# Winncom Technologies Fiber Optic Solutions

# **Outdoor Bulk Fiber Optical Cable (Outdoor Plant)**

- Standard Loose Tube Steel Wire Armored (2-44 Cores)
  - o Installation: Underwater, direct burial, climbing
    - Non- metallic (FRP)/ Metallic (phosphate steel wire) central strength member, double plastic-coated aluminum tape- PE laminated inner sheath, steel wire armor- PE laminated outer sheath.

#### • FRF-Armored Stranded Loose Tube Double Sheath Optical Cable

- Installation: All-dielectric self-supporting overhead installations
  - Protect the optical fiber cable from rodents by the solidness of FRP armor and the sharpness of fiberglass of it after being bitten by Rod-type FRP reinforced armor for rodent prevention.

#### • Stranded Loose Tube Optical Fiber GYTS (2-576 Cores)

- Long-haul communication, interoffice communication, especially suitable for application with high requirement of crush resistance like aerial installation.
  - Non- metallic (FRP)/ Metallic (phosphate steel wire) central strength member, double plastic-coated corrugated steel tape- PE laminated outer sheath.
- Stranded Loose Tube Double Sheath Optical Fiber FYTA53 Cable (2-432 Cores)
  - Direct burial
    - Non- metallic (FRP)/ Metallic (phosphate steel wire) central strength member, double plastic-coated aluminum tape- PE laminated inner sheath, double plastic-coated corrugated steel tape- PE laminated outer sheath.
- Stranded Loose Tube Ribbon Optical Fiber Cable GYDTA (72-576 Cores)
  - Long-haul communication, interoffice communication, especially suitable for application with high requirement of crush resistance like aerial installation.
    - Non- metallic (FRP)/ Metallic (phosphate steel wire) central strength member, double plastic-coated corrugated steel tape- PE laminated outer sheath.
- Central Loose Tube Optical Fiber Cable GYXTW (2-144 Cores)
  - Long-haul communication, interoffice communication.
    - Excellent water-proof performance with superior water- barrier and excellent tensile strength.





# Indoor Optical Bulk Fiber Optic Cable

- Ribbon Fiber Optical Cable
  - Indoor wiring, Interconnection of instrument and communication equipment, and Ribbon fiber patch cords.
- Optical Fiber Breakout Cable
  - The main wiring optical cable in the building
    - Optical Fiber Break Out Cable takes the simplex optical cable as the basic unit, nonmetal as the strength member around which the sub cable is stranded, and the jacket is made of polyvinyl chloride (PVC) or low smoke zero halogen flame-retardant polyolefin (LSZH).

## • Optical Fiber Distribution Cable

- Multi-fiber Patch Cords, Indoor integrated wiring.
  - Optical Fiber Distribution Cable takes multiple tightbuffered fibers as the basic unit, high modulus aramid yarn as the strength member, and the jacket is made of polyvinyl chloride (PVC) or low smoke zero halogen flame-retardant polyolefin (LSZH). (2~24 cores).

## • Indoor FTTH Drop Cable

- FTTH Applications / Indoor Wiring
  - Indoor FTTH drop cable is made by putting the fiber in the center, and two parallel strength members at two sides, and the jacket is made of low smoke zero halogen flameretardant polyolefin (LSZH).

## • Simplex Optical Fiber Cable

- Optical Fiber Patch cords and pigtails, equipment interconnect.
  - With a single tight-buffered fiber as the basic unit, high modulus aramid yarn as the strength member, and the jacket is made of polyvinyl chloride (PVC) or low smoke zero halogen flame-retardant polyolefin (LSZH).

## Duplex Optical Fiber Cable

- Duplex Fiber patch cords and pigtails.
  - With two tight-buffered fibers as the basic unit, high modulus aramid yarn as the strength member, and the jacket is made of polyvinyl chloride (PVC) or low smoke zero halogen flame- retardant polyolefin (LSZH).













