

# SOLUTIONS TO POWER YOUR BROADBAND NETWORK FORWARD

CONNECTIVITY | CUSTOMER PREMISES | DATA CENTER  
OPTICAL TRANSPORT | OUTSIDE PLANT | SECURITY  
SERVICE DELIVERY | SOFTWARE NETWORKING  
SWITCHING AND ROUTING | WIRELESS

50  
YEARS  
ANNIVERSARY  
since 1970

CELEBRATING 50 YEARS  
OF EXCELLENCE

more than  
> DISTRIBUTION

# COMPANY OVERVIEW

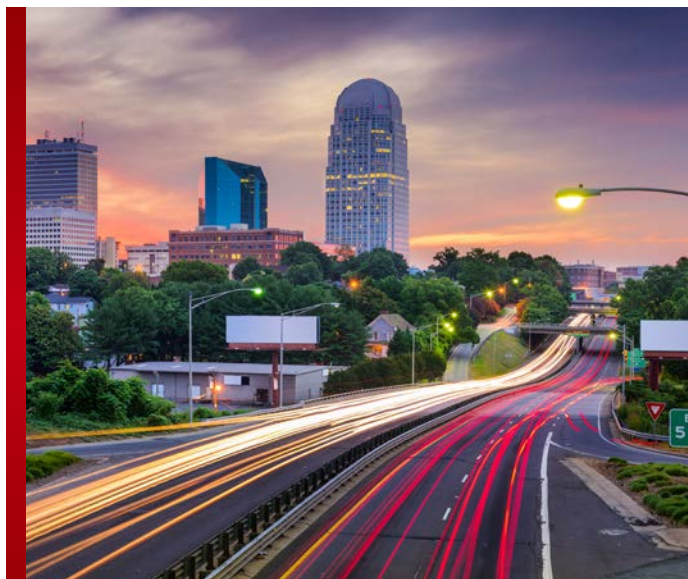
## About Walker and Associates

Walker and Associates is the premier source of telecommunications products for network operators, simplifying network deployments with expert installation, systems integration, and unsurpassed sourcing services.

Since 1970 Walker has remained an aggressive industry leader, offering products and solutions that support leading-edge technologies including Switching, Routing, Wi-Fi, Microwave, NFV, Carrier Ethernet, VoIP, WDM, ROADM, Packet Optical Networking, SDN, and Access Technologies such as GPON, Active Ethernet, Fixed Wireless, DSL, and more.

Walker provides these solutions to wireline and wireless service providers, utilities, and federal agencies of all sizes. Walker continues seeking new products and technologies that aid in building network infrastructure and allowing upgrades for embedded base of equipment for higher speeds of broadband service delivery.

Walker's services help accelerate schedules, control costs, and ensure high-quality outcomes during the planning, deployment, and maintenance of the networking solutions we sell. We assist customers in solving business challenges and increasing their ability to meet customer expectations.



## Manufacturer Partnerships

Walker works hand-in-hand with each strategic manufacturer partner to forecast, plan, replenish, and effectively manage product life cycles. We strive to maintain stocking positions on most commonly required equipment to provide just in time delivery.

## Sales and Customer Support

Help is just a phone call away. Your dedicated sales team is trained and knowledgeable about the telecommunications industry. Our sales team knows your business and assists in introducing new products and technology trends, and managing day-to-day business requirements such as product delivery, pricing, order placement and more.

## **Distribution and Logistics**

With a broad range of products and services, Walker is the ultimate one-stop shopping resource for your network needs. With an expansive 150,000 square foot warehouse and a dedicated warehouse staff that achieves 99.9% shipping accuracy, Walker makes it simple for you to purchase and install the products you need.

We maintain a thorough and efficient state of the art distribution system, saving customers time and money with logistics expertise in warehousing, asset management, barcoding, scanning, configuration services, custom network deployment kits, and more.

Today's network operator knows that experience matters, product alone is not the sole test of value, and being more than a distributor matters. You are looking for a business partner with strategic relationships that leverages the best opportunities and expertise in exchange for your loyalty.

## **Quality**

Walker is ISO 9001:2015 certified and retains this certification each year by undergoing annual audits, demonstrating our continued commitment to quality and business excellence.



Count on Walker to proactively work with you on best of breed products from over 400 of today's leading manufacturers

## **Engineering and Technical Support**

Walker's engineering and technical support team collectively boasts over 100 years of telecommunications engineering and implementation experience. In addition, their certifications from leading manufacturers make them reliable resources who are available to assist with designing communications solutions for customer premises, central office, data center, outside plant, and various network applications.

## **Professional Services**

Our certified specialists and expert professional services team makes it easy for you to incorporate new products into your network. We offer a wide range of services including installation, engineering, integration, technical assistance, network architecture and design, managed services, customer asset management, and custom configured services.

## **eBusiness Online Account Services**

Walkerfirst.com allows you direct access to business critical information including quote building, online ordering, dynamic availability, order status, invoice records, shipment tracking, proof of delivery details, RMA creation, and more.

Let us help you grow your business efficiently as you capitalize on your Walker eBusiness online account. Account set up is free and easy!

Register today at [walkerfirst.com/register](http://walkerfirst.com/register).

# CELEBRATED STATUS WITH LEADING PARTNERS

Strategic relationships with industry leading manufacturers allow Walker and Associates to provide customers best of breed solutions combined with a variety of value-added services.

Inclusion in our OEM partners' sales meetings, manufacturer certified training, preferred pricing, and stock rotation programs allow Walker to leverage the best opportunities and expertise for loyal customers like you.



## **ADTRAN**

#1 Distributor for Tier 2/3 Service Providers  
Since 2003

## **ADVA**

Top Tier Value Added Partner Since 2010

## **CAMBIUM NETWORKS**

Cambium ConnectedPartner Platinum

## **CIENA**

Ciena Partner Network (CPN) Elite Status and  
Accredited Ciena 6500 Series Install / Implement  
Partner

## **COMMSCOPE**

National Distribution Partner

## **CORNING**

Gold Status Distribution Partner

## **FORTINET**

Advanced Partner

## **JUNIPER NETWORKS**

Elite Partner since 2011; Telco Partner of the Year  
2014, 2015, 2018; Americas Partner of the Year 2018;  
Americas East Partner of the Year 2018

## **NOKIA**

Expert Level in Private Wireless and Microwave  
Technologies

## **RAD**

Leading Solutions Partner Since 2006

## **TELCO SYSTEMS**

#1 Volume Distributor in North America Since 2012

## **VERTIV**

Elite Status Distribution Partner

## **VIAVI**

Federal Master Distribution Partner

## **ZYSXEL**

Stocking Distributor Since 2010

# ASSOCIATION MEMBERSHIPS

As an active member of multiple state, regional and national industry associations, Walker is strategically engaged with organizations supporting telecommunications markets. We are proud members of the following associations. Additionally, we demonstrate our commitment through event sponsorships, contributing educational content, advertising, and exhibiting at conferences and expos.

## National Association Memberships



## State and Regional Association Memberships

Alaska Telecom Association (ATA)  
Arizona-New Mexico Telecom. Association (ANMTA)  
Arkansas Telecommunications Association (ATA)  
Broadband Association of North Dakota (BAND)  
California Communications Association (CalCom)  
Carolina-Virginias Tel. Membership Association (CVTMA)  
Colorado Telecommunications Association (CTA)  
Georgia Telecommunications Association (GTA)  
Idaho Telecom Alliance (ITA)  
Illinois Telecommunications Association (ITA)  
Indiana Broadband & Technology Association (IBTA)  
Iowa Communications Alliance (ICA)  
Kentucky Telecom Association (KTA)  
Louisiana Telecommunications Association (LTA)  
Minnesota Telecom Alliance (MTA)  
Montana Telecommunications Association (MTA)  
Nebraska Telecommunications Association (NTA)  
Nevada Telecommunications Association (NTA)  
New York State Telecom. Association (NYSTA)

North Dakota Telephone Association (NDTA)  
Ohio Rural Broadband Association (ORBA)  
Ohio Telecom Association (OTA)  
Oklahoma Telephone Association (OTA)  
Oregon Telecommunications Association (OTA)  
Pennsylvania Telephone Association (PTA)  
State Independent Tel. Association of Kansas (SITA)  
SC Telecom. and Broadband Association (SCTBA)  
South Dakota Telecommunications Association (SDTA)  
Telecommunications Association of Michigan (TAM)  
Telephone Association of New England (TANE)  
Tennessee Broadband Association (TBA)  
Texas Statewide Telephone Cooperative Inc. (TSTCI)  
Texas Telephone Association (TTA)  
Utah Rural Telecom Association (URTA)  
Virginia Telecommunications Industry Association (VTIA)  
Washington Independent Telecom. Association (WITA)  
Wisconsin State Telecom. Association (WSTA)  
Wyoming Telecommunications Association (WTA)

## Electric Cooperative Association Memberships

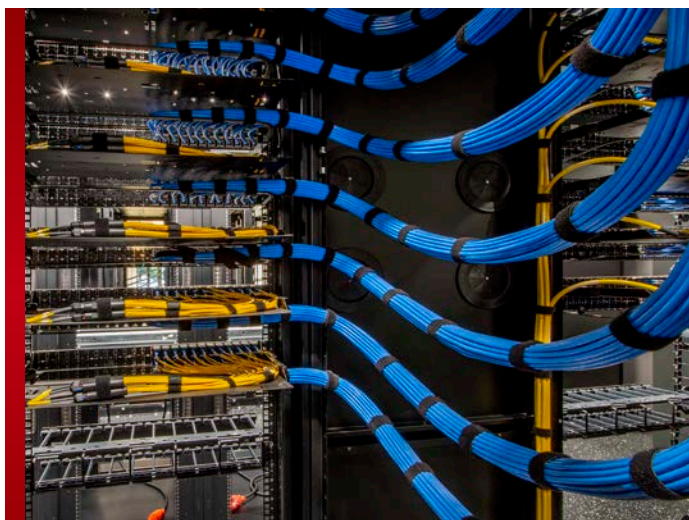
Alabama Rural Electric Association (AREA)  
Minnesota Rural Electric Association (MREA)  
Ohio's Electric Cooperatives (OEC)  
Oregon Rural Electric Cooperative Association (ORECA)

Pennsylvania Rural Electric Association (PREA)  
South Dakota Rural Electric Association (SDREA)  
Tennessee Electric Cooperative Association (TECA)  
Texas Electric Cooperative (TEC)

# CONNECTIVITY AND HARDWARE SOLUTIONS

Since 1970, Walker and Associates has provided quality economical connectivity and hardware solutions to service providers, utilities, and government agencies, supplying endless shipments of cables, fiber termination panels, fuse panels and other products to build infrastructure carrying the nation's long distance traffic and demanding mobile traffic.

