.255.0
Unique ID:	{4738a9c3-20a3-41ec-bf4a-40a3a42eed2}	Gateway:	10.10.4.1
NTP Status:	Synced to 10.10.10.14	Broadcast:	10.10.4.255
Timezone:	Europe/London		

Installing an IDS Touchscreen

5. Click **Network Settings**, make any changes and click **Apply**.

Use DHCP
IP Address : 10.10.4.34
Netmask : 255.255.255.0
Default Gateway : 10.10.4.1
 Use Proxy Server for HTTP Traffic
Server Address :
Server Port :
User :
Password :
Core Address :
Add
Delete
Select core to edit
Automatically Discover Cores?
Apply Cancel

- DHCP or Static (including static IP address settings)
- Proxy server details
- Core Address: **Add** the IP address of any IDS Core machines on your network; you can also set the unit to **Automatically Discover Cores**.

6. Click **NTP Settings**, make changes and click **Apply**.

Timezone: Europe/London
NTP Server: Select entry to edit
Add
Remove
10.10.10.14
Apply Cancel

In this dialog, you can add and remove NTP servers; to use another IDS device (Remora or Squid) as an NTP server, add its IP address to the server list.

7. Click **Apply** in the main IDS Client window when you're done.

The IDS-TS4 is now ready to be integrated into your IDS network. Please refer to the IDS Core User Guide.

Installing an IDS Desk or Floor Lamp

Installing an IDS Desk or Floor Lamp

You will need:

- IDS Server running IDS Core
- USB to Mini USB cable
- Single-port PoE injector or PoE-enabled port on an Ethernet switch, and suitable CAT-5 cables

See also "Replacing an IDS SQuid or Lamp" on page 41.



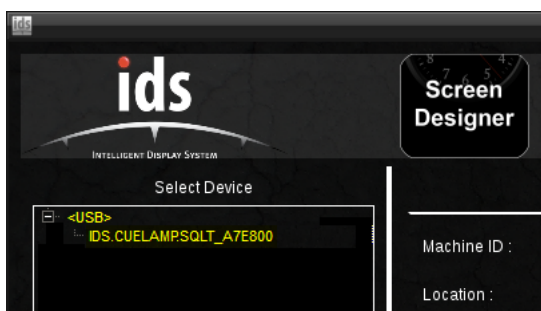
Configure IP addressing

To prepare a freestanding IDS Lamp before connecting to your LAN:

1. Connect the lamp's mini USB port (on the underside of the lamp base) to an IDS Server running IDS Core, using a USB to Mini USB cable.



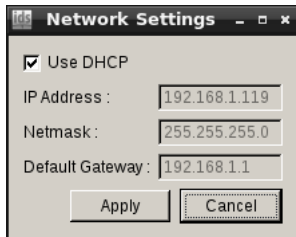
2. In the Connected Devices panel in IDS Core, expand the USB tree view. The device should appear in the USB tree view.



Warning: DO NOT try using "Identify" function with a wall or table lamp as the large LEDs will overload the USB port.

Installing an IDS Desk or Floor Lamp

3. Select the device and enter a **Name** and **Location**.
4. Click **Network Settings**.
5. Set up IP addressing to suit your LAN and click **Apply**.

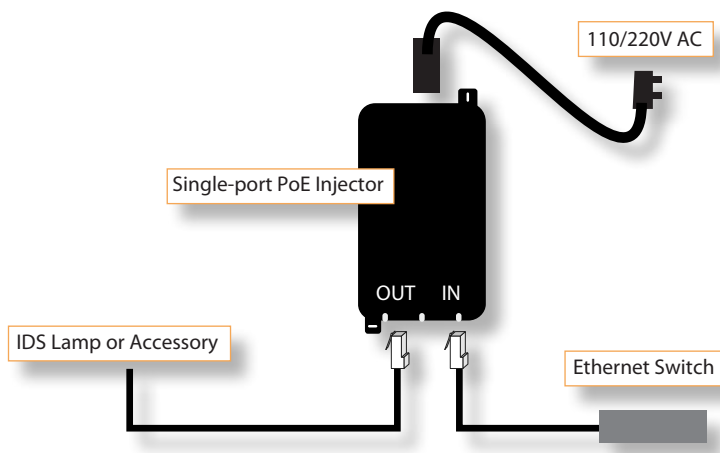


6. Remove the USB cable.

Power the lamp

Using a Single-Port PoE Injector

1. Using a standard, straight-through CAT-5 cable, connect the lamp to the OUT port on a Single-port PoE injector.
2. Using a standard, straight-through CAT-5 cable, connect the IN port on the PoE Injector to a standard port on your Ethernet switch.