# **Optical Components**

- Fiber Optic Splitters
  - PLC Splitters are an integrated lightwave optical power distribution device that is especially suitable for the connection between the central office and terminal equipment in the Passive Network (BPON, EPON, GPON, etc)
- Optical Fiber Adapters
  - The optical fiber adapter (also known as the flange) is the intermediate connecting part of the optical fiber movable connector. Series products include FC. SC. ST. LC. MTRJ. Widely used in optical distribution frames (ODF
- Optical Fiber Quick Connector
  - Optical fiber quick connectors are mainly used for fast termination, realizing the fast connection of two optical fibers. The product series have SC, FC, and other specifications, which are suitable for FTTx, LAN optical fiber wiring and other scenarios.
- Optic Fiber Patch Cord
  - This product solves the problem that the tensile strength of most products in the market is not enough and the fiber is broken in the process of using, which can facilitate FTTH construction, and increase efficiency and reduce maintenance times. The product line includes SC/FC/LC/ST optical fiber patch cords, bundled optical fiber patch cords, waterproof optic fiber patch cords, Pressive Bending Resistance (PBR) Patch Cord, MTRJ, MU, etc.

## • Pre-Terminated FTTH Drop Cable

 Pre-terminated FTTH Drop Cable are composed of drop cable and optical fiber connector. According to the production process of optical fiber movable connector, the connector is pre-installed on the drop cable in the factory. The optical performance advantage is same with the factory preset optical patch cord.









# **Optical Transceivers**



- 400G OSFP Optical Transceiver
  - SDGI provides a comprehensive 400G OSFP optical transceiver portfolio, including 4x50Gx2 and 4X100G architectures. This series of products comply with IEEE 802.3bs and OSFP MSA standards, and are mainly applied in 400G Ethernet, Data Center, and Cloud Networks.
- 100G QSFP28 Single Lambda Optical Transceiver
  - SDGI 100G QSFP28 Single Lambda Optical Transceivers are mainly applied in 100G
    Ethernet. This series of products comply with IEEE 802.3bm, IEEE 802.3cd and QSFP28
    MSA standards and will also become an alternative to traditional four-channel 100G
    optical modules.
- 50G LR and ER Modules
  - SDGI 50G LR and ER optical modules are designed for 5G mid-haul and back-haul applications. They adopt the QSFP28 form factor and LC connector, and compliant with the QSFP28 MSA.
- 40G QSFP+ Optical Transceiver
  - SDGI provides a full range of 40G QSFP+ optical transceiver products, including SR4, ES R4, IR4, LR4, ER4, LX4, PSM IR4, PSM LR4, AOC and AOC Breakout series. This series of products adopt LC or MPO optical ports and are compatible with IEEE802.3bm, SFF-8436 and other standards. It has the characteristics of low power consumption, small volume, high speed, and the like, and is beneficial to increase the capacity of data centers, improve the port density and reduce the power consumption. It is widely applied in large Data centers, Campus, Metropolitan Area Network, and other environments.

## • 25G SFP28 Optical Transceiver

- SDGI 25G SFP28 optical transceiver modules include SR, AOC, LR, ER commercial temperature series. These products adopt LC optical ports and are compatible with IEEE802.3by, IEEE802.3cc, SFF-8472, Fiber Channel ANSI/INCITS and other standards. They have the characteristics of low power consumption, high density, high speed etc. These products are mainly applied in Data Centers, 25G Ethernet Networks and Fiber Channel.
- 10G SFP+ Ethernet Optical Transceiver
  - SDGI 10G SFP+ Ethernet optical transceivers include LR, ER and ZR series, which adopt LC optical ports and are compatible with IEEE802.3ae, SFF-8472, SFF-8431 and other standards. It has the characteristics of low power consumption, small volume, high speed, etc. These products are mainly applied in Data centers, Metropolitan Area, Wireless, Transmission networks and other environments.