Beginning in the 1990's we supplied the majority of competitive service providers with infrastructure equipment for their network connectivity requirements. Today, Walker distributes products for the industry's top connectivity and hardware manufacturers, combining the best products to provide customers with high performance, cost-effective multi-vendor solutions.



## **Cable Management**

Choose from a broad range of cable management solutions designed to reduce installation and material costs, and meet requirements for any network application.

## **Copper Connectivity**

Delivering copper connectivity solutions from the central office to the network edge providing optimum transmission rates, network quality and high bandwidth transparency. Our product solutions include traditional telephony products, DS1/E1 twisted pair, coax, repeaters, cross connect systems, patch panels, termination modules, and more.

## **Equipment Racks and Hardware**

Utilize equipment racks or cabinets that fit virtually anywhere in the communications network, whether it be in a central office, data center, or remote site. Walker offers a complete line of products for standard and custom configurations.

## **Optical Connectivity**

Lower your network costs, maximize flexibility, and enhance system performance with optical connectivity solutions designed to meet the demands of today's dynamic network. Walker offers a complete line of optical connectivity solutions including splitters and WDM modules, optical transceivers, fiber jumpers, pre-connectorized cable, modular adapters, connectors, and more.

## **Power Distribution, Protection, and Management**

Manage power, protect equipment and enhance system reliability with a range of versatile, reliable distribution solutions for central office, wireless network, remote terminal, and enterprise applications.

## **Test and Tools**

Today's networks must perform under ever increasing load and environmental demands. Installation of these networks requires industry leading precision tools to ensure proper installation and reduce cost. Verify and test your network operations 24/7 with software and hardware monitoring applications and appliances. Walker carries a full suite of tools and applications for outside plant installations, optical networking, circuit verification and measurement.

# PRODUCT MATRIX

	Batteries	Cable	Cable Management	Connectorized Cable	Connectors	Enclosures	Fiber Monitoring	Fiber Routing and Management	Fiber Splitters	Fiber Termination	Fuse Panels	Patch Cords	Patch Panels	Power	Racks	Terminal Blocks	Test Equipment	Tools
ADTRAN						✓												
ADVA							✓										✓	
Alpha Technologies	✓					✓								✓				
Amphenol Network Solutions			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		
Burndy					✓													✓
Charles Industries An Amphenol Company						✓				✓								
Chatsworth			✓			✓		✓						✓	✓			
CommScope		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		
Corning		✓	✓	✓	✓	✓		✓	✓	✓		✓	✓				✓	
Eaton			✓			✓									✓			
Eltek														✓				
EnerSys	✓					✓								✓				
EXFO																	✓	✓
GE Power														✓				
General Cable		✓																
Great Lakes Case & Cabinet			✓			✓									✓			
Hubbell Premise Wiring		✓	✓	✓				✓		✓		✓	✓					✓
Newmar	✓										✓			✓				
Newton Instruments			✓			✓		✓							✓			
Rittal			✓		✓	✓		✓							✓			
Servato	✓													✓				
Suttle			✓		✓								✓			✓		
Thomas & Betts					✓													✓
Trimm											✓			✓				
Tripp Lite				✓		✓						✓		✓	✓			
Vertiv	✓		✓		✓	✓								✓				
VIAVI																	✓	
Westell			✓		✓	✓				✓	✓		✓					

# CUSTOMER PREMISES SOLUTIONS

Long lasting relationships with industry leading manufacturers provides our customers with a broad portfolio of Customer Premises Equipment (CPE) solutions delivered across multiple platforms and environments, reducing both capital and operational costs.



## **Broadband Access**

Walker provides a variety of modems, routers, and wireless networking products that are capable of supporting bonded VDSL2, VDSL2+, VDSL, ADSL, and ADSL2+ technologies ranging from compact, power-packed devices to energy efficient modems.

## **Network Interface Device (NID)**

The network interface device (NID) is one of the most critical links in the telecommunications network that serves as the demarcation point between the service provider and customer's network. NIDs offer advanced features such as bandwidth allocation, Quality of Service (QoS), Virtual Local Area Network (VLAN), encryption, firewalls and other features that enable the service provider to provide tiered service offerings to customers.

## **Structured Cabling**

A structured cabling system provides a platform upon which an overall information system strategy is built. Walker's structured cabling solutions support voice, data, video, and multimedia systems including work area outlets, patch panels and cross connects, premise cable, cords and cable assemblies, racks and enclosures, fiber optic systems, and more.

## **Switches/Routers**

Walker carries a complete portfolio of switches and routers that deliver high reliability and performance, enabling service providers to generate new sources of revenue by offering subscribers home networking products and services.

# PRODUCT MATRIX

	Analog Terminal Adapters (ATA)	DSL Modems	Ethernet Termination Devices	Home Plug	IADs and Business Gateways	Integrated ONT	IP Phones and Unified Communications	IPTV Gateway	Network Security	NIDs	Power Protection	Routers	Structured Cabling	Surveillance	Switches	Wi-Fi
ADTRAN / SmartRG		✓	✓	✓	✓	✓		✓		✓		✓			✓	✓
ADVA			✓						✓	✓					✓	
AudioCodes	✓						✓					✓				
Charles Industries An Amphenol Company					✓					✓						
Ciena			✓							✓					✓	
CommScope													✓			
CyberPower											✓					
D-Link		✓	✓	✓	✓			✓	✓			✓			✓	✓
Dell EMC									✓						✓	
Extreme Networks									✓			✓			✓	✓
Fortinet					✓		✓		✓			✓		✓	✓	✓
Fujitsu (FNC)			✓												✓	
GarrettCom												✓			✓	
Grandstream Networks	✓						✓							✓		✓
Hewlett Packard Enterprise									✓			✓			✓	
Juniper Networks / Mist Systems			✓						✓			✓			✓	✓
Mitel							✓									
Poly	✓						✓							✓		
RAD		✓	✓						✓	✓					✓	
Suttle										✓			✓			
TII Network Technologies										✓	✓					
Telco Systems			✓							✓		✓			✓	
Transition Networks			✓		✓					✓					✓	
Tripp Lite											✓					
Vertiv											✓					
Westell			✓						✓	✓	✓				✓	
Zyxel	✓	✓	✓	✓	✓			✓				✓			✓	✓

# DATA CENTER SOLUTIONS

Walker and Associates' data center networking solutions and services enable businesses to address critical business objectives in today's data centric environment. Walker offers a complete, integrated Data Center solution incorporating the compute, network, and storage elements with configured cabling, termination, power, and cooling.

## **Fibre Channel**

Walker's portfolio of Fibre Channel switches and Fibre Channel over Ethernet (FCoE) products provide optimal solutions for Storage Area Networks (SAN) utilizing Fibre Channel connections.

## **Network Security and Monitoring**

Fortify your network with next-generation firewalls that scan 100% of your traffic and scale along with your business. Our products neutralize threats while proactively identifying real-time attacks, eliminating the protection-or-performance compromise. Solutions include email security, centralized management and reporting, intrusion prevention, and more.

## **Optical Transport / DCI**

Extending LAN connectivity between geographically dispersed data centers is a critical requirement. Walker delivers a variety of technologies that allow operators with multiple facilities to create a single, elastic pool of resources over a low-latency DWDM network. Our products are certified with top storage vendor's Fibre Channel, mainframe FICON and Ethernet storage solutions for data replication and storage virtualization.



As requirements within data centers continue to grow, businesses are challenged to find solutions that are scalable and provide reliable, high-performance networking, while protecting their investment.

## **Servers and Storage**

The dense workloads existing in the modern data center require storage networks and the products that serve them to be ever more efficient, scalable and manageable. Walker's server and storage solutions reduce complexity, lower power consumption and offer state-of-the-art flexibility, especially in virtualized environments.

## **Virtualization, Security, and Firewalls**

Virtualization of switches, routers, servers, and firewalls enables automated service provisioning, reducing OPEX and downtime, and allows for server consolidation helping to manage power demands. Our suite of virtual switches, routers and firewalls along with our server virtualization software offers a complete solution.

# PRODUCT MATRIX

	Aisle Containment and Cooling Solutions	Cabinets, Enclosures, Racks, and Cages	Cabling and Cable Management	Fiber and Copper Raceway	Fibre Channel	Hyperconverged Infrastructure (HCI)	Network Management DCIM	Network Security and Monitoring	Optical Transport/DCI	Patch Panels and Connectivity Systems	Power Products	Servers and Storage	Switching and Routing	Test Equipment and Tools	Virtualization
128 Technology															✓
ADTRAN									✓				✓		✓
ADVA							✓	✓	✓						✓
Alpha Technologies											✓				
Amphenol Network Solutions		✓	✓	✓						✓	✓				
APC		✓									✓				
Chatsworth	✓	✓	✓	✓							✓				
Ciena							✓	✓	✓						✓
CommScope		✓	✓	✓			✓			✓	✓				
Coriant / Infinera									✓				✓		
Corning			✓	✓						✓					
CyberPower											✓				
Dell EMC/VMware/Velocloud		✓			✓	✓	✓	✓				✓	✓		✓
Eaton	✓	✓									✓				
Eltek											✓				
Extreme Networks							✓	✓	✓				✓		✓
Fortinet							✓	✓					✓		✓
Fujitsu		✓					✓		✓			✓			✓
Great Lakes Case & Cabinet	✓	✓													
Hewlett Packard Enterprise					✓	✓	✓	✓				✓	✓		✓
Infoblox							✓	✓							
Ixia, A Keysight Business							✓	✓						✓	✓
Juniper Networks					✓		✓	✓	✓				✓		✓
Newton Instruments	✓	✓	✓	✓											
Nutanix						✓									
Red Hat						✓									✓
Supermicro												✓			
Splunk							✓	✓							
Telco Systems							✓						✓		
Vertiv / Liebert		✓									✓				
VIAVI														✓	

# OPTICAL TRANSPORT SOLUTIONS

Walker and Associates offers cost-effective, scalable, flexible end-to-end solutions to meet the bandwidth needs for today, as well as the future. Walker's optical transport solutions cover multiple types of transport services and a broad range of applications that optimize service implementation, minimize complexity in network planning, upgrade existing infrastructures, and create solutions to expand new services to meet demand for transport capacity.

Walker's unique market position as a distributor for multiple vendors and technologies enables our team of certified specialists to design, build, install and support the optimum network for our clients.