Using a PoE-enabled switch

1. Using a standard, straight-through CAT-5 cable, connect the lamp directly to a PoE-enabled port on your Ethernet switch.

Detailed configuration changes

The device should now be visible on your LAN. For more detailed configuration instructions, see the IDS Core User Guide.

Installing an IDS Wall Lamp

Installing an IDS Wall Lamp



You will need:

- IDS Server running IDS Core
- USB to Mini USB cable
- Suitable wall fixings
- Single-port PoE injector or PoE-enabled port on an Ethernet switch, and suitable CAT-5 cables

See also “Replacing an IDS SQuid or Lamp” on page 41.

Configure IP addressing

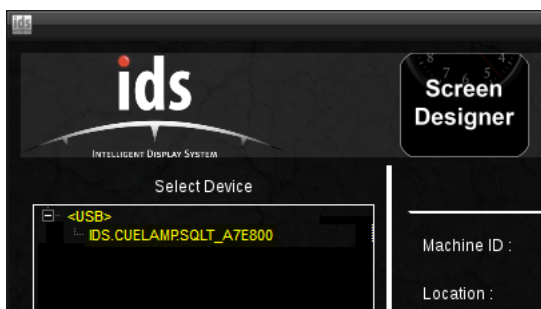
To prepare an IDS Wall Lamp before connecting to your LAN:

1. Remove the rear cover from the lamp. It is magnetic, so just gently slide the cover off.
2. Connect the lamp's mini USB port to an IDS Server running IDS Core, using a USB to Mini USB cable.



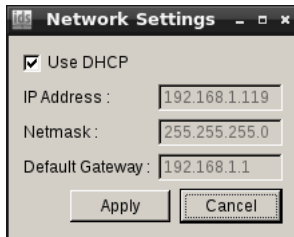
The device should appear in the USB tree view..

Warning: DO NOT try using “Identify” function with a wall or table lamp as the large LEDs will overload the USB port.



Installing an IDS Wall Lamp

3. Select the device and enter a **Name** and **Location**.
4. Click **Network Settings**.
5. Set up IP addressing to suit your LAN and click **Apply**.

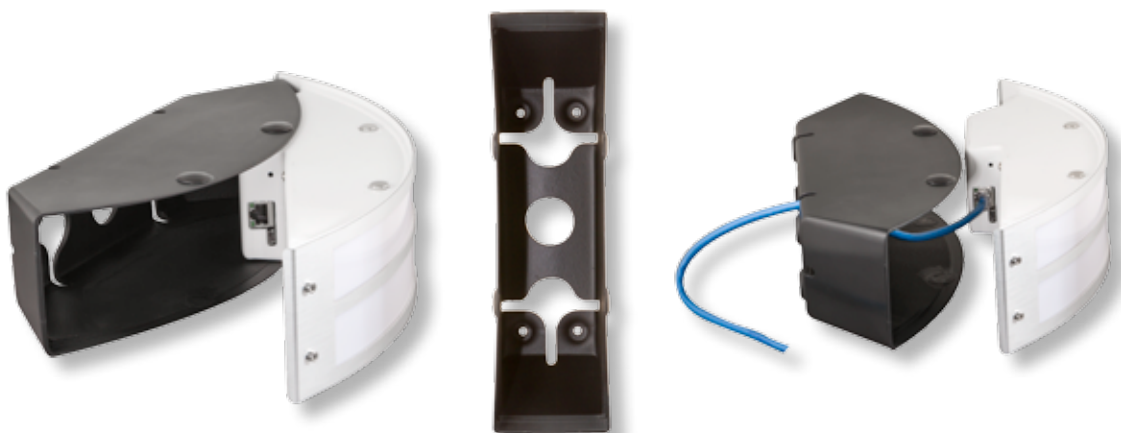


6. Remove the USB cable.

Mount the rear cover

To mount the IDS Wall Lamp:

1. If you haven't already done so, slide the rear cover off the lamp.
2. Place the rear cover where you want to install the lamp and mark the positions of the four fixing holes on the wall.
You can mount the lamp vertically or horizontally.
3. Drill four holes.
4. Feed the CAT-5 Ethernet cable through one of the holes in the rear cover. There are cable access points on the rear, top/ bottom and sides of the unit.
5. Using suitable wall fixings and screws, attach the rear cover to the wall.
6. Connect the CAT-5 Ethernet cable to the lamp's Ethernet port. This should be long enough to reach your chosen Ethernet connection (Single-port PoE injector or PoE-enabled port on an Ethernet switch).
7. Mount the lamp onto its rear cover.

