## IDS-205G - Managed Industrial Ethernet Switch with Gigabit Fiber

perle.com/products/switches/ids-205g-industrial-managed-gigabit-switch.shtml

## $4 \times 10 / 100 / 1000 B a s e-T$ RJ45 and $1 \times 1000$ Base-X SC/ST



- 4 port 10/100/1000Base-T ( RJ45 ) for Gigabit and Fast Ethernet devices
- 1 port 1000Base-X SC/ST fiber connection
- IP Manageability, VLAN and resiliency management
- Compact, corrosion resistant case attaches to a standard DIN Rail
- Redundant dual power input $12 / 24 / 48$ VDC
- Out-of-band management via RJ45
- Programmable Controller safety and Hazardous Location Certification
-     - 40 to 75 C industrial operating temperature ( XT Models )

The IDS-205G is a 5 port Managed Ethernet Switch that can operate in industrial environments providing advanced performance and enabling real-time deterministic network operation. Four 10/100/1000-Base-T Ethernet ports are available for networking Gigabit and Fast Ethernet devices. One 1000Base-X fiber connection is available to extend Gigabit Ethernet operating distances over fiber.

In industrial plants, where high levels of electromagnetic interference (EMI) is a common phenomenon, utilizing fiber is critical. EMI can cause data corruption over copper-based Ethernet links. However, data transmitted over fiber optic cable is completely immune to this type of noise ensuring optimal data transmission across the plant floor.

Perle Industrial-grade Ethernet Switches are designed to stand up to extreme temperatures, surges, vibrations, and shocks found in industrial automation, government, military, oil and gas, mining and outdoor applications.

With over 30 models, the Perle IDS-205G offers a choice of connectors, fiber types, temperature support and operating distances.

The simple Plug and Play installation available in Perle's Fast Setup feature gets your Ethernet devices networked immediately. CCNA ( Cisco Certified Network Associate ) and CCNP ( Cisco Certified Network Professional ) trained engineers will appreciate the familiar Command Line Interface (CLI ) via in-band Telnet or the out-band serial console port.

An IPv6 address can be used to manage the IDS-205G which also supports a comprehensive set of management functions, such as P-Ring, management VLAN, QoS, RMON, N:1 port mirroring and local alert log.

These rugged fan-less switches that are hardened to provide superior reliability in -10 to $60^{\circ} \mathrm{C}$. In addition, every component on every industrial (XT) model has been designed and tested to handle operating temperatures between -40 and 75 C .

All Perle Industrial Ethernet Switches only use high-end components from the leading chip manufacturers to ensure the highest level of durability and reliability. In addition, all units have a corrosion resistance aluminum case and dual redundant power input with reverse polarity and overload protection.

For over 35 years Perle has been designing industrial hardware. This expertise was used to design the toughest Ethernet switches on the market that will keep your system running for years to come.

## IDS-205G Industrial Managed DIN Rail Switch Features

Simple deployment Zero-touch discovery using Dynamic Host Control Protocol (DHCP), Perle's "Fast Setup" for first time installation, provides simple deployment in Ethernet environments.

Resiliency

- STP and RSTP protocols for fast recovery.
- Perle's P-Ring protocol for fast convergence in ring topologies

Manageability

- Web Device Manager, Telnet, SNMP and Perle's PerleView NMS for centralized management
- In-band management via RJ45 port
- Use an IPv4 or IPv6 address

Rugged design for harsh environments

- Corrosion resistant case
- Programmable Controller Safety certified
- Certified for hazardous locations
- Extended industrial temperature models


## Reliable operation

- Fan-less, no moving parts
- Dual power input. Connect to separate power sources for redundancy.
- Handles vibration and shock conditions found in
- Reverse polarity protection industrial environments
- Overload current protection

| Real-time Ethernet | - Fast wire-speed, store and forward switching |
| :--- | :--- |
| performance | - Auto-sensing for speed and duplex |
|  | - Auto-mdi/mdix-crossover works with straight and crossover cables |

Energy Efficient Energy Efficient Ethernet (EEE) as per 802.3az provides power savings during idle network actinity. Ethernet (EEE)

