7x10/100TX + COMBO: 3x10/100/1000T + 3x100/1000SFP
Industrial Gigabit Ethernet Switch (Managed / Ring)

Benefits

- **System Interface/Performance**
  - RJ-45 port supports Auto MDI/MDI-X Function
  - SFP(Mini-GBIC) supports 100/1000 Dual Mode
  - Back-plane (Switching Fabric): 7.4Gbps
  - 1Mbits Packet Buffer
  - 8K MAC Address Table
  - Wide operating temperature (-40□~75□)

- **Power Supply**
  - Wide-range Redundant Power Design
  - Power Polarity Reverse Protect
  - Overload Current Protection

- **VLAN**
  - Port Based VLAN
  - Support 802.1 Q Tag VLAN
  - GVRP

- **Port Trunk with LACP**

- **QoS (Quality of Service)**
  - Support IEEE 802.1p Class of Service,
  - Per port provides 4 priority queues
  - Port Base, Tag Base and Type of Service Priority

- **Port Mirror: Monitor traffic in switched networks.**
  - TX Packet only
  - RX Packet only
  - Both of TX and RX Packet

- **Security**
  - Port Sercurity: MAC address entries/filter
  - IP Security: IP address security management to prevent unauthorized intruder.
  - Login Security: IEEE802.1X/RADIUS

- **IGMP**
  - Query mode for Multi Media Application
  - Support multicast filter

- **Supports 6000 VDC Ethernet ESD protection**

- **Supports DIDO function**

- **Case/Installation**
  - IP-30 Protection
  - DIN Rail and Wall Mount Design

- **Spanning Tree**
  - Support IEEE802.1d Spanning Tree
  - Support IEEE802.1w Rapid Spanning Tree

- **Ring**
  - Ring, Dual Homing, Couple Ring and Dual Ring Topology
  - Provide redundant backup feature and the recovery time below 20ms

- **Support IEEE802.1ab LLDP**

- **Bandwidth Control**
  - Support Rate-based and Priority-based rate limiting
  - Broadcast/Multicast Packet Filter Control

- **System Event Log**
  - System Log Server/Client
  - SMTP e-mail Alert
  - Relay Alarm Output System Events

- **SNMP Trap**
  - Device cold start
  - Power status
  - Authentication failure
  - Ring topology changed
  - Port Link up/Link down

- **TFTP Firmware Update ,System Configure Restore and Backup**

- **Provides EFT protection 3000 VDC for power line**

Standard Compliance

IEEE Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX
	IEEE802.3ab 1000Base-T
	IEEE802.3z Gigabit fiber
	IEEE802.3x Flow Control and Back Pressure
	IEEE802.3ad Port trunk with LACP
	IEEE802.1d Spanning Tree/ IEEE802.1w Rapid Spanning Tree
	IEEE802.1p Class of Service
	IEEE802.1Q VLAN Tag
	IEEE 802.1x User Authentication (Radius)
	IEEE802.1ab LLDP

Hardware Specification

Switch Architecture	Back-plane (Switching Fabric): 7.4Gbps
	Packet throughput ability(Full-Duplex): 11Mpps @64bytes
Transfer Rate	14,880pps for Ethernet port
	148,800pps for Fast Ethernet port
	1,488,000pps for Gigabit Fiber Ethernet port
Packet Buffer	1Mbits
Mac Address	8K MAC address table
Flash ROM	4Mbytes
DRAM	32Mbytes
Connector	10/100TX: 7 x RJ-45
	10/100/1000T/ Mini-GBIC Combo: 3 x RJ-45 + 3 x 100/1000 SFP sockets
	RS-232 connector: RJ-45 type
DI/DO	2 Digital Input (DI) : Level 0 : -30~2V
	Level 1 : 10~30V
	Max. input current:8mA
	2 Digital Output(DO): Open collector to 40 VDC, 200mA
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable
	EIA/TIA-568 100-ohm (100m)
	100Base-TX: 2-pair UTP/STP Cat. 5/5E cable
	EIA/TIA-568 100-ohm (100m)
	1000Base-TX: 2-pair UTP/STP Cat. 5e or 6 cable
	EIA/TIA-568 100-ohm (100m)
Optical Fiber	Multimode: 50/125µm~62.5/125µm
	Single mode: 9/125µm
	Available distance: 2km (Multimode) / 30km (Singlemode)
	Wavelength: 1310nm (Multimode/Singlemode)
Protocol	CSMA/CD
LED	Per unit: Power (Green), Power 1 (Green), Power 2 (Green), Fault (Red), Master (Green)
	10/100TX : Link/Activity (Green), Full duplex/Collision (Yellow)
	Giga Copper: Link/Activity (Green), Speed (1000Mbps Green)
	SFP: Link/Activity (Green)
Power Supply	12~48 VDC
	Redundant power with polarity reverse protect function and removable terminal block
Power Consumption	10.2 Watt (Open issue)
Operating Humidity	5% to 95% (Non-condensing)
Operating Temperature	Standard -10℃~60℃
	Wide Operating Temperature -40℃~75℃
Storage Temperature	-40°C to 85°C
Case Dimension	Metal case. IP-30, 72mm (W) x 105mm (D) x 152mm (H)
Installation	DIN Rail and Wall Mount Design
EMI	FCC Class A, CE EN61000-4-2 (ESD), CE EN61000-4-3 (RS), CE EN-61000-4-4 (EFT), CE EN61000-4-5 (Surge), CE EN61000-4-6 (CS), CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4
Safety	UL, cUL, CE/EN60950-1
Stability Testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)

