WAVE2WAVE.io

Cabling, Power, Connectivity - Simplified

Designing, delivering, and supporting the critical physical infrastructure behind tomorrow's networks.

Product Offerings

- Fiber Infrastructure
- Active Optical (AOC), Active Electrical (AEC) and Direct Attach Cables (DAC)
- Optical Transceivers
- Ethernet Systems
- Patch Panels & Cassettes (EVO / EXO Platforms)
- Testing & Lab Tools
- Power Cables

Engineering and Customization Services

- Custom Cable Engineering
- Custom Cable Bundles
- Factory Labeling
- Advanced Deployment Kitting
- Digital Twin/DCIM Integration (DC Twin™)
- Quality Assurance
- Delivery Speed
- Global Delivery

Wave2Wave.io designs and manufactures engineered connectivity systems for data center, hyperscale, enterprise, and telecom infrastructure. All products are factory-terminated, serialized, and verified for consistency, performance, and traceability. Capabilities include fiber, copper, and power systems; pre-assembled deployment kits; and labeling integration with DCIM platforms.

- Enterprise Labs
- Hyperscalers
- Broadband/FTTH
- Commercial Data Centers
- Colocation

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The Wave2Wave.io Difference
Engineering AI-Ready Infrastructure

We provide more than commodity components. At the core of every Wave2Wave.io project lies a suite of value-added services that turn cabling into an engineered experience.

- **Custom Cable Engineering - Built to Your Architecture**
  Wave2Wave cables are engineered to your exact requirements, not to a nearest-foot catalog length. We manufacture in 3-inch increments to match your pathway design, airflow zones, and color conventions. Fiber, copper, or power — each assembly is optimized for performance, thermal efficiency, and visual organization. Choose your length, jacket color, connector type, and boot style; we deliver a system that fits perfectly the first time.
- **Factory Labeling & Identification — Faster Installs, Zero Field Errors**
  We eliminate field labeling entirely. We factory label with identifiers marking to your rack, port, and service map. Installers simply "connect the label," finishing racks faster with no mismatched circuits. The result: infrastructure that installs in days, audits in minutes, and scales cleanly as AI clusters expand.
- **Advanced Deployment Kitting - Rack-Ready Systems, Not Bulk Boxes**
  Instead of bulk cartons—we can ship rack-ready systems. Each shipment arrives sequenced by installation order — every cable, cord, and accessory kitted for a specific rack or phase. Let your field teams spend their time building, not sorting. Customers routinely cut your installation labor and bring GPU and HPC facilities online weeks earlier.
- **100% Quality Assurance - Factory Tested, Field Ready**
  Every product we manufacture undergoes a rigorous, 100% inspection process before it leaves our facility. From optical performance to physical integrity, we ensure every component meets our exacting standards.
- **Fast Delivery Speed and Global Delivery:**
  With a typical delivery window of just 3 to 4 weeks, we provide some of the fastest lead times in the industry for custom-engineered solutions. And we can ship globally.

FIBER INFRASTRUCTURE

Factory-terminated optical cable assemblies and components for structured cabling and interconnect systems.

> Typical deployments: Enterprise and AI data centers, engineering labs, telecom and broadband networks, and colocation facilities requiring pre-terminated, high-density fiber backbone systems.

- **Trunk assemblies**
  MTP/MPO terminates 12/24, 16/32 fiber; OS2, OM3, OM4, OM5; Ribbon or round, pinned or unpinned, standard or low-loss options
- **Patch cords**
  LC / SC / ST / SN / FC / CS,, simplex or duplex, UPC or APC polish, optional pull-tab connectors, bend-insensitive fiber.
- **Cable Construction Options**
  Distribution, riser (OFNR), plenum (OFNP), LSZH, indoor/outdoor, interlocking armored, micro-distribution, high-flex jacket.
- **Specialty Assemblies**
  Breakout, fanout, pigtail bundles, MPO polarity A/B/C optimized, ribbonized options, data-center kitting.
- **Custom Options**
  Lengths in 3-inch / 8-cm increments, connector type, fiber grade, jacket color, pulling eyes, serialized labels, port-mapping, and packaging.
- **Quality & Testing**
  100% interferometry inspection; IL/RL tested to IEC/TIA limits; serialized test reports included with each assembly.

ACTIVE OPTICAL, ACTIVE ELECTRICAL AND DIRECT ATTACH CABLES (AOC/AEC/DAC)

High-speed factory-terminated assemblies for short and mid-range interconnects.

> Typical deployments: GPU and AI fabric clusters, hyperscale and colocation data centers, HPC interconnects, and Ethernet/InfiniBand spine-leaf architectures where latency and density are critical.