## CWDM/DWDM

Wavelength Division Multiplexing (WDM) is a technology that combines several streams of data, storage, video, or voice protocols on the same physical fiber optic cable by using several wavelengths or frequencies of light with each frequency carrying a different type of data. By utilizing Course and Dense (CWDM and DWDM) network systems or the mixture thereof, carriers and enterprises are able to transport services from 2 Mbps up to 100 Gbps of data.

## ROADM

Reconfigurable Optical Add-Drop Multiplexers (ROADM) are used in networks to route and switch traffic on and off to optimize capacity and maintain critical 99.999% network up time. Remote reconfiguration capabilities reduce network operating costs, while enabling service providers to add network capacity and manage network resources in real time.

## SONET

Synchronous Optical Network (SONET) offers highly secure, cost-effective transport for voice, data, and video traffic. SONET technology uses two or more transmission paths between network nodes, facilitated with digital cross-connects (DCSs) or add/drop multiplexers (ADMs). SONET services scale quickly and easily to handle large amounts of voice and data traffic without compromising reliability. They are designed to allow easy application adoption to your network without disruption.

## Packet Optical Networking

Packet-based services such as Ethernet and IP, Packet Optical Networking enables multilayer network convergence, eliminating the cost and complexity of multiple legacy elements, and allowing service providers to leverage their existing network infrastructure.



# PRODUCT MATRIX

	CWDM	DCI	DWDM	Fiber Management Infrastructure	Management	Multiplexer	Optical Filters	Packet Optical Networking	ROADM	SFP / SFP+ / XFP	SONET
ADTRAN	✓		✓		✓	✓	✓	✓	✓	✓	✓
ADVA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amphenol Network Solutions				✓							
Champion ONE	✓		✓				✓			✓	
Ciena	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
CommScope	✓		✓	✓			✓			✓	
Coriant / Infinera	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Corning				✓							
ENET Solutions										✓	
Fujitsu (FNC)	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
IPG / Menara Networks	✓		✓					✓		✓	
Juniper Networks	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
RAD	✓		✓	✓	✓	✓				✓	✓
Telco Systems	✓	✓	✓	✓	✓	✓		✓		✓	✓
Tellabs				✓							
Transition Networks	✓								✓	✓	

# OUTSIDE PLANT SOLUTIONS

Walker and Associates provides a diverse offering of outside plant (OSP) products and solutions supported by industry-leading technologies. The engineering, installation, integration, and sales teams at Walker are always available to help with your OSP deployment. Walker's integration and installation services are strategically involved with many DSL and PON projects combining remote MSAN products with OSP cabinets and hardware. Our access to large numbers of manufacturers allows us to combine the best products from each manufacturer to provide high performance, multi-vendor solutions.



## Splicing and Termination

Splice closures can be ordered in a variety of configurations to maximize efficiency and minimize up-front cost. A full line of accessories are also available including splice trays, sealing kits, and hardware mounting options.

## Pole Line Hardware

Walker's common pole line hardware products include anchors, nuts, bolts, dead ends, clamps, fasteners, grounding products, and more.

## Power Solutions

Support critical voice and communications networks with dependable power that is designed to withstand the most rigorous network power applications available in many different configurations.

## Underground Solutions

Walker offers cost efficient and durable underground solutions such as inner duct, conduit, vaults, and manholes.

## Enclosures and Cabinets

Simplify network installation, maintenance and management from the central office/head-end to the outside plant with a diverse portfolio of indoor and outdoor enclosures, cabinets, pedestals, fiber distribution hubs, building entrance terminals, cross connect cabinets, backhaul cabinets, NIDs and more.

## OSP Cable

With thousands of different types of optical fiber, copper and wire designs available, Walker's cabling products serve virtually any application required for OSP installations including fiber optic cable, direct buried cable, grounding cable, copper cable, drop cables, and more. In addition to maintaining inventory of fiber cable, Walker provides fiber cutting and re-spooling services to support customer requirements in designing, building, and maintaining growing networks.

Walker's certified specialists, integration, and installation teams can deliver hut installations as well as providing hardware, fiber equipment, and electronics for CEV applications.

Walker offers warehousing solutions to meet various OSP product needs. Our indoor and outdoor storage facilities with material handling capabilities accommodate many large multi-node FTTH deployment projects.

# PRODUCT MATRIX

	Bonding and Grounding	Broadband Service Delivery	Cabinet Power Systems	Conduit and Innerduct	Cooper & Aluminum Cable	Drop Cables	Fiber Cable	Fiber Distribution Hubs	Fiber Splitter & Termination	FTTx Cabinets	HDSL Components	Mobile Backhaul Cabinets	OSP Cabinets	Pedestals	Pole Line Hardware	Repeaters and Repeater Housings	Splice Cabinets	Splice Closures	Surge Protection	Vaults and Handholes
ADTRAN		✓								✓	✓	✓	✓							
Alpha Technologies			✓																	
Amphenol Network Solutions			✓						✓	✓		✓	✓				✓			
Blue Diamond				✓																
Bourns																			✓	
Cambium Networks		✓																		
Carlson Electrical				✓																
Channell																				✓
Charles Industries An Amphenol Company								✓		✓	✓	✓	✓	✓		✓	✓			✓
CommScope	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓
Corning						✓	✓	✓	✓	✓			✓				✓	✓		
Eltek			✓																	
GE Power			✓																✓	
General Cable					✓		✓													
Hubbell Power	✓														✓					
NewBasis																				✓
Newmar			✓																	
OFS							✓													
Positron																✓				
Preformed Line Products	✓														✓			✓		
Priority Wire	✓				✓															
Servato			✓																	
Thomas & Betts	✓														✓				✓	
TII Network Technologies																			✓	
Vertiv			✓					✓	✓	✓		✓	✓	✓			✓		✓	
Westell			✓						✓	✓		✓	✓			✓			✓	



# SECURITY SOLUTIONS

## Application Security

Application security is the process of making applications more secure by finding, fixing, and enhancing the applications during the development and deployment phases. This is becoming more important as hackers increasingly target applications with their attacks.

## Cloud Security

Cloud security, also known as cloud computing security, consists of a set of policies, controls, procedures and technologies that work together to protect cloud-based systems, data, and infrastructure. From authenticating access to filtering traffic, cloud security can be configured to the exact needs of the business.

## Data Security

Data security is the process of protecting data from unauthorized access and data corruption throughout its lifecycle. Data security and privacy must be aligned to effectively implement consumer privacy protections. An effective risk-based privacy and security framework should apply to all collection of personal data.

## Encryption

Encryption refers to any process that's used to make sensitive data more secure and less likely to be intercepted by those unauthorized to view it. There are several modern types of encryption used to protect sensitive electronic data, such as email messages, files, folders and entire drives.

## Messaging Security

Messaging security category contains all the information related with messaging: antispam solutions, malware scanning solutions, data leaking prevention solutions which will allow you to better understand what kind of security measures and tools you have to use in order to protect your data.

## Physical Security

Physical security is the protection of personnel, hardware, software, networks and data from physical actions and events that could cause serious loss or damage to an enterprise, agency or institution. This includes protection from fire, flood, natural disasters, burglary, theft, vandalism and terrorism.

Protect your network with the latest technologies to keep your network safe from malicious activity and threats 24x7. Walker and Associates simplifies network security management, improves performance, and provides innovative solutions to secure and monitor your network.

## Risk and Compliance

Risk and compliance ensures that businesses protect their information, have consistent cohesion departmentally, while following all governmental regulations. A governance, risk and compliance, (GRC) program is critical to insure against liability.

## Security Operations and Incident Response

Incident response (IR) is a structured methodology for handling security incidents, breaches, and cyber threats. A well-defined incident response plan allows you to effectively identify, minimize the damage, and reduce the cost of a cyber-attack, while finding and fixing the cause to prevent future attacks.

## Threat Intelligence

Threat intelligence, or cyber threat intelligence, is information an organization uses to understand the threats that have, will, or are currently targeting the organization. This info is used to prepare, prevent, and identify cyber threats looking to take advantage of valuable resources.

## Transaction Security

Transaction security refers to the safety of confidential information when multiple entities communicate to complete a transaction.

## Web Security

Web security is also known as "cybersecurity", a set of web applications that detect, prevent and responding to cyber threats.

# PRODUCT MATRIX

	Application Security	Cloud Security	Data Security	Encryption	Endpoint Security	Messaging Security	Network Security	Physical Security	Risk and Compliance	Security Operations and Incident Response	Threat Intelligence	Transaction Security	Web Security
ADVA				✓				✓					
Ciena				✓			✓		✓				
CommScope								✓					
Corero		✓					✓			✓			
Corning								✓					
Dell EMC / VMware	✓	✓	✓		✓			✓					✓
Fortinet	✓	✓			✓	✓	✓	✓		✓	✓		✓
Hewlett Packard Enterprise	✓	✓	✓	✓	✓		✓	✓		✓			✓
Infoblox		✓					✓						
Ixia, A Keysight Business		✓					✓		✓	✓	✓		
Juniper Networks		✓	✓		✓		✓				✓		
Network Integrity Systems								✓					
Proofpoint	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓
PulseSecure	✓	✓			✓		✓		✓		✓		
RAD	✓	✓			✓		✓						✓
SafeNet / Thales	✓		✓	✓								✓	
SPARQ			✓	✓						✓			
Splunk									✓	✓	✓		



# SERVICE DELIVERY SOLUTIONS

Walker and Associates offers service providers a multitude of network design options for deploying broadband services. Broadband access and delivery is a key driver of economic growth. The ability to share large amounts of information at ever-greater speeds increases productivity, facilitates commerce, and drives innovation.

## **Carrier Ethernet**

Carrier Ethernet offers price performance leadership and investment protection in the face of increased bandwidth requirements for residential and business services.

## **Multi-Service Access**

Today's converging network is often a mix of TDM, Ethernet, and DSL protocols supporting voice, video and data applications. Walker provides solutions and the expertise that enable service providers to offer their business customers a seamless migration path from TDM-based services to enhanced triple-play services.

Broadband is changing how we communicate, educate, entertain, and work with each other. Increasingly, it is a determining factor in where we live, which is why broadband is particularly critical in rural areas, where advanced communications can shrink the distances that isolate remote communities.

## **Optical Transport**

Networks that are built on a scalable optical foundation can grow with changing business demands. Walker delivers future-proof optical transport solutions that will scale to tomorrow's unconstrained data transport needs.