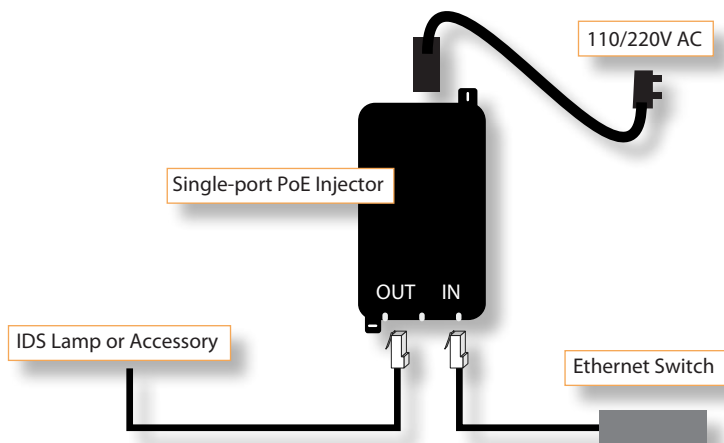


Installing an IDS Wall Lamp

Power the lamp

Using a Single-Port PoE Injector

1. Using a standard, straight-through CAT-5 cable, connect the lamp to the OUT port on a Single-port PoE injector.
2. Using a standard, straight-through CAT-5 cable, connect the IN port on the PoE Injector to a standard port on your Ethernet switch.



Using a PoE-enabled switch

1. Using a standard, straight-through CAT-5 cable, connect the lamp directly to a PoE-enabled port on your Ethernet switch.

Detailed configuration changes

The device should now be visible on your LAN. For more detailed configuration instructions, see the IDS Core User Guide.

Installing an IDS Accessory

Installing an IDS Accessory



This section explains how to install and configure any of the IDS Accessories:

- Timecode referenced NTP server (SQ-NTP)
- DMX driver (SQ-DMX)
- Noise level monitoring (SQ-NLM)
- IR device control (SQ-IRQ)
- GPIO extension (SQ-GPIO3)
- Dual-channel timecode interfacing (SQ-DTC).

You will need:

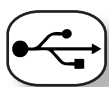
- IDS Server running IDS Core
- USB to Mini USB cable
- PoE connection (Single-port PoE injector or PoE-enabled port on an Ethernet switch) and suitable CAT-5 cables

Note: It is vital to set up each unit to compensate for the location of the microphone compared to the desired operator's position. See "Calibrating an SQ-NLM (suggested method)" on page 32.

Configure IP addressing

To prepare an IDS Accessory before connecting to your LAN:

1. Connect the IDS Accessory mini USB port to an IDS Server running IDS Core, using a USB to Mini USB cable.

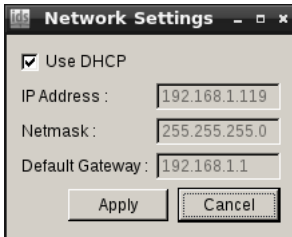


Installing an IDS Accessory

The device should appear in the Connected Devices panel of IDS Core, on the lefthand side of the window.



2. Select the device and enter a **Name** and **Location**.
3. Click **Network Settings**.
4. In the resulting dialog, configure the device so that it will work on your LAN and click **Apply**.



5. Remove the USB cable.

You're now ready to install the IDS Accessory in its operational location.

Mount the IDS Accessory (optional)

If you need to secure the accessory (e.g. to a wall, ceiling, or under a desk surface) you can use the supplied mounting bracket:

1. Offer the mounting bracket up to the surface and mark the mounting holes.
2. Drill suitable fixing holes.
3. Fix the mounting bracket to the surface, using appropriate fixing screws.
4. Secure the Accessory to the mounting bracket using cable ties.