# **Optical Distribution Panel (Cabinets & Racks)**

#### • Cabinets

 SDGI can provide IDC cabinets, integrated cabinets, outdoor cabinets, mini cabinets, and other types of cabinets, which have good shock resistance and heat dissipation performance, and provide reliable and safe protection for the stable operation of the equipment.

#### • Optical Fiber Distribution Panels

- All modular design. All operations in the front. Integrated fiber splicing and distribution. Suitable for 19" and 23" frames.
  - Optic fiber distribution panel is suitable for fiber optic ribbon cable as well.

#### • Optical Fiber Distribution

 A fiber optic distribution box is used to connect trunk cable and distribution cable for indoor and outdoor purposes. Fulfill the introduction and fixing of fiber cable, fiber splicing, distribution, installation and distribution of optical splitter, storage and splicing of drop cable, etc., Each performance meets or exceeds the requirement of YD/T 2150- 2010 standard.

#### • Multimedia boxes

 Multimedia boxes are widely used in smart homes, smart buildings, building intelligence, smart electrical, and weak current projects. They can uniformly manage weak current signal lines and place small or special equipment. applied to FTTH indoor customer, Wall embedded installation, and achieved the real FTTH.

#### • Optical Cable Cross Connect Cabinet

 Common optical cable cross-connect cabinets can provide connection, distribution, and dispatch between main optical cables and distribution optical cables, easy and reliable to use and maintain.

#### • Fiber Optic Distribution Frame

 SDGI optical distribution frame with splice and termination integration modules, wide rack structure, always is used in the line sides of the central office and access Bureau, to make a reliable connection and distribution between the outside cables and optical communication equipment.















## **Fiber Access Solutions**

- V1-16XC
  - OLT with the flexibility to choose GPON, XGS-PON or GPON+XGS-PON (Combo) for costeffective 10Gig services.
    - Compact 1U low profile, high density
    - 360Gbps switching capacity.
    - 16-port XGS-PON/GPON combo SFP+ interfaces
    - Fixed 4-port 25GE SFP28 and 2-port 100G QSFP28 optical interfaces.
    - XGS-PON ODN class N1/N2/E1 compliant with ITU-T G.9807.1
- V2
- Compact high-capacity solution for Hyper-Fast SDN Access Networks
  - Any services Residential or Business Broadband, and Mobile xHaul
  - GPON, XGS-PON, GPON+XGS-PON (Combo), 1GigE, and 10GigE Active Ethernet fiber access+ Meets ETSI EN 300 standard.
  - Industrial temperature
  - sdNOS<sup>™</sup> operating system software for modular software and cloud-based network functions
  - Intuitive, comprehensive management, with CLI, and DZS Cloud Access Edge Domain Orchestrator.
- V6

 Groundbreaking System First to Provide Upgrade Path from Today's XGS-PON to Future 50/100G PON.

- Ready for High-Density Edge Deployment: 6RU environmentally hardened with 6 slots
- Extraordinary Performance: Scales to 800
  Gbps of non-blocking switching capacity per slot
- Industry-Leading Capacity: Serves over 24,000 subscribers in 6RU form factor.
- Deploy 10G Today and 50/100G Tomorrow: First system to provide in-place upgrade path from XGS PON to future 50/100G PON.
- Open Standards-based and SDN-enabled Software: Aligned with global standards and complemented by award-winning DZS Cloud software.
- Best of Both Worlds: Support for centralized and disaggregated deployment models, including benefits of chassis-based disaggregation
- Expansive, Interoperable ONT and Gateway Portfolio: Supports a full array of ONTs and gateways with cutting-edge WiFi and proven 3rd party interoperability.