## **Mobile Backhaul**

Keep pace with today's increasing demand for mobile communication with mobile backhaul solutions. Expand capacity at a lower cost, provide the necessary service, reliability, quality of experience while upgrading to the stringent requirements of 5G networks. Walker's strong partnerships with leading manufacturer partners and its ability to deploy multi-vendor solutions allow for specialized backhaul communications solutions to meet your needs.

## **Timing and Synchronization**

The quality of timing and synchronization that telecommunication operators put into their network impacts the Quality of Service (QoS) of their voice, video and data services. Superior timing solutions and reliable synchronization means better QoS maximizing network performance.

# PRODUCT MATRIX

	Carrier Ethernet	Channel Bank	DSLAM	DSL Modems	Ethernet Over Copper	Fixed Wireless	FTTx	Media Converters	Mobile Backhaul	Multi-Service Access Platform	PON / ONT	Synchronization
ADTRAN / SmartRG	✓		✓	✓	✓	✓	✓		✓	✓	✓	
ADVA / Oscilloquartz	✓				✓		✓		✓	✓		✓
Amphenol Network Solutions							✓					
Cambium Networks						✓						
Charles Industries An Amphenol Company		✓					✓					
Ciena	✓				✓				✓		✓	✓
CommScope							✓		✓		✓	
Coriant / Infinera	✓								✓			✓
Corning							✓		✓		✓	
Extreme Networks	✓								✓			
Fujitsu (FNC)	✓				✓		✓		✓			
Juniper Networks	✓								✓			✓
Mimosa						✓			✓			
Positron					✓							
RAD	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓
Siklu						✓			✓			
Telco Systems	✓	✓					✓	✓	✓	✓		✓
Tellabs	✓						✓			✓	✓	
Transition Networks	✓						✓	✓	✓			✓
Zyxel				✓			✓					



# SOFTWARE DEFINED NETWORKING SOLUTIONS

In 2016 Walker and Associates launched its industry leading Walker Software Networking Lab to help define the next generation of telecommunications infrastructure and provide our customers an environment to evaluate this innovative technology. As cloud based technologies, services delivery platforms, smart devices, and automation become more prevalent, the very structure of the Internet will continue to shift, from a static platform based architecture to a dynamic software driven platform able to add resources and applications to meet increasing user demands. The interoperability of server platforms and open standards will drive the costs of network hardware down and enable more choice in vendors preventing vendor lock-in. The “mass customization” of network operations allows multiple 3rd party applications and differentiated services to operate on single devices offering both CAPEX and OPEX savings by minimizing the complexity of heterogeneous networks.

## **Controllers**

Introduce programmability into networking allowing use of libraries of predefined policies, and offer a platform on which to independently develop new networking features and applications to meet the specific service needs of your organization.

## **Network Function Virtualization (NFV)**

NFV is the next generation of telecommunications applications. With NFV, service creation and product teams can now quickly build new services using virtual functions. The virtualization of network functions reduces the number of hardware appliances and simplifies the task of building complex and higher value services. NFV enables deployment of network services when and where needed on virtual machines (VMs). NFV allows for consolidation of many network equipment types on to industry-standard, cost-effective, scalable, and secure high-volume servers, switches, and storage devices.

## **Software Defined Networking (SDN)**

SDN is an innovative network architecture that improves network flexibility and manageability by separating the network data and control planes. Network control is directly programmable because it is decoupled from forwarding functions. Network intelligence is centralized in software-based SDN controllers that maintain a global view of the network. SDN can further simplify the complex task of defining the workflows that activate and manage services by chaining the tasks into a Service Chain to improve packet flow by identifying application type, source and destination addresses and other data characteristics. Simplification is an imperative to delivering services rapidly and in a profitable manner in today's telecommunication networks.

## **Orchestrators**

Enable a single point of entry for end-to-end VNF and network service lifecycle management, and achieve greater profitability through policy-driven automation for quick and reliable service creation, activation and assurance.

## **SD-WAN**

SD-WAN simplifies the management and operation of the WAN infrastructure by decoupling the networking hardware from the control mechanism. Allows companies to build high performance secure WANs across lower cost internet connections independently or in correlation with MPLS networks.

## **Virtual Routers – Firewalls – IPS/IDS**

Convert the functions of traditional hardware-based network appliances to software than can be run on standard Commercial Off-the-Shelf (COTS) hardware. This has advantages of lowering hardware costs and allowing more hardware interoperability, rather than requiring a proprietary hardware platform.

## **vCPE (CPE w/ x86)**

Simplify the way that Wide Area Network (WAN) connectivity and applications are purchased, provisioned, and managed. Virtual CPE can replace specialized proprietary gear with commodity hardware that can be rapidly updated and provisioned from the cloud with open software.

# PRODUCT MATRIX

	Controller	Hypervisor	Orchestrator	SDN Apps	Servers	Service Assurance Monitoring	uCPE / vCPE (CPE w/ x86)	Virtual Evolved Packet Core	Virtual Firewall	Virtual Load Balancer	Virtual Probe	Virtual Router	Virtual WAN SD-WAN	White Box Switches
128 Technology				✓		✓						✓	✓	
ADTRAN	✓	✓	✓	✓		✓	✓		✓			✓	✓	
ADVA	✓	✓	✓	✓			✓						✓	✓
Champion ONE														✓
Ciena	✓		✓	✓		✓	✓							
Coriant / Infinera	✓		✓	✓		✓								
Dell EMC / VMware	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Fortinet		✓	✓				✓		✓	✓			✓	
Fujitsu America					✓									
Fujitsu (FNC)	✓		✓	✓			✓						✓	
Hewlett Packard Enterprise	✓	✓	✓		✓	✓	✓					✓		✓
Infoblox				✓										
Ixia, A Keysight Business				✓		✓					✓			
Juniper Networks	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
Lanner							✓							✓
Nutanix	✓	✓	✓		✓					✓				
OpenStack Solutions		✓	✓					✓				✓		
RAD		✓	✓	✓		✓	✓				✓		✓	✓
Red Hat		✓						✓						
Supermicro					✓		✓							✓
Telco Systems	✓	✓	✓	✓			✓		✓		✓	✓	✓	
VIAVI						✓					✓			

# SWITCHING AND ROUTING SOLUTIONS

Walker and Associates provides a vast range of core and access switches, edge routers, universal access routers, core network routers, and multi-access gateways designed to offer the scalability and performance needed to satisfy the most demanding network requirements.

Switches and routers are the building blocks for all business communications, from data, to voice and video, to wireless access. They improve profitability by enabling your company to increase productivity, reduce business expenses, and improve security. Walker's certified network management engineers enable customers to support specialized multi-vendor network solutions.

## Aggregation/Core Switching

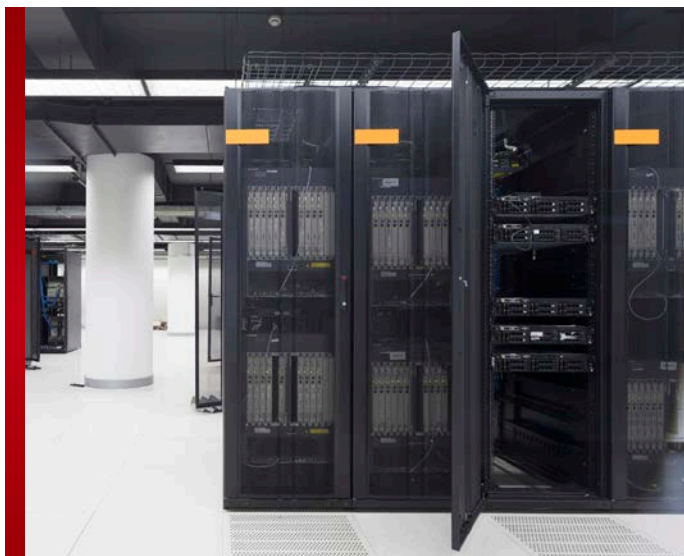
Build the backbone of your network on high-speed switching that provides advanced traffic management and quality of service.

## Ethernet Access Switches

Implement industry-leading high performance Ethernet access switches featuring advanced applications such as unified services, virtualization, integrated security, and interoperability, with simplified manageability.

## Access Routers

Rapidly deploy access services and create a seamless end-to-end service delivery platform to improve network utilization and revenue opportunities.



Walker's certified network management engineers enable customers to support specialized multi-vendor network solutions.

## Network Security

Prevent costly network disruptions and slowdowns with a comprehensive portfolio of network security products designed to protect your business from internal and external threats.

## Wireless Networking

Streamline operations and increase flexibility and mobility in the workplace with a wireless networking solution to improve operational efficiencies, while addressing the most demanding business-class security concerns.

# PRODUCT MATRIX

	Access Routers	Access Switches	Aggregation Switches and Routers	Core Router	Core Switch	Enterprise Router	Enterprise Switch	Management	Network Security	Synchronization	WLAN
ADTRAN	✓	✓	✓			✓	✓	✓			✓
ADVA	✓	✓	✓		✓		✓	✓	✓	✓	
Ciena		✓	✓		✓		✓	✓		✓	
Corero									✓		
Coriant / Infinera	✓	✓	✓	✓	✓	✓	✓	✓		✓	
D-Link		✓			✓		✓		✓		✓
Dell EMC	✓	✓	✓		✓	✓	✓	✓	✓		✓
Extreme Networks	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Fortinet	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Fujitsu (FNC)		✓						✓			
Grandstream Networks	✓										
Hewlett Packard Enterprise	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Ixia, A Keysight Business									✓		
Juniper Networks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Proofpoint									✓		
PulseSecure									✓		
RAD		✓	✓					✓		✓	
SafeNet / Thales									✓		
Telco Systems	✓	✓	✓					✓		✓	
Transition Networks		✓	✓				✓		✓	✓	
Zyxel	✓	✓	✓				✓		✓		✓

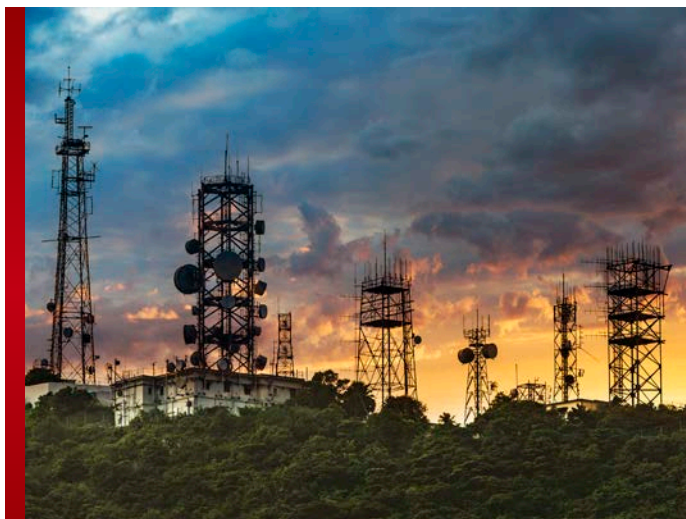
# WIRELESS SOLUTIONS

Wireless communication is a widely deployed technology that enables users to communicate with each other and share real-time information, regardless of where they are or what type of wireless device they are using. Whether you're implementing a Wi-Fi access network or building new broadband connectivity to remote areas, Walker has a solution for you.