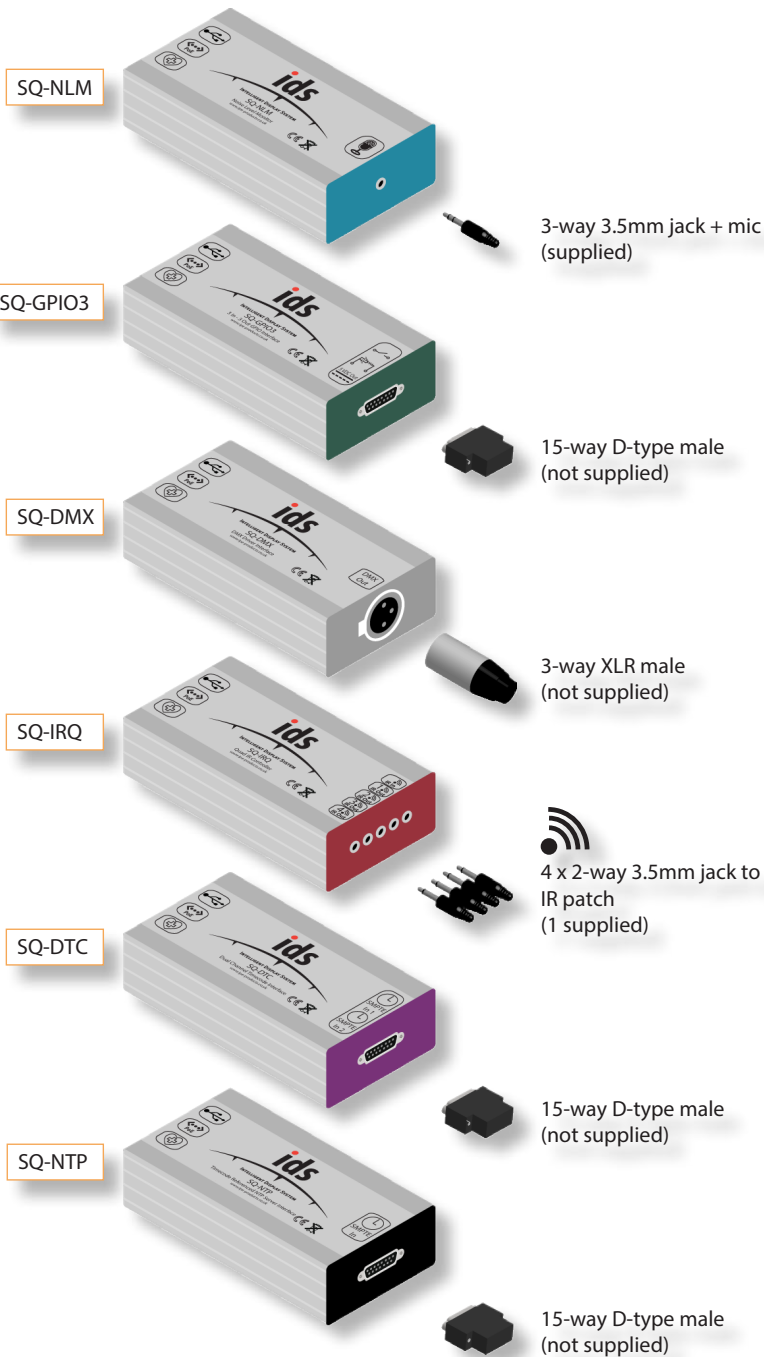


Installing an IDS Accessory

Make the signal connections

At this point, you need to connect the correct signal cables to your IDS Accessory.

If you need information on the connector types and pinouts, refer to "IDS Accessory connections" on page 37.

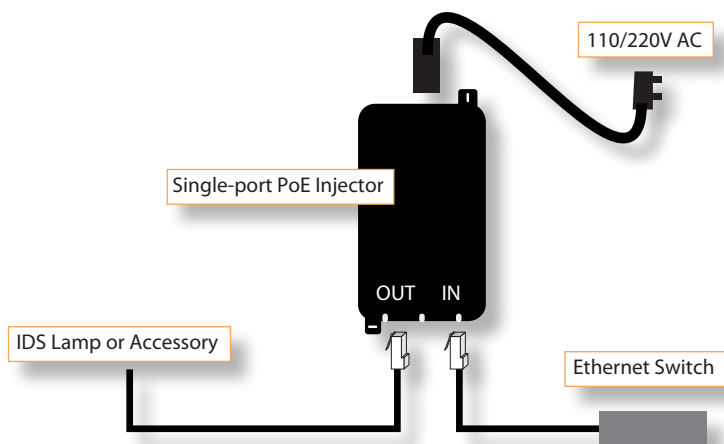


Installing an IDS Accessory

Power the IDS Accessory

Using a Single-Port PoE Injector

1. Using a standard, straight-through CAT-5 cable, connect the IDS Accessory to the OUT port on a Single-port PoE injector.
2. Using a standard, straight-through CAT-5 cable, connect the IN port on the PoE Injector to a standard port on your Ethernet switch.