## Performance Features

| Port Auto- <br> sensing | Auto-sensing of port speed and auto-negotiation of duplex on all switch ports for optimizing bandwidth |
| :--- | :--- |
| Auto <br> MDI/MDIXMedium-dependent interface crossover ( Auto-MDIX) capability on 10/100 and 10/100/1000 mbps interfaces <br> that enables the interface to automatically detect the required cable type ( straight thru or crossover ) and to <br> configure the connection appropriately |  |

802.3x flow
control
IEEE 802.3x flow control on all ports. ( The switch does not initiate pause frames )

| Storm |  |
| :--- | :--- |
| Control | Storm control prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on <br> one of the physical interfaces. A LAN storm occurs when packets flood the LAN, creating excessive traffic and <br> degrading network performance. Storm Control enables limits to be placed on broadcast, multicast and unicast <br> traffic |

Static MAC
Addressing
This feature enables the manual configuration of the MAC addresses on a per port basis. Flooding is prevented by retaining MAC entries across a reboot of the switch.

## Port Blocking

Port Blocking provides the ability to block the flooding of unknown layer 2 unicast and multicast traffic on an Interface

## IPV4 IGMP

Snooping
Internet Group Management Protocol ( IGMP ) constrains the flooding of multicast traffic by dynamically configuring Layer 2 interfaces so that multicast traffic is forwarded to only those interfaces associated with IP multicast devices.

IGMPv1, $\sqrt{ } 2$, $\sqrt{ } 3$, IGMP snooping querier mode, IGMP report suppression, topology change notification and robustness variable features are supported

## Port Quick <br> Disconnect

In some network environments, it is desirable to move an Ethernet from one switch port to another and have the device come on-line quickly. The Port Quick Disconnect feature if enabled, provides an immediate age-out of the MAC addresses learned on the port when the port status changes from a link-up to a link-down state

## Manageability Features

## Web Device <br> Manager

The Perle Web Device Manager is an embedded Web based application that provides an easy to use browser interface for managing the switch. Unlike competitive products, Java applet technology is not required or used

Command Line Interface (CLI)

A familiar text-based Command Line Interface that is based on accepted industry standard syntax and structure. Ideal for CCNA and CCNP trained engineers, this interface is available via in-band Telnet or the outband serial console port

## SNMP

Manage the switch with an snmp compatible management station that is running platforms such as HP Openview or Perle's PerleVIEW NMS. SNMP V1 and V2C

## PerleVIEW

PerleVIEW is Perle's SNMP-based network management system that provides a view of the network with a large scale of Perle networking devices.

```
IPv6
Manage with an IPv4 or IPV6 address
```


## DHCP Client

Auto-
Configuration

Automates configuration of switch information such as IP address, default gateway, hostname and Domain Name System ( DNS ) as well as TFTP server names. Firmware and configuration file locations are provided through options 54, 66, 67, 125 and 150

## DHCP Relay

DHCP Relay is used for forwarding requests from DHCP clients when they are not on the same physical subnet. As a DHCP relay agent the switch operates as a Layer 3 device that forwards DHCP packets between clients and servers.

DHCP Option
82 Insertion

Normally used in metro or large enterprise deployments DHCP Option 82 insertion is used to provide additional information on "physical attachment" of the client. As per RFC 3046, option 82 enables additional pre-defined information to be inserted into the DHCP request packet (for DHCP Servers that support this option )

## LLDP

LLDP-Link Layer Discovery Protocol as per IEEE 802.1AB is a neighbor discovery protocol that is used for network devices to advertise information about themselves to other devices on the network. This protocol runs over the data-link layer, which allows two systems running different network layer protocols to learn about each other ( via TLVs - Type-Length-Value )

File
Download Firmware can be transferred via TFTP or HTTP. Text-based files that can be created or edited by common text editors.

## Availability and Redundancy Features

## Spanning

Tree Protocol
( STP )
IEEE 802.1D now incorporated in IEEE 802.1Q-2014, STP prevents bridge loops and the broadcast radiation that results from them.

Other Spanning Tree features include BPDU guard, Root guard, loop guard, root guard and TCN Guard

Perle's Ring Protocol provides resilient operation of a network made up of managed switches in a ring topology. The implementation prevents a switch loop scenario and also enables communication within the ring if a failure occurs somewhere in the ring.

P-Ring also has an auto-configuration feature that automatically determines the master control switch in the ring reducing installation time.