# **Optical Network Terminals**

- 2411GN (GPON ONT)
  - The next generation G-Series ONT enables subscribers to enjoy bandwidth-intensive multimedia services with leading-edge GPON technology.
    - Supports 2.5Gbps/1.25Gbps
      (Downstream/Upstream) with integrated GPON WAN interface.
    - High-capacity multi-rate 1G/2.5G Ethernet interface
    - One POTS interface compliant to SIP and MGPC telephony standards.
- 2434GN (GPON ONT)
  - The next generation G-Series ONT enables subscribers to enjoy bandwidth-intensive multimedia services with DZS leading-edge GPON technology.
    - Supports 2.5Gbps/1.25Gbps (Downstream/Upstream) with integrated GPON WAN interface.
    - Four multi-rate 10/100/1000M Ethernet interfaces
    - Two POTS interfaces compliant to SIP and MGPC telephony standards.
    - 8-pin Battery Backup interface with telemetry
- 5222XG (XGS-PON ONT)
  - The first generation of 10 Gigabit X-Series ONT enables subscribers to enjoy bandwidth-intensive multimedia services with leading-edge XGS-PON technology.
    - Supports 10Gbps/10Gbps (Downstream/Upstream) with integrated XGS-PON WAN interface.
    - High-capacity multi-rate 1G/2.5G/5G/10G Ethernet interface
    - Two multi-rate 10/100/1000M Ethernet interfaces
    - Two POTS interfaces compliant to SIP and MGPC telephony standards.
- 5225A (XGS-PON / 10GS AnyPON ONT)
  - 10 GigE ONT optimized for residential and small-business applications using DZS leading-edge xPON 10G technology.
    - Supports 10Gbps/10Gbps (Downstream/Upstream) with pluggable SFP+ WAN interface.
    - One high-capacity multi-rate 100M/1G/2.5G/5G/10G Ethernet interfaces
    - Four multi-rate 10/100/1000M Ethernet interfaces
    - Two POTS interfaces compliant to SIP and MGPC telephony standards.
    - Enterprise LAN features (802.1x, LLDP)









#### WiFi Gateways & Access Points

- 1664WC
  - OpenSync compatible WiFi networking for home users.
    - Functions as an Access Point or Client
    - One gigabit Ethernet WAN port
    - Three multi-rate 10/100/1000M Ethernet LAN ports
    - Dual-band 2.4GHz 2×2 802.11ax, 5GHz 2×2 802.11ax
      Carrier-grade WiFi 6 interfaces
- 1764WC-A
- Enables the DZS Xperience with CloudCheck compatible Wi-Fi networking for home users.
- Functions as an Access Point or Client
- One 2.5 gigabit Ethernet WAN port
- Three multi-rate 10/100/1000M Ethernet interfaces
- Dual-band 2.4GHz 2×2 802.11ax, 5GHz 2×2 802.11ax
  Carrier-grade WiFi 6 interfaces
- 2428TE WiFI 6 Ethernet Wireless Controller
  - Advanced 802.11ax Ethernet service point enables subscribers to enjoy multimedia services over wireless with DZS leading-edge technology.
    - Supports 2.5Gbps/2.5Gbps (Downstream/Upstream) with multi-rate Ethernet WAN interface.
    - Four multi-rate 10/100/1000M Ethernet interfaces
    - Two POTS interfaces compliant to SIP and MGPC telephony standards.
    - Dual-band 2.4GHz 3×3 802.11ax, 5GHz 4×4 802.11ax Carrier-grade WiFi 6 interfaces
    - Support of DZS CloudCheck WiFi optimization
    - USB 3.0 with support of 3G and LTE wireless WAN backup
- W5500CA Advanced Dual-Band Access Point with WiFi 6
  - First generation 802.11ax Access Point provides high-performance wireless connectivity of multimedia services with DZS leadingedge technologies.
    - Dual-band 2.4GHz 2×2 802.11ax, 5GHz 2×2 802.11ax wireless
    - One gigabit Ethernet WAN port
    - Three multi-rate 10/100/1000M Ethernet LAN ports
    - One USB 2.0 port







