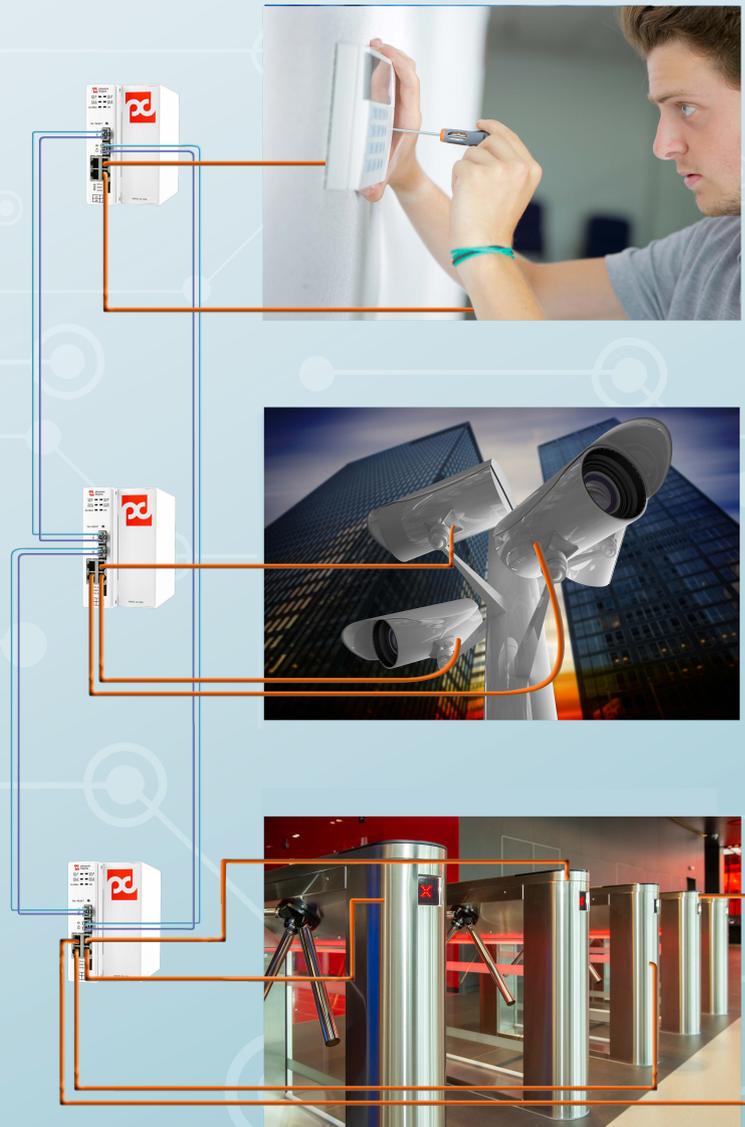
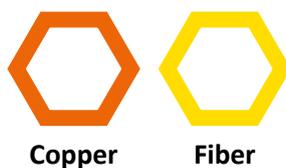


OCR

Network Switch



Panel mount network switch
for security appliances



networking for your
security solutions such as
access control, cameras,
and motion detection

fiber optic redundant Ethernet switch



IT Networks

OCR

Plug and play, no configuration, redundant fiber for maximum availability in an easy to use networking solution for security appliances such as access control, cameras, monitors, and security panels

- Connect OCR modules together in a ring via redundant fiber backbone over long distances
- Connect your cameras and security devices to the copper ports on each OCR
- Unique ring architecture reduces cabling to end devices
- Redundant Ring architecture adds an additional network path to increase reliability
- Relay out for fault indication (ETF module)
- Network status and diagnostics software
- Scalable platform



Reduce Installation Costs, Increase Reliability, Built-for-purpose

Ethernet switches connect hardwired computers, and they direct data to destinations. IT switches offer flexibility for the office environment like configuration, firmware patches, quality of service for voice, and VLANs to segregate finance, sales, marketing, and the engineering department, for example.

IT switches have the luxury of being supported by IT staff. **The Phoenix Digital OCR is not a complex IT managed switch.** It's a plug and play, high performance, redundant fiber, self-healing, built-for-purpose network switch for your security appliances.