Recovery time of 10 ms or better in rings composed of up to 14 switches

## VLAN Features

## VLAN Range

Up to 255 VLANS across a VLAN ID range of 1 to 4094

VLAN
Interfaces
Perle switches provide the ability to configure management VLAN interfaces. This enables network administrators to access the switch's management interface from separate VLAN networks

Quality of Service ( QoS ) and Class of Service ( CoS ) Features

Classification
IP ToS/DSCP and IEEE 802.1p CoS

Congestion
Avoidance
Weighted Fair Queuing or Strict Queuing

## Egress

Queues and scheduling

- 4 traffic class queues per port
- output queue mapping
- DSCP to output queue mapping


## Monitoring Features

## Port Mirroring

$\mathrm{N}: 1$ Port Mirroring is a method of monitoring network traffic. With port mirroring enabled, the switch sends a copy of one or more ports to a predefined destination port. Selection of Transmit, Receive frames or both can be made

## RMON

RMON statistics provided for statistics, history, alarms and events for network monitoring and traffic analysis

Syslog
Facility for logging systems messages to an external SYSLOG server

| Alert Log | Facility for logging systems messages locally |
| :--- | :--- |
| Traceroute | Layer 2 traceroute to identify the path that a frame takes from source to destination |
| Virtual cable <br> test | A test that enables the detection of potential copper cabling issues such as pair polarity pair swaps and <br> excessive pair skew as well as any opens, shorts or any impedance mismatch. Will report the distance in the <br> cable to the open or short. |

## Power Supply

Monitoring
Provides the status of power supplies of the switch

## Alarm <br> Processing

The switch can monitor global switch conditions as well as individual ports. These alarms can be configured to send messages to ;

- an internal log file
- external Syslog server
- SNMP trap server
- An external alarm device such as a bell, light or other signaling device via the switch's built-in dry contact alarm relay


## Global Status Monitoring Alarms

- Dual power supply alarm


## Port Status Monitoring Alarms

- Link Fault Alarm ( IE loss of signal )
- Port not forwarding alarm
- Port not operating alarm ( failure upon start up tests )
- FCS Bit error rate alarm


## Alarm Relay

When enabled, energizes the built-alarm relay triggering an external alarm circuit such as a bell, light or other signaling device according to alarm conditions set

## Management and Standards

| IEEE |  |
| :--- | :--- |
| Standards | IEEE 802.3 for 10Base-T |
|  | IEEE 802.3u for 100Base-T $(X)$ and 100Base-X |
|  | IIEE 802.3ab for 1000Base-T |
|  | IEEE 802.3z for 1000BaseX |

IEEE 802.3x for Flow Control
IEEE 802.1D-2004 for Spanning Tree Protocol
IEEE 802.1w for Rapid STP
IEEE 802.1Q for VLAN Tagging
IEEE 802.1p for Class of Service
IEEE 802.3ad for Port Trunk with LACP
IEEE 802.1AB LLDP

## SNMP MIB

Objects
RFC 1213-MIB II
RFC 1493-BRIDGE-MIB
RFC 1907-SNMPV2-MIB
RFC 2012-TCP-MIB
RFC 2013-UDP-MIB
RFC 2578-SNMPV2-SMI
RFC 2579-SNMPV2-TC
RFC 2819-RMON-MIB
RFC 4502-RMON2-MIB
RFC 2613-SMON-MIB
RFC 2863-IF-MIB
RFC 4363-Q-Bridge-MIB and P-Bridge MIB
RFC 4318-RSTP-MIB
IP-MIB
LLDP-MIB

## Hardware Features \& Technical Specifications: IDS-205G Industrial Managed DIN Rail Switch

## Power

Dual Power Input Both inputs draw power simultaneously. If one power source fails, the other live source can, acting as a backup, supply enough power to meet the operational needs of the switch.

12/24/48 VDC Nominal. ( 9.6 to 60 VDC)

Power Connector 4-Pin Removable Terminal Block.