Walker and Associates maintains a large wireless portfolio ranging from indoor to outdoor wireless access networks to a wide variety of business networking solutions.

Walker's strong partnerships with leading manufacturers and its ability to deploy multi-vendor solutions allow for specialized wireless communications solutions.

Walker is dedicated to helping customers maximize investments in the network, offering secure, stable, standards based, and scalable solutions that can be deployed across many different network platforms.



## **Distributed Antenna System (DAS)**

Indoor and outdoor distributed antenna systems (DAS) address a variety of coverage and capacity needs for wireless networks today. Indoor DAS extends wireless services throughout building and campuses, whereas outdoor DAS is ideal for wireless networks in diverse outdoor locations and large venues.

## **Fiber-to-the-Antenna (FTTA)**

Fiber-to-the-Antenna (FTTA) enables service providers to deliver higher bandwidth, reduce power requirements, and decrease base station footprint compared to traditional tower sites using coaxial infrastructure.

## **Wireless LAN**

The next-generation mobile workplace and home environment requires a wireless network that's faster and more reliable than ever. Wireless LAN (WLAN) and Wi-Fi solutions address today's requirements and enable seamless mobility, while extending wireless range, significantly improving productivity and collaboration for users across the world.

## **Fixed Wireless Broadband**

Wireless point-to-multipoint (PMP) solutions are proven around the world to be interference tolerant and provide consistent low latency for sensitive video and voice applications, making them ideal for last mile connectivity. Our wireless PMP products are a great alternative for copper loop replacement, eliminating the need for expensive fiber plant trenching.

## **Microwave Radio**

Designed to operate at high performance and availability standards, microwave radio systems have the capability to natively support any combination of TDM and Ethernet traffic. Supported frequencies includes 2 to 43 GHz, and includes non-traditional bands such as 24, 25, 28, 29, 31 and 42 GHz with capacities up to 1 Gbps, providing a range of options to fit various applications from the edge to the core.

# PRODUCT MATRIX

	Antennas and Accessories	Distributed Antenna System (DAS)	Fiber to the Antenna (FTTA)	Microwave Point to Multipoint	Microwave Point to Point Licensed	Microwave Point to Point Unlicensed	WLAN - Indoor	WLAN - Outdoor
ADTRAN / SmartRG				✓	✓	✓	✓	✓
Cambium Networks	✓			✓	✓	✓		✓
CommScope / Ruckus	✓	✓	✓	✓	✓	✓	✓	✓
Corning	✓	✓	✓					
D-Link								✓
Fortinet	✓					✓		
Fujitsu (FNC)					✓	✓		
Hewlett Packard Enterprise							✓	✓
Juniper / Mist Systems	✓							✓
Mimosa	✓		✓	✓	✓	✓		✓
Nokia	✓		✓	✓	✓	✓	✓	✓
RAD	✓			✓		✓		
RFS	✓							
Siklu	✓		✓	✓	✓	✓		✓
Westell	✓	✓						
Zyxel								✓

# CUSTOMER ASSET MANAGEMENT PROGRAM (CAMP)

## **CAMP Service**

Maximizing resources through effective allocation, tracking and reporting is within your reach. Since 1970, Walker has assisted customers with more than simply acquiring inventory to build networks. We know how to save you money, make you more efficient and more profitable.

CAMP enables customers to outsource logistics support for customer owned material. We stock and distribute your products as needed, and arrange shipping to you in tandem with other, newly ordered product.

You choose the level of CAMP service you need. Our services can be selected as individual programs or a combination of CAMP services for a multi-faceted program, bringing value to your business.



Through our extensive logistics expertise, Walker will customize a package to meet your specific requirements and provide a tailored CAMP solution which includes the following services:

- Warehousing, logistics, and management of customer owned inventory
- Bar-coding and scanning
- Asset tagging
- Serial number tracking
- Web based asset reporting and tracking
- Customized network deployment kits
- Software and firmware loading
- Configuration loading
- Customer owned/consignment inventory management

## **Warehousing and Management of Customer Owned Inventory**

Walker maintains a TL9000 certified distribution system. Walker's warehouse includes designated warehouse space for custom owned materials within the "Walker Distribution Facility". This service includes creation of "custom" warehouse within Walker's current MRP system, including the incorporation of all customer owned part numbers.

## **Custom Configuration Services**

Now, customers who log into their eBusiness account on the Walkerfirst.com portal can submit orders for custom configured products, such as IP phones, business gateways, IADs, switches, etc. The eBusiness portal is free, easy to use, and provides you with valuable logistics capabilities reducing your OPEX. With only a few clicks you can select your products, add them to your cart, enter instructions for your configuration, and then finalize your order. Once your order is placed you can check order status, receive shipment notifications, and track your order through your eBusiness account.

### Service Deployment Kits

Combine multiple part numbers from a variety of manufacturers as one part number, customized for you. For ease of ordering your custom kit serves as one line item on a purchase order, and all of the items in the kit are packaged together.

### Custom Labeling and Asset Tracking

Affix “custom” labels to products to support your management of deployed customer assets further extending your customer touch and increase customer satisfaction. Our service includes placement of label based on contract specifications. Serial number and/or customized labeling tracking functions are available through the Walkerfirst.com portal to further assist you with customer service relations.



### Consignment Program

Walker provides a consignment service to sell slow moving or overstocked equipment. Walker actively markets for resale, customer-owned materials for a specified period of time. Revenue obtained through this program is shared between the parties. Service includes creation of a “custom” warehouse within Walker’s current Material Requirements Planning (MRP) system, and loading of all customer owned part numbers, as well as a designated warehouse space.

### Reconditioning for Redeployment

Walker provides a reconditioning and redeployment process of customer products that are de-installed in the field.

### eBusiness Online Account Services

Walkerfirst.com provides a secure web portal and allows you direct access to business critical information including quote building, online ordering, dynamic availability, order status, invoice records, shipment tracking, proof of delivery details, RMA creation, and more.

Let us help you grow your business efficiently as you capitalize on your Walker eBusiness online account. Account set up is free and easy! Register today at [walkerfirst.com/register](https://walkerfirst.com/register).

# ENGINEERING SERVICES

Walker has certified engineers on staff with over 100 years of collective telecommunication engineering and implementation experience. They are available to answer pre- and post-purchase questions, assist with network design, and work through any technical issues you have to guarantee optimum performance. Our engineers work with manufacturers to stay informed on latest developments in technical advances, which means you will stay informed in the fast-changing technology field. Walker's engineers are also available for on-site consultation when you need additional resources to help with the first look at a project or to help verify your network design.



**01**

## **Service and Support**

Providing first-line support for pre-sales and post-sales

**02**

## **Network Architecture and Design**

Design communications solutions for customer premises, central office, data center, outside plant, and network applications



**03**

## **Engineering Solutions**

Engineer solutions and BOM development for integration and kitting

**04**

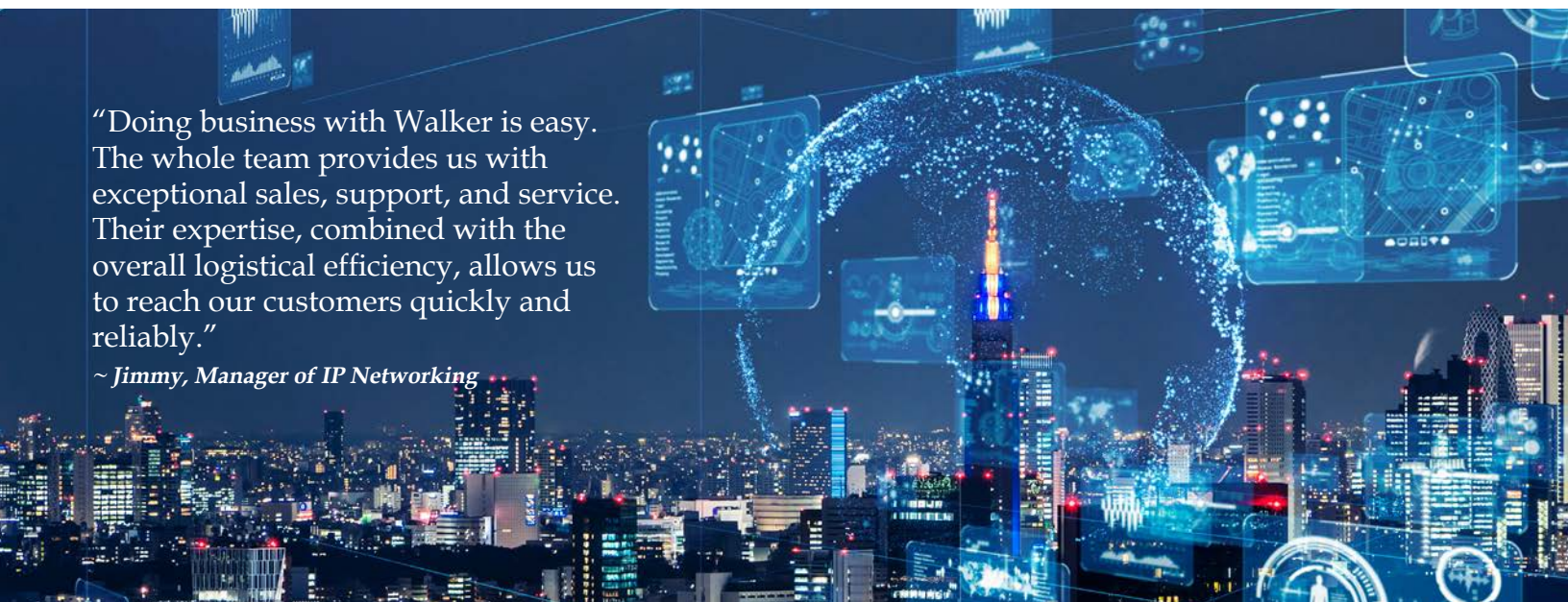
## **Design Analysis**

Design analysis and development, elevation drawings, and wiring specifications on integrated projects



"Doing business with Walker is easy. The whole team provides us with exceptional sales, support, and service. Their expertise, combined with the overall logistical efficiency, allows us to reach our customers quickly and reliably."