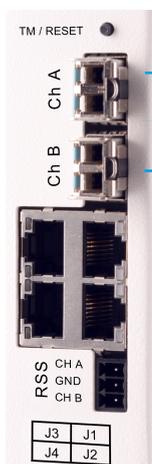
Redundant Fiber Self-healing Backbone

OCR modules are connected together in a redundant fiber ring architecture. It's redundant to increase reliability. It's a closed ring so one module can fail, and there's still a network path to the other modules. It's fiber, so you can cover long distances with EMI immunity. The network is self healing, so if you lose a fiber, or a module, there's zero network convergence time.

Unique, High Performance

The OCR supports up to 1Gbit/sec network speeds, and uniquely, can support those speeds up to 100% bandwidth utilization. This is only possible because of the patented technique of packetization between modules that always runs at 100% carrying network data.

OCR ETG Connections



Redundant fiber backbone between OCR modules

RJ45 ports for field devices

Returned signal strength voltage test points

OCR ETF Connections



Plug and Play

Full disclosure... it's almost plug and play. Truth is, you have to set one DIP switch on one OCR module on your network. This designates this OCR module as the network master on the ring architecture. So, if any module fails, it's plug and play, unless you have to throw that one DIP switch -- but hey -- that's pretty much plug and play for a network switch!

Cost Saving Architecture

The traditional architecture is hub and spoke -- switch at the hub, components at the spokes. The OCR is a ring, and hub, and spoke architecture. OCR switches are arranged in a ring and your devices connected to each OCR (a hub) which reduces network components, cabling, and connections by as much as 40%.

OCR Benefits

- 30 sec MTTR mean time to repair
- No software updates, security patches, driver updates, or memory flash configurations
- Field replaceable SFPs
- Integrated returned signal strength (RSS) (ETG module)
- 10 sec power up
- Commonality of spares
- Embedded diagnostics
- 0 sec network convergence time on channel failure
- hot swappable modules
- no IP addressing

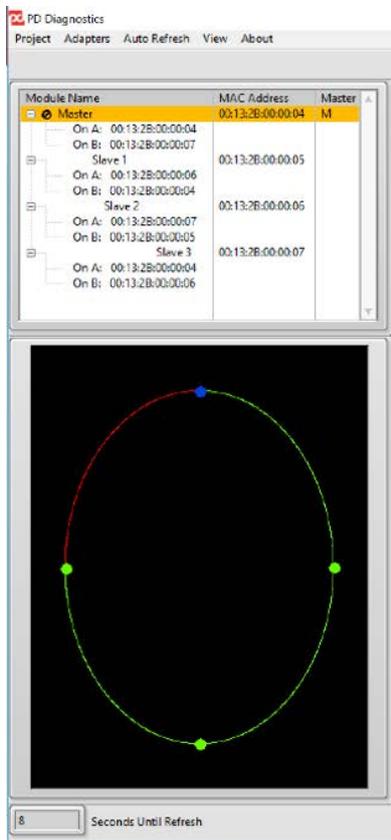
OCR Diagnostics

Diagnostic software is included with the network switch.