Software Feature

Feature	Description
Management	SNMP v1 v2c, v3/ Web/Telnet/CLI/NS-View Management
SNMP MIB	RFC 1215 Trap, RFC1213 MIBII, RFC 1157 SNMP MIB, RFC 1493 Bridge MIB, RFC 2674 VLAN MIB, RFC 1643 , RFC 1757, RSTP MIB, Private MIB
VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP (256 Groups)
Port Trunk with LACP	LACP Port Trunk: 4 Trunk groups/Maximum 4 trunk members
LLDP	Support LLDP to allow switch to advise its identification and capability on the LAN
Spanning Tree	Support IEEE802.1w Rapid Spanning Tree
Ring	Support Ring, Dual Homing, Couple Ring and Dual Ring Topology Provide redundant backup feature and the recovery time below 20ms.
Quality of Service	The quality of service determined by port, Tag and IPv4 Type of service, IPv4/IPv6 Different Service,
Class of Service	Support IEEE802.1p class of service, per port provides 4 priority queues
Port Security	Support 100 entries of MAC address for static MAC and another 100 for MAC filter
Port Mirror	Support 3 mirroring types: "RX, TX and Both packet".
IGMP	Support IGMP snooping v1,v2 256 multicast groups and IGMP query Support multicast filter
IP Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Login Security	Support IEEE802.1X Authentication/RADIUS
Bandwidth Control	Support ingress packet filter and egress packet limit The egress rate control supports all of packet type and the limit rates are 100K~250Mbps Ingress filter packet type combination rules are Broadcast/Multicast/Unknown Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all of packet. The packet filter rate can be set from 100k to 250Mbps,
Flow Control	Support Flow Control for Full-duplex and Back Pressure for Half-duplex
System Log	Support System log record and remote system log server
SMTP	Support SMTP Server and 6 e-mail accounts for receiving event alert
Relay Alarm	Provides one relay output for port breakdown, power fail Alarm Relay current carry ability: 1A @ DC24V
DIDO	DO: When disconnection of the specific port was detected, DO will activate the signal LED to alarm. DI: Integrate critical sensors: 2 groups of digital inputs. DI can integrate the sensors into the auto alarm system and transfer the alarm information to IP network with email and SNMP.
SNMP Trap	Up to 3 Trap stations Cold start, Port link up, Port link down, Authentication Failure, Private Trap for power status, Port Alarm configuration, Fault alarm, Ring topology change
DHCP	Provide DHCP Client, DHCP Server and IP Relay
DNS	Provide DNS client feature and support Primary and Secondary DNS server
SNTP	Support SNTP to synchronize system clock in Internet
Firmware Update, configuration backup and restore	Support TFTP firmware update, System configure backup and restore.
ifAlias	Each port allows importing 128bit of alphabetic string of word on SNMP and CLI interface.

** Optional

Order Information

Part Number	Product Name	Description
26 1770 300	DragonLine	Industrial Ethernet Switch (Managed / Ring) 7x10/100TX + 3x10/100/1000T/ 100/1000 SFP Combo
26 1770 300E	DragonLine	Industrial Ethernet Switch (Managed / Ring) 7x10/100TX + 3x10/100/1000T/ 100/1000 SFP Combo Wide Temperature Range(-40℃~75℃)