Grounding screw on metal chassis


Overload Current Fused overload current protection
Protection

Reverse polarity The positive and negative inputs can be reversed providing safe and simple power connectivity. protection

## Access Ports

RJ45 4 shielded RJ45 ports for 10/100/1000Base-T up to 100 meters ( 328 ft )

Auto-negotiation

Auto-MDI/MDIX-crossover for use with either crossover over straight-through cable types

Ethernet isolation 1500 V

| RJ45 Serial | RJ45 DTE |
| :--- | :--- |
| Console port | Optional rolled and straight thru RJ45 cables and DB adapters are available |

Gigabit Fiber port 1000Base-x fiber port models

Duplex SC or ST connector

- Multimode $50 / 125$ or $62.5 / 125$ micron fiber cable
- Single mode 9/125 micron fiber cable

Simplex (BIDI, single strand) SC connector

- Multimode $50 / 125$ or $62.5 / 125$ micron fiber cable
- Single mode 9/125 micron fiber cable

PC and UPC type patch cords supported.

## Fiber Port Specs

| Transmit | Receive |
| :---: | :---: |
| $(\mathrm{dBm})$ | $(\mathrm{dBm})$ |


| Fiber Type |  |  |  |  | Power <br> Budget <br> (dB) | Wavelength (nm) | IEEE | Core <br> Size <br> (um) | Modal Bandwidth (MHz* Km) | Maximum Operating Distance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Min | Max | Min | Max |  |  |  |  |  |  |
| MMF | -9.5 | -4.0 | -17.0 | -3.0 | 7.5 | 850 | 1000Base- | 62.5 | 160 | 220 m |
| ( Duplex |  |  |  |  |  |  | SX |  |  | (722 ft.) |
| SC/ST ) |  |  |  |  |  |  |  |  |  |  |


$50 \quad 400 \quad$| 500 m |  |
| :--- | :--- |
|  | $(1,640 \mathrm{ft})$. |


|  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  | 50 | 500 |  |


| SMF ( Duplex SC/ST) | -2.0 | 5.0 | -23.0 | -3.0 | 21.0 | 1550 | $\begin{aligned} & \text { 1000Base- } \\ & \text { ZX } \end{aligned}$ | 9 | ** | $\begin{aligned} & 70 \mathrm{~km} \\ & (43 \mathrm{mi}) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SMF <br> ( <br> Simplex <br> SC ) | -2.0 | 3.0 | -26.0 | -3.0 | 24.0 | $\begin{aligned} & 1510 / 1590 \\ & 1590 / 1510 \end{aligned}$ | $\begin{aligned} & \text { 1000Base- } \\ & \text { BX-U } \\ & \text { 1000Base- } \\ & \text { BX-D } \end{aligned}$ | 9 | ** | $\begin{aligned} & 80 \mathrm{~km} \\ & (50 \mathrm{mi}) \end{aligned}$ |
| SMF <br> ( Duplex SC/ST) | 0.0 | 5.0 | -32.0 | -9.0 | 32.0 | 1550 | $\begin{aligned} & \text { 1000Base- } \\ & \text { ZX } \end{aligned}$ | 9 | ** | $\begin{aligned} & 120 \mathrm{~km} \\ & (74.6 \mathrm{mi}) \end{aligned}$ |
| SMF <br> ( <br> Simplex <br> SC ) | $-3.0$ | 2.0 | -34.0 | -9.0 | 31.0 | $\begin{aligned} & 1510 / 1590 \\ & 1590 / 1510 \end{aligned}$ | $\begin{aligned} & \text { 1000Base- } \\ & \text { BX-U } \\ & \text { 1000Base- } \\ & \text { BX-D } \end{aligned}$ | 9 | ** | $\begin{aligned} & 120 \mathrm{~km} \\ & (74.6 \mathrm{mi}) \end{aligned}$ |
| SMF ( Duplex SC/ST) | 2.0 | 5.0 | -34.0 | -9.0 | 36.0 | 1550 | $\begin{aligned} & \text { 1000Base- } \\ & \text { ZX } \end{aligned}$ | 9 | ** | $\begin{aligned} & 160 \mathrm{~km} \\ & (100 \mathrm{mi}) \end{aligned}$ |

* 1db/km multimode fiber cable
** as per ITU-T G. 652 SMF specifications


## Alarms

Alarm Relay

- NC ( Normally Closed ) dry contact.
- 1A @ 24V


## Switch Properties

Standards IEEE 802.3 for 10Base-T

IEEE 802.3u for 100Base-T(X)

IEEE 802.3ab for 1000Base-T

IEEE 802.3 z for 1000BaseX

Energy Efficient Ethernet (EEE) as per 802.3az.