Using a PoE-enabled switch

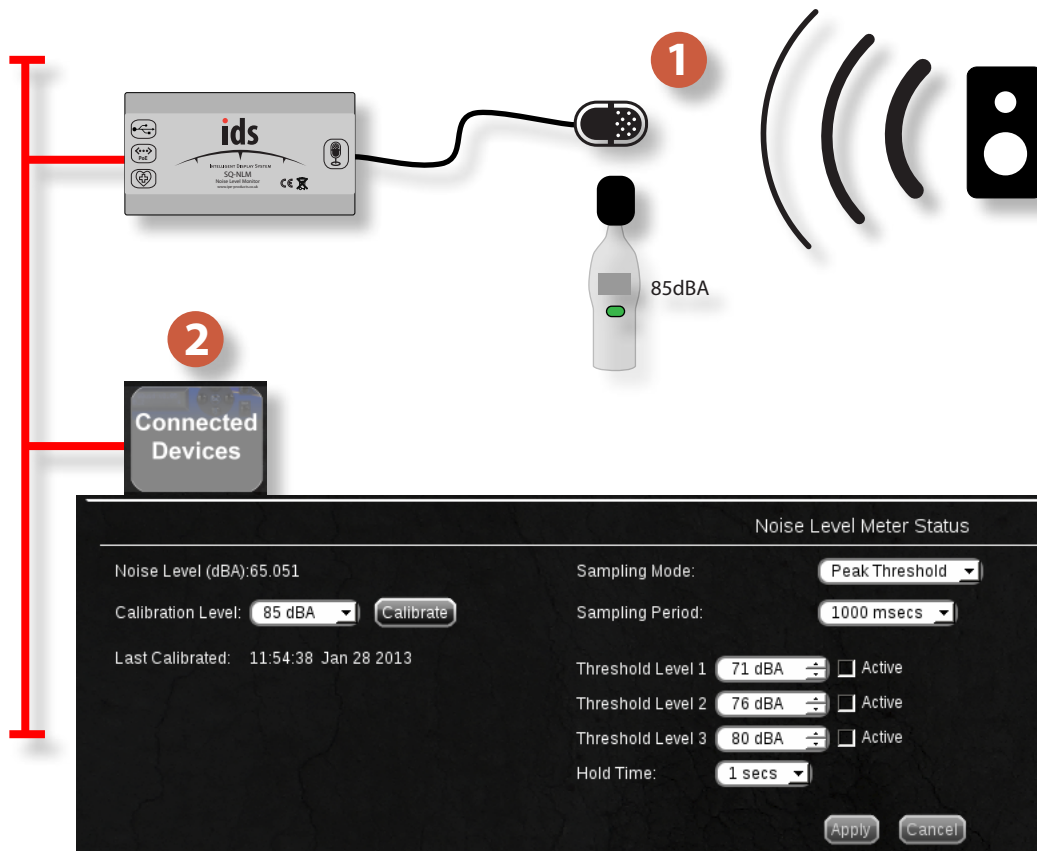
1. Using a standard, straight-through CAT-5 cable, connect the device directly to a PoE-enabled port on your Ethernet switch.

Installing an IDS Accessory

Calibrating an SQ-NLM (suggested method)

Important! The SQ-NLM is calibrated by us before it leaves the factory, so normally you **won't** need to perform the extra calibration steps in this section. This procedure is only necessary if you have extremely stringent noise monitoring requirements.

Ideally, the microphone attached to an SQ-NLM should be as close as possible to the position of the person being subjected to the noise level being measured. Calibration ensures that the SQ-NLM shows the correct noise level, wherever the SQ-NLM happens to be physically installed.