*~ Jimmy, Manager of IP Networking*



# FIBER CABLE SERVICES

As operators upgrade and modernize their networks to keep pace with growing demands from new technologies, partnerships with trusted professionals is essential. Walker is uniquely poised to be your OSP partner, not only with fiber cable, but also with the associated equipment and services that matter to anyone involved in designing, building and maintaining networks.

Walker and Associates maintains a full-service fiber cable facility at its Winston-Salem, NC Distribution Center. This resource, dedicated to stocking large fiber reels, enables Walker to support customer fiber demands. With 24,000 square ft of outdoor space allocated, Walker currently stocks more than 4 million feet of bulk cable from multiple manufacturers in addition to the fiber equipment necessary for FTTx projects, central office redesigns and more.

## **Fiber Cutting and Re-spooling Services**

Walker strives to provide a single source for customer needs, offering services as well as products. Our expansive range of logistics services provides customers with worry-free supply chain management.

Fiber cutting, re-spooling and an expansive inventory of outside plant bulk fiber cable has positioned Walker to support customer project needs no matter what the project size.

## **Fiber Network Architecture and Design**

An integral part of Walker's professional services include network architecture, design, and implementation of connectivity and networking products. Walker provides turnkey services for fiber network deployments including engineering, installation, integration, and project management services.



# INSTALLATION SERVICES

As a solutions focused distributor, Walker features an Engineering, Furnish, Install & Test (EFI&T) team that delivers new equipment to the deployment site and guarantees its professional installation.

Walker's team of certified engineers, certified installers, project managers, and service partners take the worry out of meeting the needs of a challenging project. Walker's staff is a team of experienced industry veterans knowledgeable with industry standards for installation, test and turn-up, project management, and engineering excellence.

Since 2002, the Walker Installation Services team has successfully worked on over 1,600 specialized projects, serving more than 250 customers including CLEC, independent telco, RBOC, wireless, long distance, cable TV, integrated communications providers, and utilities markets.

Acting as your project manager, Walker will oversee and coordinate all of the following areas to ensure your in-service dates are met, and provide you the following capabilities:

- Nationwide Installation and Engineering
- Detail/Design Engineering
- VISIO/AutoCAD Drawings
- Project Management
- Turnkey Installation
- Test and Turn-up
- Equipment Provisioning
- Fiber Characterization
- Wireless/WiFi
- Site Surveys
- DC Power Design
- Sales Support
- Technical Support
- Bill of Materials

Walker's installation and project management team offers design engineering, project management and installation services providing customers with a complete EFI&T solution. Partnering with a strong, stable installation services resource that has access to multiple vendors allows you to turn up service quickly and efficiently. Your complex projects require experienced talent. Walker, working with a nationwide installation footprint, provides complete turnkey services for all of your central office, co-location, shelter, cabinet and wireless needs.

## Wireless Installation Services Capabilities

Walker's Wireless Services offer a wide range of wireless solutions. Walker's in-house project management and engineering teams coupled with a network of proven partners provide our customers complete solutions including:

- Complete Wi-Fi Design and Installation
- RF Propagation Studies for Point to Multipoint Radio Coverage
- Path Profiles for Point to Point Microwave Radio Applications
- Site Surveys and Inspections
- RF Sweep Testing
- Construction Engineering and Design
- Civil Construction
- Foundations
- Tower Erection
- Electrical and Grounding
- Tower Enhancements
- PTP, PMP, Fixed Wireless Solutions
- Zoning and Permitting
- Site Restoration
- Copper/Coax/Fiber Cabling
- Roof Top Sites
- Water Tank Sites
- Cabinets and Shelters
- Power Transfer Switches and Generator Back-up
- Complete System Turn-up and Test

# INTEGRATION SERVICES

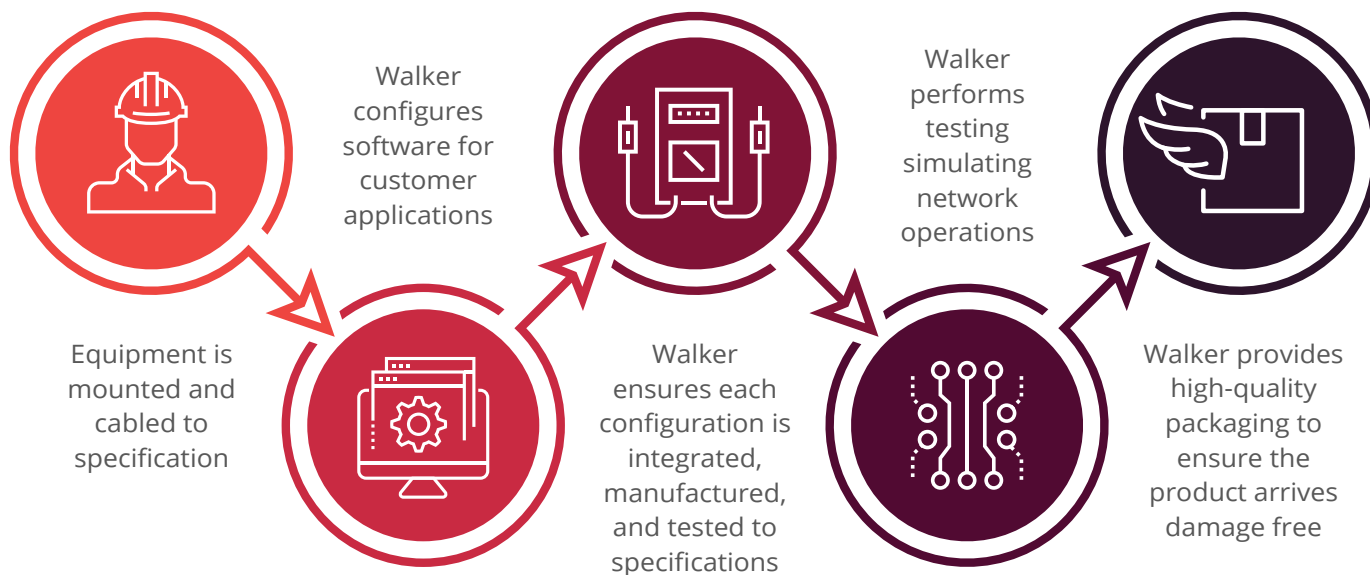
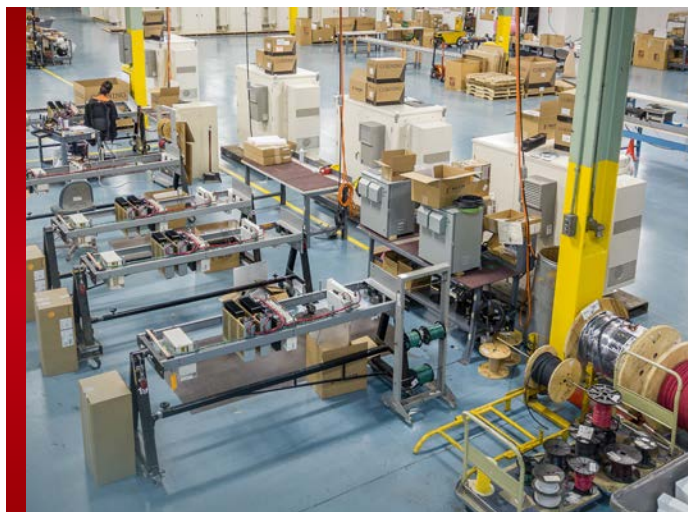
Your telecommunications equipment needs require dependable and knowledgeable support. Walker provides customers a one-stop resource for the best in telecommunications equipment and integration services. Whether your project is large or small, Walker has the resource to fit your needs.

## Fully Equipped Staging and Lab Space

Co-located in Walker's logistics and distribution center is a 26,000 square foot environmentally controlled, integration and configuration facility.

Within this facility, a forty rack staging area has been established for the purpose of pre-configuring hardware and provisioning equipment prior to on-site installation.

Our staging facility reduces the number of on-site processes, project management time and installation time. Our networking lab also is available as an educational tool for live customer demonstrations.



# MANAGED SERVICES

Walker teams with experienced, industry-leading partners to provide managed services. Network Operation Centers of these partners are staffed with the best engineers and technicians in the industry. Let our managed services provide you with the network peace of mind you need so that you can move on to other strategic business.

Walker offers a menu of managed services allowing you to tailor a solution for your network operations. These services range from 24/7 monitoring to site dispatch.

## Managed Service Offerings

- **Network Operations Center (NOC)**
  - Network Fault Monitoring
  - Network Performance/SLA Monitoring
  - Troubleshooting
  - Dispatch Management/Field Repair Coordination
  - Log Management
  - Utilization Monitoring and Visualization
- **Security Operations Center (SOC)**
  - Penetration Monitoring
  - Attack Detection/Mitigation/Response
- **Ongoing Penetration and Vulnerability Testing**
  - Client Customer Call-in Support
  - Client Customer Provisioning Services

## Carrier Class Monitoring Services

Walker offers a suite of services and solutions that minimizes the effects of business outages. Walker's carrier class Network Operations Center monitors the hardware, software and applications that companies must use to conduct business around the clock.

The NOC is staffed with professionals 24x7x365, backed by experienced network engineering, design and operations teams. Our straightforward watch, respond, and resolve process focuses on the root cause of service affecting outages. Simply put, we fix the process behind the problem, to drive your business forward.

Walker's monitoring services are performed from a specially built facility, equipped with redundant connectivity, UPS and dedicated generators, secure access, and high availability of service.

## Carrier Class Remote Support Services

Walker and Associates provides remote services to support and augment your technical team. Walker's support staff becomes a part of your team, allowing you to focus on the higher value tasks and projects critical to your company's success.

The end user customer support, whether down the hall or across the country, will be treated as a respected customer. From triage to assessment to resolution, Walker's experienced staff can deal with an individual or systemic issue either remotely or on-site.

The purpose of the process is to remove you from the daily operational minutia, while keeping you fully informed. Walker's partnering business model Watch-Respond-Resolve is designed to keep your problems from recurring. You benefit because we have a vested stake in helping your business run efficiently.