## IEEE 802.3x for Flow Control

| Processing Type | Store and Forward |
| :---: | :---: |
| MAC Address Table Size | 8K |
| VLAN ID range | 1 to 4094 |
| IGMP groups | 1024 |
| Packet Buffer Memory | 1 Mbit |
| Jumbo Frame Size | 10 KB |

## Indicators

Power This LED is turned on when the appropriate level of voltage is applied to one or both of the power inputs

System Indicates whether the switch O/S is operating normally

RJ45 Ethernet These integrated colored LEDs indicate link, activity and speed for each port.
Fiber Link Fiber link LED indicates Link and Data Activity

Alarm The alarm LED ( Red ) will be turned on under alarm conditions

P-Ring Master Status of the P-Ring Master
LED

# Backup Network Indicates whether or not the "Backup Network Coupling" feature is enabled (Redundant links connecting two Coupling P-Ring networks ) 

## Environmental Specifications

Operating $\quad$ Standard temperature models (Std ): $-10^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}\left(14^{\circ} \mathrm{F}\right.$ to $\left.140^{\circ} \mathrm{F}\right)$.

Temperature
Ranges

XT Industrial extended temperature models ( Ind ) : $-40^{\circ} \mathrm{C}$ to $75^{\circ} \mathrm{C}\left(-40 \mathrm{~F}\right.$ to $167^{\circ} \mathrm{F}$ )

Storage Minimum range of $-25^{\circ} \mathrm{C}$ to $75^{\circ} \mathrm{C}\left(-13^{\circ} \mathrm{F}\right.$ to $\left.167^{\circ} \mathrm{F}\right) .-40 \mathrm{C}$ to $85 \mathrm{C}(-40 \mathrm{~F}$ to 185 F$)$ for industrial extended
Temperature temperature models
Range

Operating $5 \%$ to $90 \%$ non-condensing
Humidity Range

Storage Humidity $5 \%$ to $95 \%$ non-condensing
Range

| Operating Altitude | Up to 3,048 meters (10,000 feet) |
| :---: | :---: |
| Chassis | Metal with an IP20 ingress protection rating |
| Din Rail Mountable | DIN Rail attachment included. Mounts to standard 35 mm DIN rail in accordance with DIN EN 60175. |
|  | Removable to accommodate optional Panel/Wall mount kit |
|  | Product Weight and Dimensions |
| Weight | 0.61 kg ( 1.34 lbs ) |
| Dimensions | $45 \times 130 \times 121 \mathrm{~mm}$ |

## Packaging

Shipping Weight $0.76 \mathrm{~kg}(1.76 \mathrm{lbs})$
Shipping $\quad 170 \times 260 \times 70 \mathrm{~mm}$

## Standards and Certifications

Laser Safety EN 60825-1:2007

Fiber optic transmitters on this device meet Class 1 Laser safety requirements per IEC-60825 FDA/CDRH standards and comply with 21CFR1040.10 and 21CFR1040.11.
Safety UL 60950-1

IEC 60950-1:2005+A1:2009 and

EN 60950-1:2006+A11:2009+A1:2010+A12:2011

CE Mark

UL 61010-1 and UL 61010-2-201 ( Standard for Safety for Programmable Controllers )

Emissions FCC 47 Part 15 Class A

CISPR 22:2008/EN55022:2010 (Class A)