You are measuring:

- Units: dBA
- Type of sound: pink noise

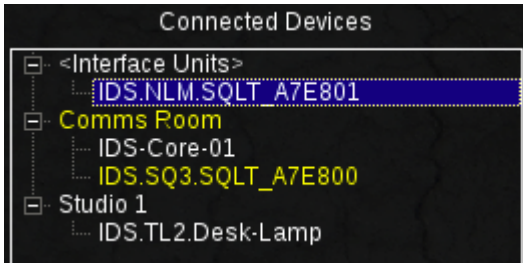
We assume that you have already:

- Set up IP addressing
- Physically installed the SQ-NLM
- Connected the SQ-NLM to your LAN
- Powered on the SQ-NLM

Installing an IDS Accessory

Proceed as follows:

1. Select the SQ-NLM in the Connected Devices panel in IDS Core.

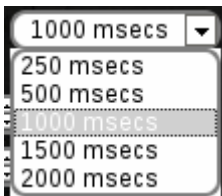


2. In the Noise Level Meter Status panel on the right, select your preferred Sampling Mode:

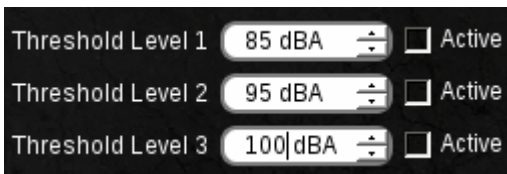


- **Raw:** Sends a numeric noise level value every Sampling Period.
- **Peak Threshold:** Sends a logic TRUE each time the noise level crosses one of three Threshold values.
- **Bar Threshold:** Like Peak Threshold, except that logic TRUE is sent every Sampling Period for **all** currently exceeded thresholds.

3. Select a Sampling Period from the drop-down menu.

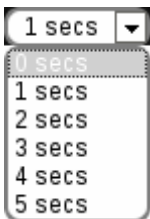


4. (Peak and Bar threshold methods) You can set three different Threshold Levels.



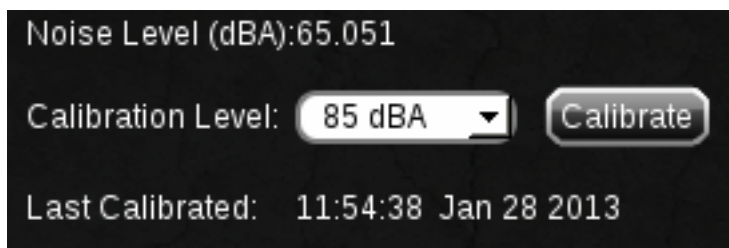
The Active boxes are only for information, and show which threshold has just been exceeded.)

5. (Peak and Bar threshold methods) If required, set a Hold Time using the drop-down menu. This is a Peak Hold function, which retains the threshold state for a specified time, even if it is only exceeded very briefly; setting it to zero disables the function.



Installing an IDS Accessory

6. Use a sound source to generate pink noise in your studio or chosen measurement environment.
7. Place a third-party noise level meter where a listener would usually be.
8. Adjust the volume coming from your sound source until the SPL measured by the third-party noise level meter matches one of the available IDS Calibration Levels (e.g. 85 dBA).
9. Use the Calibration Level drop-down menu in the Connected Devices tab to select the same noise level threshold (e.g. 85 dBA).



10. Click **Calibrate**.

Notes

- If you change Sampling Mode or Period, you may need to recalibrate.
- If you change from Raw to one of the Threshold modes, the device continues to send the Raw numeric threshold level, as well as the appropriate logic signals.
- In Threshold modes, the unit send threshold messages every 10 seconds, regardless of whether the noise level has changed.

IDS SQuid rear panel connections

IDS SQuid rear panel connections



- Mains IEC socket – Power supply is fed via a T2A 290mm fuse housed in the IEC connector. The AC input of the system is 110 –240V – 50/60Hz.
Note: IDS SQuid has two mains sockets (Dual Redundancy)
- Network Socket – standard RJ45
- LTC and overall system Alarm – 9 Way D-type. Timecode - SMPTE LTC -10dBu to +10dBu 25/30 frame. Alarm 1 and 2 are from a common relay and indicate unit faults
- Slot A, B, C, D Inputs / Outputs – 25 Way D-type. Mating connectors are not provided.

LTC/Alarm connector: 9-way D-type female

PIN	FUNCTION
1	Timecode +
2	Timecode Screen
3	Alarm 1 Common
4	Alarm 2 n/c
5	Alarm 2 n/o
6	Timecode –
7	Alarm 1 n/c
8	Alarm 1 n/o
9	Alarm 2 common

Note: Do not use drop frame format

RS232 connector (future use): 9-way D-type male

PIN	FUNCTION
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

IDS SQuid rear panel connections

Slot Output connectors: 25-way D-type male: Relay outputs 1-8 (upper connector)