## Carrier Class Monitoring Services

- Carrier Class Network Operations Center
- Staffed, Access Available 24x7x365
- Remote Prevention Monitoring Services (Watch)
- Problem Escalation Procedures (Respond)
- Process and Structure Resolutions (Resolve)

## Carrier Class Remote Support Services

- End-user Help Desk Support 24x7x365
- Technical Support and Advice
- Systems Engineering Solutions
- Network Engineering Expertise

# NETWORK DEPLOYMENT KITS

Walker can save you time and money with custom network deployment services. As a national distributor, we represent more than 400 different manufacturers. That gives us the ability to combine multiple part numbers from a variety of manufacturers as one part number, customized for you. This way, you don't have to search for them each time you purchase. Your custom network kit serves as one line item on a purchase order, so you'll never waste time and resources selecting parts. The choices are really limitless!

## Examples of Network Deployment Kits:



### IP Switch and Cameras

Utilize ports on your existing carrier-grade Juniper switch to monitor remote cell towers, POP's or colo's with D-Link's DCS POE indoor/outdoor cameras. Gain security and peace of mind knowing your network is supported by the industries most advanced switch from Juniper, and D-Link cameras providing real time monitoring of your onsite assets.



### Ethernet Service Extension

Maximize your existing infrastructure by taking advantage of ADVA's FSP150-T1804. Our solution kit allows you to provide Ethernet service extension over bonded T1/E1 facilities. The end users experience crisp, carrier-grade experience with Mitel 6869 SIP phones aggregated into the Juniper EX4200 POE switch.



### FTTx Deployment Kits

This kit has all the accessories to make the FTTx installation neat and clean with a termination/splice point for the outside of the house plus all the material needed (wall molding/raceway, strand of indoor/outdoor fiber, indoor fiber termination panel etc) to complete the installation inside the house.



### Wireless LAN Solution Kit

Simplify your ordering process by using Walker's ADTRAN Bluesocket kits for your Wireless LAN deployments. Each kit contains the Bluesocket AP device, the AP license, and the basic care maintenance package (required with purchase).

# PROFESSIONAL SERVICES

## WalkerFirst Professional Services Methodology

Selecting a Professional Services partner is a strategic decision that is essential in your network's scalability, service quality, longevity, and total cost of ownership. Your subscribers rely on you to deliver the high-speed connectivity that is critical to your community's welfare and future growth. With Walker as a trusted advisor, you gain access to the technical expertise to maximize return on investments and increase your deployment's velocity. The WalkerFirst Professional Services team ushers you through the advanced discovery, assessment, and planning activities foundational to project success.

### Plan

WalkerFirst Project Managers help orchestrate the discovery, planning, and solution validation sessions to support your project's assessment and design phase. WalkerFirst Network Architects collaborate with you to develop the high-level and low-level design documents that serve as a blueprint for the network configurations and equipment installations.

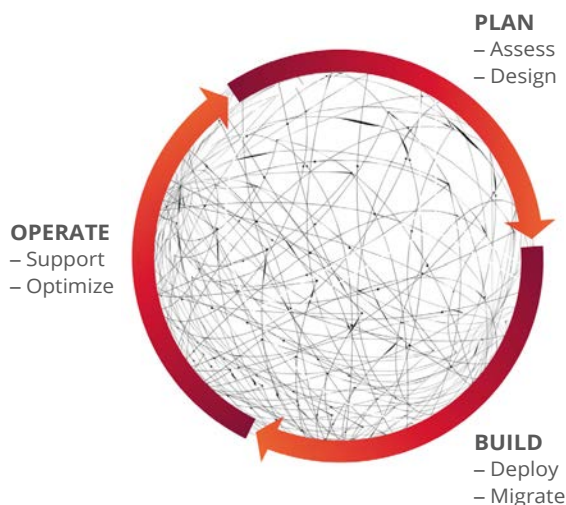
### Build

With a wealth of first-hand experience implementing carrier networks, WalkerFirst Engineers develop, test, and deploy configurations that provide reliable, high-performance service that scales to support expanding workloads and connected endpoints.

The WalkerFirst Services team leverages Walker's 50-year legacy in logistics and distribution to equip our Installation teams for streamlined deployment. The WalkerFirst Professional Services team helps document the implementation with as-built reference materials and MOPs, enabling your engineering and technical support teams to leverage for future operations.

### Operate

Walker Engineers provide support with knowledge transfer and ongoing consultation throughout your network's life cycle, including optimizing, upgrading, and augmenting your network.



## CERTIFICATIONS

### ADTRAN

- ADTRAN Technical Solutions Professional (ATSP)

### ADVA

- OSA Technical Training

### CIENA

- Ciena Design
- Carrier Ethernet Associate (CE-A)
- Optical Communications Associate (OC-A)

### CISCO

- Cisco Certified Network Professional
  - CCNP Routing and Switching
  - CCNP Enterprise
  - CCNP Security
  - Cisco Fed Authorization, ESAM, OSSE, ENG SASE, CNOPS, ICND1

### FORTINET

- NSE 1-7 (Network Security Architect)

### JUNIPER

- *Juniper Networks Emeritus* – Over 9 years of holding active JNCIE titles:
  - Service Provider Routing & Switching (Emeritus-SP)
  - Enterprise Routing & Switching (Emeritus-ENT)
- Juniper Networks Certified Instructor (JNCI)
- Juniper Networks Data Center Professional (JNCIP-DC)
- Juniper Networks Security Professional (JNCIP-SEC)
- Juniper Networks Design Specialist (JNCDS-DC)
- Juniper Networks Automation and DevOps Associate (JNCIA-DevOps)
- Juniper Networks – Mist Wi-Fi

### NOKIA

- NRS-1
- Microwave, LTE, 5G, Nuage SDWAN

### NUTANIX

- NCSE Core & NCP

### RAD

- vCPE and EXT Certification

### RUCKUS

- SmartZone SE Partner Accreditation

### VMWARE

- ENG VTSP SD-WAN
- ENG Data Center Virtualization
- ENG SD-WAN VeloCloud

### VEEAM

- VMTSP

## WalkerFirst Professional Services Portfolio

Walker offers an array of Professional Services to support the end-to-end life cycle of designing, deploying, and optimizing your network. When building networks at scale, there is no one size fits all solution. Agility and adaptability are needed to keep pace with emerging business requirements, and a solid foundation leveraging industry best practices and applied experience ensures success. Whether you are seeking a partner to guide you through the full life cycle of building a network, or engineering resources to support you along the way, Walker is here to help.

### Network Assessment and Advisory

Whether you are planning a new build or working to integrate new network components into a pre-existing brownfield deployment, Walker has the expertise to ensure your success. Align your cloud and network strategies with industry best practices and solutions with guidance from Walker's OEM certified engineers. WalkerFirst Professional Services provide efficient cloud, network, and security roadmaps. We offer assessment/advisory services for: Core Telco network, Metro Ethernet networks, Network Architecture, Data Center Network, Security, and Enterprise Networks.

### Network Design and Architecture

With a 50-year legacy of supporting service providers, utilities, and government organizations with their network deployments, WalkerFirst Engineers are well equipped to support your Network Design and Architecture projects. Our expertise spans Carrier Ethernet, switching and routing, optical transport, FTTX, SDN, NFV, cloud technologies, mobile backhaul, copper and fiber connectivity, VoIP, wireless, data center, and more. Walker solutions feature best of breed products from more than 400 leading manufacturers. We help you identify and develop network architectures and designs that complement your business requirements and growth strategies.

### Network Security Audits and Penetration Testing

WalkerFirst Engineers help analyze and take inventory of your organization's security architecture to determine compliance with best practices, Internet standards, security principles, performance, routing, switching, firewall configurations, and physical cabling.

WalkerFirst Penetration Testing service includes a vulnerability scan designed to actively penetrate a client's infrastructure and validate that exfiltration or C&C is possible in the client's environment. This penetration test can be "black box" (reports delivered at the end, limited queries from the client if any) or "live reported" (for highly sensitive environments where any operational impingement is a problem).

### Network Implementation

WalkerFirst Implementation Services simplify your network deployment, freeing your staff to focus on more strategic work that moves your business forward. Our services cover the entire plan and build phases needed to pre-stage, implement, migrate, and successfully facilitate your network deployment. WalkerFirst Project Managers and Implementations Engineers help oversee logistics, track project deliverables, and coordinate installation events. We help assure the quality of work, timeliness of delivery, and relay of information throughout the project.

## Areas of Expertise

### Network Architecture and Design

- OSPF
- IS-IS
- BGP (eBGP, iBGP, MP-BGP)
- MPLS (LDP, RSVP-TE, Segment Routing)
- Broadband Network Gateways (BNG)
- IPv4, IPv6
- CG-NAT
- COS/QOS
- L2 VPN (VPLS/EVPN/VxLAN)
- L3 VPN
- High Availability (HA)
- Data Center Interconnect (DCI)
- Master Clock & Network Timing

### Optical Networking

- CWDM
- DWDM
- ROADM
- Converged Packet/Optical
- Fiber Characterization
- FTTX & Carrier Ethernet
- Packet Optical

### Security

- DDoS Protection
- Perimeter Protection (Firewalls)
- Intrusion Protection & Detection (IPS/IDS)
- Application Aware Firewalling
- NAT
- IPsec VPNs
- Centralized Authentication (Radius, TACACS+, LDAP)

### Wireless Networking

- Coverage and Channel Planning
- Indoor/Outdoor Wireless Networks
- 5G, 6G, Millimeter Wave, Wave 2