CISPR 24:2010/EN 55024:2010

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EMC and CISPR 24:2010/EN 55024:2010
Immunity IEC/EN 61000-4-2 (ESD) :
    IEC/EN 61000-4-3 (RS)
    IEC/EN 61000-4-4 (EFT) :
    IEC/EN 61000-4-5 (Surge)
    IEC/EN 61000-4-6 (CS)
    IEC/EN 61000-4-8
    IEC/EN 61000-6-2 ( General Immunity in Industrial Environments )
```

Industrial Safety UL 61010-1 and UL 61010-2-201 ( Standard for Safety for Programmable Controllers ). Formerly known as UL508 (Safety standard for Industrial Control Equipment )

Hazardous
Locations ( Hazloc )

ANSI/ISA 12.12.01, Class 1 Division 2 Groups A-D (formerly known as UL 1604 ) *

ATEX Class 1 Zone 2 *

Other ECCN: 5A991

HTSUS Number: 8517.62.0050

5 year Warranty

Contents Shipped Industrial Ethernet Switch with DIN Rail attachment
Terminal block
Installation guide

* pending

IDS-205G Industrial Switch Diagram


Single Mode / Single Strand ( WDM ) Fiber

Connecting devices over a single fiber strand ( also referred to as "Bi-Directional" BiDi or Simplex)

To reduce costs, or where there are limits on available fiber, Wavelength-Division Multiplexing (WDM) technology may be utilized. WDM uses separate transmit and receive frequencies to communicate on a single fiber strand. WDM technology relies on the fact that optical fibers can carry many wavelengths of light simultaneously without interaction between each wavelength. Thus, a single fiber can carry many separate wavelength signals or channels simultaneously. WDM systems are divided into different wavelength patterns, conventional/coarse (CWDM) and dense (DWDM).


When Single Strand fiber is used, you will need an "Up" side and a "Down" side when interconnecting fiber devices.

Perle offers a wide variety of Single Fiber ("Up/Down") Ethernet Switches and Media Converters for use with single strand of fiber.

## Select a Model to obtain a Part Number - IDS-205G

Std = Standard Temperature models: $-10^{\circ} \mathrm{C}$ to $60^{\circ} \mathrm{C}\left(14^{\circ} \mathrm{F}\right.$ to $\left.140^{\circ} \mathrm{F}\right)$.
Ind $=$ Industrial Extended Temperature Models: $-40^{\circ} \mathrm{C}$ to $75^{\circ} \mathrm{C}\left(-40 \mathrm{~F}\right.$ to $167^{\circ} \mathrm{F}$ )

## Duplex Fiber

## 促

| Transmit | Receive |
| :---: | :---: |
| $(\mathrm{dBm})$ | $(\mathrm{dBm})$ |


| Model | Temp | RJ45 GE | Fiber Connector |  |  |  |  | Power <br> Budget (dB) | Wavelength (nm) | Fiber <br> Type | Operating Distance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Min | Max | Min | Max |  |  |  |  |
| IDS-205G- | Std | 4 | $1 \times$ Duplex | -9.5 | -4.0 | -17.0 | -3.0 | 7.5 | 850 | MMF | 550 m |
| CMD05 |  |  | SC |  |  |  |  |  |  |  | (1,804 ft.) |


| IDS-205G- Ind | 4 | $1 \times$ Duplex | -9.5 | -4.0 | -17.0 | -3.0 | 7.5 | 850 | MMF | 550 m |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CMD05-XT |  |  |  |  |  |  |  |  |  |  |  |
| SC |  |  |  | 804 ft ) |  |  |  |  |  |  |  |


| IDS-205G- Std | 4 | $1 \times$ Duplex | -9.5 | -4.0 | -17.0 | -3.0 | 7.5 | 850 | MMF | 550 m |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| TMD05 |  | ST |  |  |  |  |  |  | $(1,804 \mathrm{ft})$ |  |


| IDS-205G- <br> TMD05-XT | Ind | 4 | 1 x Duplex ST | -9.5 | -4.0 | -17.0 | -3.0 | 7.5 | 850 | MMF | $\begin{aligned} & 550 \mathrm{~m} \\ & (1,804 \mathrm{ft} .) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IDS-205G- <br> CMD2 | Std | 4 | $\begin{aligned} & 1 \text { x Duplex } \\ & \text { SC } \end{aligned}$ | -6.0 | 0.0 | -17.0 | 0.0 | 11.0 | 1310 | MMF | $\begin{aligned} & 2 \mathrm{~km} \\ & (1.2 \mathrm{mi}) \end{aligned}$ |