- **Active Optical Cables (AOC)**
  OSFP (400G, 800G), QSFP-DD (400G, 800G), QSFP112, QSFP56, QSFP28, QSFP+, SFP112, SFP56, SFP28, SFP+.
  - Custom lengths: 0.5m to 100m.
- **Active Electrical Cables (AEC)**
  OSFP (400G, 800G), QSFP / QSFP-DD (400G, 800G)
  - Custom lengths: 0.5m to 7m.
- **Direct Attach Copper (DAC)**
  OSFP (400G, 800G), QSFP-DD (400G, 800G), QSFP112, QSFP56, QSFP28, QSFP+, SFP112, SFP56, SFP28, SFP+
  - Custom lengths: 0.5m to 5m.
- **Supported speeds**
  10G, 25G, 40G, 50G, 100G, 200G, 400G, 800G+.
- **Coding**
  Fully vendor-validated EEPROM coding for switch, NIC, accelerator, and router platforms.
- **Custom Options**
  - Breakout/fanout configurations: 400G → 4 x 100G, 400G → 2 x 200G, 800G → 4 x 200G), 800G → 2 x 400G
  - Lengths in 3 inch / 8 cm increments
  - Cable bundles / harness builds
  - Custom Labeling, serialization, barcodes, QR codes

OPTICAL TRANSCEIVERS

Hot-pluggable optical modules for network switches, routers, and servers.

> Typical Deployments: Enterprise and hyperscale data centers, AI/GPU clusters, and telecom networks — enabling 10G–800G optical connectivity for spine-leaf, inter-rack, and long-reach applications.

- **Form factors**
  OSFP (400G, 800G), QSFP-DD (400G, 800G), QSFP112, QSFP56, QSFP28, QSFP+, SFP112, SFP56, SFP28, SFP+.
- **Optical Types / Reaches**
  SR, LR, DR, SR4, DR4, FR4, LR4, SR8, DR8, ER, ZR, CWDM, DWDM
  - 10G variants depending on form factor and reach class.
- **Platform Compatibility**
  Fully coded and validated for Cisco, Arista, Juniper, Dell, HPE, NVIDIA, and other major switch/NIC OEMs
- **Diagnostics / Standards**
  DOM / DDM (Digital Optical Monitoring) compliant; SFF-MSA-OSFP -MSA standard management interface.
- **Coded and tested for interoperability**
- **Custom EEPROM programming available**

ETHERNET SYSTEMS

Twisted-pair copper cabling solutions for structured network and device connectivity.

> Typical Deployments: Enterprise networks, edge compute, and lab environments where PoE++ power and high-density patching are required.

- **Cable Types**
  CAT5e, CAT6, CAT6A, CAT7, CAT8; available in shielded (STP/FTP) and unshielded (UTP) options.
- **Custom Options**
  Length, color, boot style, wiring (straight-through or crossover), labeling, bundling, and sequencing.
- **Power Support**
  Fully compliant with PoE, PoE+, PoE++ (802.3bt Type 4) up to 100W continuous load.
- **Jacket & Construction Choices**
  - Slim / ultra-flex jacket for high-density routing
  - Standard or snagless boots, molded boot
  - Stranded or solid conductor options
- **Performance & Testing**
  Factory-terminated, 100% tested for continuity, resistance, NEXT/ RETURN LOSS, and wiremap certification.
- **Rating / Compliance**
  Available in CMP (plenum), CMR (riser), CM, and LSZH low-smoke zero-halogen jackets; compliant with TIA/EIA-568, RoHS, and REACH.

PATCH PANELS & CASSETTES (EVO/EXO PLATFORMS)

Modular chassis and cassette platforms for fiber, copper, and hybrid connections.

> Typical Deployments: AI and HPC cluster patching, colocation meet-me rooms, enterprise distribution frames, and modular data halls requiring 100G–800G migration capability.

- **1RU and 2RU chassis, 4–14 cassette capacity.**
- **EVO and EXO platforms with interchangeable modules.**
- **Fiber cassettes**
  MTP/MPO feedthrough, LC /SC duplex breakout, TAP, Splitter, WDM.
- **Copper cassettes**
  RJ45 feedthrough and pre-terminated bundles.
- **Hybrid and mixed-media configurations supported.**
- **Supports migration paths for 100G, 400G, and 800G.**
- **Tool-less insertion and front/rear service access.**

TESTING & LAB TOOLS

Tools and assemblies for network validation, port testing, and system diagnostics.

> Typical Deployments: Lab and manufacturing environments, OEM validation facilities, and telecom testing operations requiring repeatable, high-accuracy simulation.

- **Fiber-in-a-Box™**
  Portable and rack mounted Fiber-in-a-Box fiber spools for distance simulation (up to 250 km).
- **Loopbacks**
  Electrical and optical loopback assemblies for port validation. SFP to OSFP up to 800G.
- **Custom length and connector options available.**

POWER CABLES

Custom-length power distribution assemblies for data center and IT equipment.

- **Connector types**
  NEMA 5-15P/C13/C14, C19/C20, IEC60320, and custom configurations.
- **Gauge options**
  12AWG, 14AWG, 16AWG and 18AWG conductors.
- **Custom Colors**
  Coded jackets for circuit identification.
- **UL-listed components and strain-relief construction.**
- **Rack-kitted and labeled for coordinated deployment.**
- **Manufactured to exact length and delivered with serialized QC report.**

QUALITY & MANUFACTURING EXCELLENCE

- **ISO 9001 and ISO 14001 certified manufacturing facilities.**
- **Automated polishing, interferometric inspection, and SPC process control.**
- **Serialized traceability for all assemblies and materials.**
- **Full optical and electrical test documentation supplied with shipment.**
- **Compliance with TIA, IEC, and Telcordia standards.**
- **Global production and logistics network for consistent supply.**

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