### Customer Edge

- PON (B/G/XGS)
- ONT/ONU
- Legacy TDM/DSL/T1
- Wireless

### Software Integration and Development

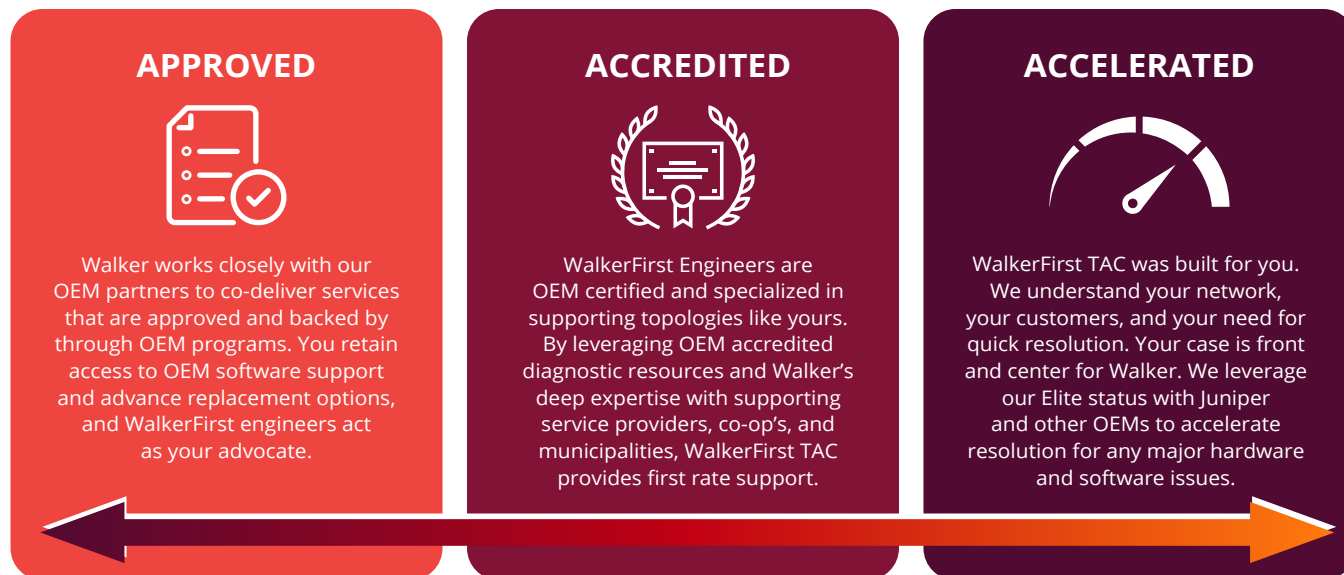
- Monitoring Systems
- Operations and Management
- Software Defined Networking (SDN)
- Network Functions Virtualization (NFV)
- Provisioning Systems
- Controller Based Networking
- SD-WAN, SD-LAN, SDSN
- VoIP and Collaboration

### Private Cloud

- Nutanix Clusters
- VMware
- Storage and Backup
- Bare Metal Servers (BMS)

# WALKERFIRST TAC SERVICES

Walker is dedicated to supporting the full life cycle of our customers. The same WalkerFirst Engineering resources that helped you design and deploy your network collaborate with our WalkerFirst TAC Engineering resources on your network's ongoing support and network reliability strategies. Experience the Walker advantage; Approved, Accredited, Accelerated. WalkerFirst TAC programs are approved and backed by our OEM partners. WalkerFirst accredited engineers hold certifications for multiple leading OEM platforms. WalkerFirst TAC accelerates resolution of issues, by leveraging long standing relationships with our OEM partners. Our expanded team is up to speed on your account's history and solution design; when you need support, we are ready to serve and stay engaged to provide solutions until your network operates smoothly.



## WalkerFirst TAC – Juniper Program Highlights

Walker has maintained its Juniper Elite Partner status for over five years and has earned the distinguished Partner Support Services Specialization (PSS) from Juniper. This collaborative relationship ensures WalkerFirst TAC customers a first-class experience: Walkers Juniper certified engineers help fast-track remediation and resolve issues. Our fully accredited program with Juniper provides you peace of mind knowing you retain access to the Juniper Maintenance program's best features.

WalkerFirst TAC engineers leverage Juniper's troubleshooting best practices and diagnostic tools coupled with a unique understanding of your complete network architecture and business objectives to diagnose and remediate issues effectively.

Juniper Level 3 and 4 technicians support advanced diagnostics, equipment replacements, and PRs. You maintain access to Junipers Knowledgebase, Tech Library, as well as hardware and software support.

### With WalkerFirst you gain:

- 24/7 access to WalkerFirst Juniper certified engineers
- Proactive escalation for any level 3 or 4 issues
- Asset management and onboarding support
- Multi-vendor support for qualifying WalkerFirst Solutions

### With WalkerFirst you maintain:

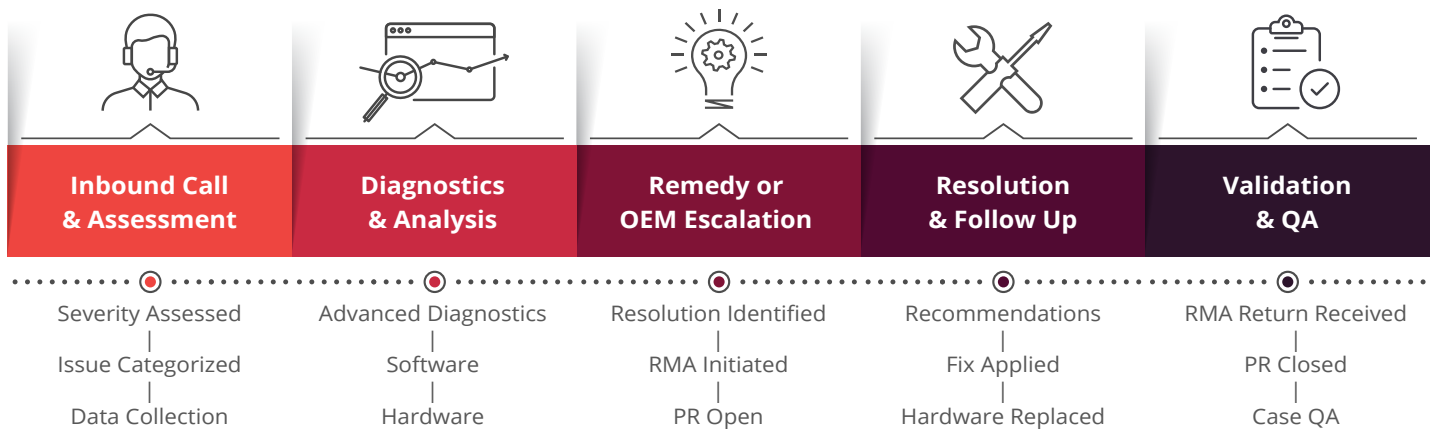
- Access to Juniper software releases and support
- Access to Juniper knowledgebase, tech bulletins, and tools
- Access to Juniper advance equipment replacements and RMA support

## WalkerFirst Customer Success Portal

As a WalkerFirst TAC customer, you gain access to a wealth of network problem-solving resources. Search the WalkerFirst TAC Help Desk to access our favorite “Getting Started” resources, links to product landing pages, and historical documentation related to your account. We share WalkerFirst asset information, summaries of past Professional Services projects we completed for your account, and historical case information. Still not finding what you need? WalkerFirst TAC is always at the ready to assist. Open a service ticket or contact us by phone for immediate support.

## WalkerFirst TAC - Case Flow Description

The Walker team is available 24/7 to help WalkerFirst TAC customers diagnose and mitigate service impacting issues. WalkerFirst engineers resolve a majority of cases during their initial contact. If OEM escalation is required, we help escalate your case to our Level 3 OEM counterparts and continue to stay engaged throughout the process to assist with proactive escalation and communication.



### With every service request, you can expect:

- You will receive expert assistance by telephone or email for information related to product use and troubleshooting.
- WalkerFirst TAC will provide updates at regular intervals, and we will proactively drive open cases to resolution.
- We will continue our efforts until you are satisfied that network performance levels are restored to what you experienced before the issue occurred.
- If at any time you are not satisfied with TAC Support, you can escalate your request.

Priority Classification	Response Target	Standard Update Interval
Priority 1 (P1) – Critical (Service Down)	Within 15 minutes	Updates every four hours
Priority 2 (P2) – High (Service Impaired)	Within 30 minutes	Updates daily
Priority 3 (P3) – Medium (Minor Impact)	Within 4 hours	Updates every three days
Priority 4 (P4) – Low (Inquisitive)	Within 8 hours	Updates weekly

## Customer Lifecycle Management

WalkerFirst TAC provides triage and resolution of hardware and software issues. Still, there will be times where you need to re-engage with an engineering resource who can provide consultation for solution upgrades, configuration changes, or redesigns. WalkerFirst TAC works hand in hand with our Sales Engineering and Professional Services teams to provide continuity; We track trends and proactively engage your account manager to share recommendations for services or products to improve network reliability and service quality.

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# TOP MANUFACTURERS

## #

128 Technology  
3M

## A

Actelis Networks  
ADTRAN  
ADVA  
AFL  
Alcatel-Lucent Enterprise  
Allworx  
Alpha Technologies  
Amphenol Network Solutions  
APC  
AudioCodes

## B

Bekaert  
Bourns  
Burndy

## C

C&D Technologies  
Cambium Networks  
Carlson  
Champion ONE  
Channell  
Charles Industries  
Chatsworth Products  
Ciena  
CommScope  
Corero  
Coriant / Infinera  
Cornet Technology  
Corning  
Cortelco  
CyberPower

## D

Dell EMC  
Digium  
D-Link  
Dura-Line

## E

Eaton  
Electric Motion  
Eltek  
EnerSys  
ENET Solutions  
Engenuity Communications  
Erico  
EXFO  
Extreme Networks

## F

Fortinet  
Fujitsu (FNC)  
Fujitsu America

## G

GarrettCom  
General Cable  
Grandstream Networks  
Great Lakes Case & Cabinet  
Greenlee

## H

Harger Lightning  
HellermanTyton  
Hewlett Packard Enterprise  
Hubbell Power Systems  
Hubbell Premise Wiring

## I

ICC  
Infoblox  
iPhotonix  
ITW Linx  
Ixia, A Keysight Business

## J

Jonard Industries  
Juniper Networks

## K

Klein Tools

## L

Lanner  
Lynn Electronics

## M

MacLean Senior Industries  
Master Lock  
Mimosa  
Mitel

## N

Network Integrity Systems  
NewBasis  
Newmar  
Newton Instruments  
Nokia  
Nutanix

## O

OFS  
Oldcastle Infrastructure  
OpenStack

## P

Panduit  
Plantronics  
Poly  
Positron  
Preformed Line Products  
Proofpoint  
PulseSecure

## Q

Quality Metal Works  
Quazite

## R

RAD  
Rainbow Technology  
Red Hat  
RFS  
Rittal

## S

SafeNet  
Siklu  
SPARQ Global  
Splunk  
Supermicro  
Suttle

## T

Telco Systems  
Tellabs  
Thomas & Betts  
TII Network Technologies  
Transition Networks  
Trimm, Inc.  
Tripp Lite

## V

Valcom  
Veeam  
VeloCloud  
Vertiv  
VIAVI Solutions  
Viking Electronics  
VMware

## W

Westell  
Wilmore Electronics

## Z

Zhone Technologies  
Zyxel Communications

For more information,  
please contact a Walker  
sales executive at  
1-800-WALKER1  
or visit [walkerfirst.com](http://walkerfirst.com).

CONNECT WITH US



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