| IDS-205G- <br> TMD2 | Std | 4 | 1 x Duplex ST | -6.0 | 0.0 | -17.0 | 0.0 | 11.0 | 1310 | MMF | $\begin{aligned} & 2 \mathrm{~km} \\ & (1.2 \mathrm{mi}) \end{aligned}$ |


| IDS-205G- | Std | 4 | $1 \times$ Duplex <br> SC | -9.5 | -3.0 | -20.0 | -3.0 | 10.5 | 1310 | SMF | 10 km |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CSD10 |  |  |  |  |  |  |  |  |  |  |  |


| $\begin{aligned} & \text { IDS-205G- } \\ & \text { CSD10-XT } \end{aligned}$ | Ind | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { SC } \end{aligned}$ | -9.5 | -3.0 | -20.0 | -3.0 | 10.5 | 1310 | SMF | $\begin{aligned} & 10 \mathrm{~km} \\ & (6.2 \mathrm{mi}) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { TSD10 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { ST } \end{aligned}$ | -9.5 | -3.0 | -20.0 | -3.0 | 10.5 | 1310 | SMF | $\begin{aligned} & 10 \mathrm{~km} \\ & (6.2 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { TSD10-XT } \end{aligned}$ | Ind | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { ST } \end{aligned}$ | -9.5 | -3.0 | -20.0 | -3.0 | 10.5 | 1310 | SMF | $\begin{aligned} & 10 \mathrm{~km} \\ & (6.2 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { CSD40 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { SC } \end{aligned}$ | -2.0 | 2.0 | -23.0 | -3.0 | 21.0 | 1310 | SMF | $\begin{aligned} & 40 \mathrm{~km} \\ & (24.9 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { TSD40 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { ST } \end{aligned}$ | -2.0 | 2.0 | -23.0 | -3.0 | 21.0 | 1310 | SMF | $\begin{aligned} & 40 \mathrm{~km} \\ & (24.9 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { CSD70 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { SC } \end{aligned}$ | -2.0 | 5.0 | -23.0 | -3.0 | 21.0 | 1550 | SMF | $\begin{aligned} & 70 \mathrm{~km} \\ & (43 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { TSD70 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { ST } \end{aligned}$ | -2.0 | 5.0 | -23.0 | -3.0 | 21.0 | 1550 | SMF | $\begin{aligned} & 70 \mathrm{~km} \\ & (43 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { CSD120 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { SC } \end{aligned}$ | 0.0 | 5.0 | -32.0 | -9.0 | 32.0 | 1550 | SMF | $\begin{aligned} & 120 \mathrm{~km} \\ & (74.6 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { TSD120 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { ST } \end{aligned}$ | 0.0 | 5.0 | -32.0 | -9.0 | 32.0 | 1550 | SMF | $\begin{aligned} & 120 \mathrm{~km} \\ & (74.6 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { CSD160 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { SC } \end{aligned}$ | 2.0 | 5.0 | -34.0 | -9.0 | 36.0 | 1550 | SMF | $\begin{aligned} & 160 \mathrm{~km} \\ & (100 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS-205G- } \\ & \text { TSD160 } \end{aligned}$ | Std | 4 | $\begin{aligned} & 1 \times \text { Duplex } \\ & \text { ST } \end{aligned}$ | 2.0 | 5.0 | -34.0 | -9.0 | 36.0 | 1550 | SMF | $\begin{aligned} & 160 \mathrm{~km} \\ & (100 \mathrm{mi}) \end{aligned}$ |

[^0]Single Fiber ( Simplex / BiDi ) Models ( Recommended use in pairs )

## Simplex (BiDi) Fiber

## $\begin{array}{cc}\text { Transmit } & \left.\begin{array}{c}\text { Receive }\end{array}\right)\end{array}$ <br> (dBm) (dBm)

| Model | Temp | $\begin{gathered} \text { RJ45 } \\ \text { GE } \end{gathered}$ | Fiber Connector | Min | Max | Min | Max | Power Budget (dB) | Wavelength ( nm ) TX / RX | Fiber Type | Operating Distance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| IDS- | Std | 4 | 1 x | -10.0 | -4.0 | -17.0 | -3.0 | 7.0 | 1310 / 1550 | MMF | 500 m |