PIN	FUNCTION	PIN	FUNCTION
1	Relay 1 N/O	14	Relay 1 C
2	Relay 2 N/O	15	Relay 2 C
3	Relay 3 N/O	16	Relay 3 C
4	Relay 4 N/O	17	Relay 4 C
5	Relay 5 N/O	18	Relay 5 C
6	Relay 6 N/O	19	Relay 6 C
7	Relay 7 N/O	20	Relay 7 C
8	Relay 8 N/O	21	Relay 8 C
9	Relay 1 N/C	22	Relay 2 N/C
10	Relay 3 N/C	23	Relay 4 N/C
11	Relay 5 N/C	24	Relay 6 N/C
12	Relay 7 N/C	25	Relay 8 N/C
13	Chassis		

Slot Input connectors: 25-way D-type female: Opto-isolated Inputs 1-8 (NOT polarity dependent)

PIN	FUNCTION	PIN	FUNCTION
1	Opto 1a	14	Opto 1b
2	Opto 2a	15	Opto 2b
3	Opto 3a	16	Opto 3b
4	Opto 4a	17	Opto 4b
5	Opto 5a	18	Opto 5b
6	Opto 6a	19	Opto 6b
7	Opto 7a	20	Opto 7b
8	Opto 8a	21	Opto 8b
9	+12V DC*	22	+12V DC*
10	0V	23	0V
11	+12V DC*	24	+12V DC*
12	0V	25	0V
13	Chassis		

* Each connector has a maximum output current of 250mA on an auto-resetting fuse.

- The nominal voltage for the operation of the opto isolators is 12V but they have a reliable range of 5V to 30V.
- The absolute minimum operating voltage is around 3.6V, so driving them from a 5V supply via an open collector output is not reliable.
- Since the minimum operating voltage is low it is possible that, for a high DC supply (e.g. 15V and above), driving the opto via an open collector output may cause the opto to not turn off reliably, due to the residual voltage within the circuit.

IDS Accessory connections

Timecode referenced NTP server (SQ-NTP)

15-way D-type, fixed female


PIN	FUNCTION	
1	Timecode 1 +	
2		
3		
4		
5		
6		
7		
8		
9	Timecode 1 -	
10		
11		
12		
13		
14		
15		

- Screen to shell
- Timecode - SMPTE LTC -10dBu to +10dBu 25/30 frame

Note: Do not use drop frame format


DMX driver (SQ-DMX)

3-way XLR-type, fixed female

PIN	FUNCTION	
1	Screen	
2	Data -	
3	Data +	

Noise level monitoring (SQ-NLM)


3-way 3.5mm jack, fixed female

PIN	FUNCTION	
Tip	Signal +	
Ring	Signal -	
Sleeve	Ground	

IDS Accessory connections

Quad IR device control (SQ-IRQ)

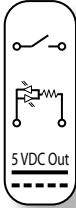
2-way 3.5mm jack, fixed female

PIN	FUNCTION	
Tip	Anode	
Sleeve	Cathode	

Note: IR In not used.

GPIO extension (SQ-GPIO3)


15-way D-type, fixed female

PIN	FUNCTION	
1	Input Opto Isolator 1	
2	Input Opto Isolator 2	
3	Input Opto Isolator 3	
4	Output Relay 1	
5	Output Relay 2	
6	Output Relay 3	
7	0V	
8	0V	
9	Input Opto Isolator 1	
10	Input Opto Isolator 2	
11	Input Opto Isolator 3	
12	Output Relay 1	
13	Output Relay 2	
14	Output Relay 3	
15	+5V DC	

- The opto isolator inputs are NOT polarity dependent. Operating voltage is 5Vdc to 30Vdc (12Vdc nominal).
- The relay outputs are volt free floating contacts; closed when relay is activated by the IDS logic system.
- The 5Vdc output available on the connector is current limited and is designed to only operate the 3 input opto isolators.
- The absolute minimum operating voltage is around 3.6V, so driving them from a 5V supply via an open collector output is not reliable.
- Since the minimum operating voltage is low it is possible that, for a high DC supply (e.g. 15V and above), driving the opto via an open collector output may cause the opto to not turn off reliably, due to the residual voltage within the circuit.