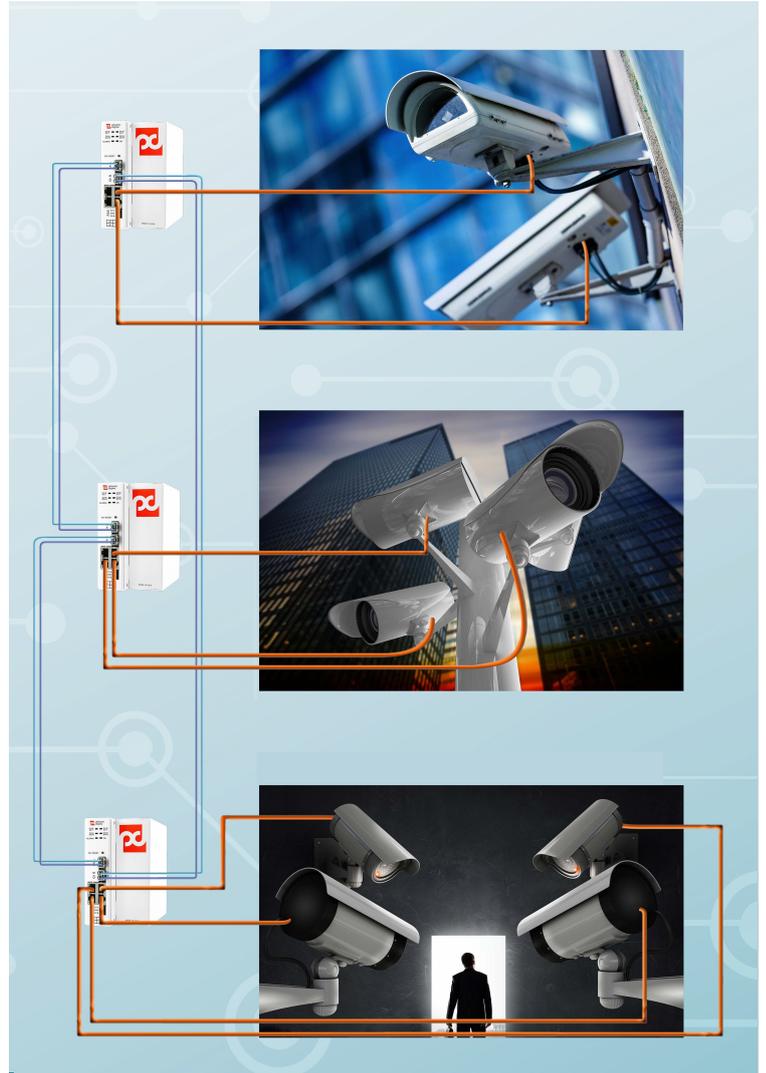
In the example below, the red line is an indication that one of the fiber segments between modules is down.

In this example, there is no outage because the network automatically adjusts and all modules remain connected via the ring.

The blue dot represents the master module on the network. This module was designated the master by setting a DIP switch in the module to Master.



OCR Diagnostics Software



Scalable Platform

The ring architecture can be extended at anytime and while running with no interruption to the network.

End devices can be connected while running to the copper ports, and OCR modules can be inserted into the fiber ring while with no interruption to the existing network.

OCR

Specifications

Ethernet speed	10/100 MB for model OCR-ETF 10/100/1000 MB for model OCR-ETG
Fiber	Single mode or multimode ST, SC, or LC connectors for model OCR-ETF LC connector for model OCR-ETG -15 dBm transmit power typical multimode -18 dBm transmit power typical single mode -32 dBm receive sensitivity
Power supply	0 to 60 degrees C (32 to 140 F) operating temperature 120/220 VAC input voltage or... 24 VDC dual feed 8 - 10 watts power consumption
Environmental	0 to 60 degrees C (32 to 140 F) operating temperature -40 to 85 degrees C (-40 to 185 F) storage temperature 0 - 95% relative humidity, non-condensing
Dimensions	162.3 mm H x 89.7 mm W x 174.2 mm D 6.39" H x 3.53" W x 6.86" D
Approvals	UL and CUL Class I Div 2 all groups CE
Diagnostics	ETG has RSS voltage out. ETF has relay out for fault indication.

Ordering Options

OCR-ETF-aa-bb-ccc-dd

- aa = "85" for 850 nm multimode
- aa = "13" for 1310 nm multimode
- aa = "13" for 1310 nm singlemode
- aa = "15" for 1550 nm singlemode
- bb = "ST" for ST connector
- bb = "SC" for SC connector
- bb = "LC" for LC connector (singlemode only)
- ccc = "24V" for 24 VDC option
- ccc = "125V" for 125 VDC option
- ccc = "ACV" for 120/220 VAC option
- dd = "SM" for singlemode

OCR-ETG-aa-bb-ccc-dd

- aa = "85" for 850 nm
- aa = "13" for 1310 nm singlemode
- aa = "15" for 1550 nm singlemode
- bb = "LC" for LC connector (no other option)
- ccc = "24V" for 24 VDC option
- ccc = "125V" for 125 VDC option
- ccc = "ACV" for 120/220 VAC option
- dd = "SM" for singlemode

<https://www.phoenixdigitalcorp.com/>

For more information please contact

North America

Softing Inc.
7209 Chapman Hwy
Knoxville TN 37920
Phone: +1.865.251.5252
E-mail: sales@softing.us

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