| 205G- |  |  | Simplex |  |  |  |  |  |  |  | (1,640 ft) |
| CMS05U |  |  | SC |  |  |  |  |  |  |  |  |


| IDS- | Std | 4 | 1 x | -10.0 | -4.0 | -17.0 | -3.0 | 7.0 | 1550 / 1310 | MMF | 500 m |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 205G- |  |  | Simplex |  |  |  |  |  |  |  | (1,640 ft) |
| CMS05D |  |  | SC |  |  |  |  |  |  |  |  |



| IDS- | Std | 4 | 1 x <br> Simplex | -9.0 | -3.0 | -20.0 | -3.0 | 11.0 | $1490 / 1310$ | SMF | 10 km |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 205G- |  |  |  |  |  |  |  |  |  | $(6.2 \mathrm{mi})$ |  |
| SCS10D |  |  |  |  |  |  |  |  |  |  |  |


| IDS- | Ind | 4 | 1 x | -9.0 | -3.0 | -20.0 | -3.0 | 11.0 | $1310 / 1490$ | SMF | 10 km |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 205G- |  |  | Simplex |  |  |  |  |  |  |  |  |  |
| CSS10U- |  |  | SC |  |  |  |  |  |  |  |  |  |
| XT |  |  |  |  |  |  |  |  |  |  |  |  |


| IDS- | Ind | 4 | $1 \times$ <br> Simplex <br> SC | -9.0 | -3.0 | -20.0 | -3.0 | 11.0 | $1490 / 1310$ | SMF | 10 km <br> $(6.2 \mathrm{mi})$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 205G- |  |  |  |  |  |  |  |  |  |  |  |
| CSS10D- |  |  |  |  |  |  |  |  |  |  |  |


| $\begin{aligned} & \text { IDS- } \\ & \text { 205G- } \\ & \text { CSS20D } \end{aligned}$ | Std | 4 | $1 \text { x }$ <br> Simplex <br> SC | -8.0 | -3.0 | -22.0 | -3.0 | 14.0 | 1490 / 1310 | SMF | $\begin{aligned} & 20 \mathrm{~km} \\ & (12.4 \mathrm{mi}) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IDS- <br> 205G- <br> CSS40U | Std | 4 | $1 \text { x }$ <br> Simplex <br> SC | -3.0 | 2.0 | -23.0 | -3.0 | 20.0 | 1310 / 1490 | SMF | $\begin{aligned} & 40 \mathrm{~km} \\ & (24.9 \mathrm{mi}) \end{aligned}$ |
| $\begin{aligned} & \text { IDS- } \\ & \text { 205G- } \\ & \text { CSS40D } \end{aligned}$ | Std | 4 | $1 \text { x }$ <br> Simplex <br> SC | -3.0 | 2.0 | -23.0 | -3.0 | 20.0 | 1490 / 1310 | SMF | $\begin{aligned} & 40 \mathrm{~km} \\ & (24.9 \mathrm{mi}) \end{aligned}$ |
| IDS- <br> 205G- <br> CSS80U | Std | 4 | $1 \text { x }$ <br> Simplex <br> SC | -2.0 | 3.0 | -26.0 | -3.0 | 24.0 | 1510 / 1590 | SMF | $\begin{aligned} & 80 \mathrm{~km} \\ & (50 \mathrm{mi}) \end{aligned}$ |


|  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| IDS- | Std | 4 | $1 \times$ | -2.0 | 3.0 | -26.0 | -3.0 | 24.0 | $1590 / 1510$ | SMF | 80 km |
| 205G- |  |  | Simplex |  |  |  |  |  |  | $(50 \mathrm{mi})$ |  |
| CSS80D |  |  |  |  |  |  |  |  |  |  |  |


| IDS- | Std | 4 | 1 x | -3.0 | 2.0 | -34.0 | -9.0 | 31.0 | $1510 / 1590$ | SMF | 120 km |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 205G- |  |  | Simplex <br> SC |  |  |  |  |  |  |  |  |
| CSS120U |  |  |  |  |  |  |  |  |  |  |  |

## Industrial Ethernet Switch Accessories

Panel Mount kit PM3

Brackets for attaching 30 to 75 mm wide Perle IDS industrial switches inside a control panel or to a wall for wall.

Bracket for mounting Perle DIN Rail switches in a standard 19" rack. Occupies " 4 U" of vertical rack space. 275 mm ( 10 inches ) deep

DIN Rail 24V
Power Supply

IDPS-24-40-XT - DIN-Rail 24 VDC, 40Watt power supply with universal 85 to 264 VAC or 120-370 VDC input, -20 to $70^{\circ} \mathrm{C}$ extended operating temperature. Power Supply Specifications.

DBA0020C RJ-45F to DB-9F crossover (DTE) adapter for Perle serial console ports with Sun/Cisco pinout. \#1100300-10


[^0]:    * 1db/km multimode 50/125 micron fiber cable