Dual-channel timecode interfacing (SQ-DTC)

15-way D-type, fixed female

PIN	FUNCTION	
1	Timecode 1 +	
2	Timecode 2 +	
3		
4		
5		
6		
7		
8		
9	Timecode 1 -	
10	Timecode 2 -	
11		
12		
13		
14		
15		

- Screen to shell
- Timecode - SMPTE LTC -10dBu to +10dBu 25/30 frame

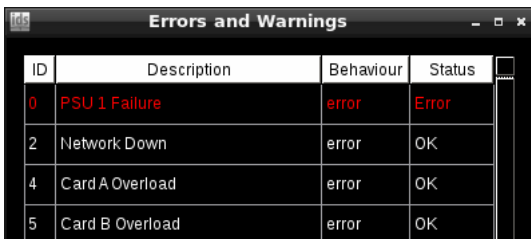
Note: Do not use drop frame format

Replacing faulty hardware

IDS Squid Power supply

Identifying a faulty power supply

1. Access the IDS Server (either on your KVM system, or via a local keyboard, monitor and mouse).
2. View the Connected Devices panel and select the IDS Squid in the list on the left.
3. If there are errors, click **Display** to view pop-up window containing the list of errors/warnings. Note: the 'LTC time jump' warning comes up a lot due to the way the incoming LTC feed gets switched; this does not cause a problem.



ID	Description	Behaviour	Status
0	PSU 1 Failure	error	Error
2	Network Down	error	OK
4	Card A Overload	error	OK
5	Card B Overload	error	OK

4. Click **Requery Device** to check that any errors/warnings are still current.
5. If the PSU is faulty it will show here.

Swapping a faulty power supply

If one of the power supplies in a IDS Squid develops a fault, you will hear an alarm; depending on settings, you will see a red warning on the front panel. It is quite safe to run on one PSU for extended periods.



To **hot-swap** the faulty power supply:

1. Remove the power cord from the faulty power supply on the rear panel.
2. Squeeze the release catch.
3. Pull out the faulty power supply and replace with a working unit.
4. Ensure the new power supply is properly installed, then reconnect the power cord.

To **silence** an alarm (e.g. if one of the PSUs stops delivering power or is unplugged):

1. Press the red **PRreset** button on the rear panel.

Replacing faulty hardware

Replacing an IDS Remora

1. Note down all the settings for the unit you are replacing. You can find these on the IDS Core, on the Connected Devices list. It is especially important that you note down the name and location of the unit accurately, as these are crucial to the operation of some logic. You will need:
 - IP Address, Subnet and Gateway address
 - NTP address (for accurate time display)
 - DNS and Proxy settings (to enable web/RSS-based content to display)
 - Name and Location of the unit
 - Associated Workstation address (to link the unit to a specific IDS Core)
 - Logic Map name
2. Disconnect the power, network and video cables and remove the faulty hardware.
3. Connect the replacement unit (video, network and power cables).
4. If your network has DHCP support then the unit will automatically be given an IP address. If so skip steps 5 & 6.
5. If you need to assign a static IP address to the unit, plug in a USB keyboard and press the 'Esc' key.
6. Enter the settings you noted down in step 1 (use the Tab key to navigate between fields and the Space Bar to press buttons).
7. On the Connected Devices tab in IDS Core, select the new device and assign the same Logic Map as the faulty unit to complete the replacement.

Replacing an IDS Squid or Lamp

These units (including the TL1/2 table lamp and the WL2 wall lamp) are based upon the same design and can be treated in the same way.

1. Note down all the settings for the unit you are replacing. You can find these on the IDS Core, on the Connected Devices list. It is especially important that you note down the name and location of the unit accurately, as these are crucial to the operation of some logic.
2. Unplug and remove the faulty hardware.
3. Plug the replacement unit into the IDS Server via a USB to Mini USB cable, this will power the unit, except for the IDS Squid which requires a 240V mains connection.
Note: Do not put the WL2 or TL2 into 'Identify Mode' while plugged in via USB – This will overpower the USB port and may cause damage to the IDS Server.
The unit will appear in the Connected Devices list in IDS Core, under the heading <USB>.
4. Select the unit and enter the settings you noted down earlier. Note if the unit you are replacing has an LTC reference then make sure you input the same settings as the faulty unit so the replacement unit reads the LTC format correctly.
5. Once completed, unplug the unit from the IDS Server and reconnect to the IDS network using the original cables.
6. The new unit will now appear in the Connected Devices list.

Note: The old faulty unit will be shown in red (unavailable) in the Connected Devices list for reference. You can select it and click **Remove Device**.

Contact details

IPE Products
Saxon Way
Melbourn
Royston
Herts.
SG8 6DN

tel: +44 (0)1763 269066
email: sales@ipe-products.com
web: www.ipe-products.com