

# Integrated Communications— Delivered.

Integrating your  
communications  
and technology  
networks worldwide.



# Integrated Communications—Delivered.

**Solving today's complex communications challenges—  
one client at a time.**

**Streamline operations. Improve productivity. Reduce costs. Boost profits.**



Put a leading communications systems integrator on your team. With an unmatched portfolio of partnerships with all the top manufacturers, we can provide services and solutions to help our clients, of every size and industry, fully optimize their communications investments.

## **Integrated communications solutions optimized for you.**

From supporting the communications infrastructure of a small retail outlet to managing the communications systems of Fortune 100 enterprises, Black Box provides complete services and solutions designed to help our clients succeed. We'll help you use today's communications technology to streamline operations, improve productivity, reduce costs, and boost profits.

No matter where you are in your communications life cycle, Black Box can offer you a solution focused on your needs. As a leading communications system integrator, we can guide you through the complex challenges of transitioning from traditional voice and data communications to a sophisticated unified voice, data, and video communications system.

As a true communications system integrator, Black Box can help you adopt best-of-breed technologies, maintain a hybrid environment, and move to unified communications. Whether your needs involve migrating to VoIP, managing a call center, adding wireless and mobility, upgrading a data center, installing structured cable, or sourcing superior technology products, Black Box offers you complete communications solutions, services, products, and support.

## The advantages of Black Box integrated communications.

Because communications are so dynamic, the role of the integrator is critical to assessing where you are and developing a communications plan to take you where you want to go. That's where the Black Box advantage comes in. No other integrator can offer you the broad portfolio of solutions, the global footprint, and the depth of technical resources that Black Box can offer.

### Advantage 1: Technology-independent portfolio of solutions.

With the broadest portfolio of manufacturer partnerships in the industry, we'll find a solution that's right for you. Black Box represents all major manufacturers and is a top partner with the market leaders, including Avaya®, Cisco®, CommScope®, NEC, ShoreTel®, Siemens®, and more. We can support a single manufacturer solution, as well as cross-platform solutions involving systems from multiple manufacturers.

### Advantage 2: Global footprint.

Whether you have one office, a campus, a nationwide operation, or a global enterprise, Black Box can help. With 198 offices in 141 countries, we are where you are. You'll benefit from consistent quality of service and products across all locations and platforms. Why risk working with multiple vendors in multiple locations with multiple results? The solution for worry-free services is Black Box Network Services.

### Advantage 3: 3,000+ technical Black Box Team Members.

With our 35 years of experience in communications and networking solutions, you can be assured of working with the best trained and most knowledgeable technical people in the business. And you'll work with Black Box Team Members: 3,000+ certified technical personnel, including engineers, Registered Communications Distribution Designers (RCDDs), and certified technicians. We hire and train our own technicians, and make sure they're certified in relevant technologies and stay up-to-date on all new technologies. In addition, Black Box has also attained ISO/IEC 20000-1:2005 (IT Service Management Standard) certification.

### Featured partners:



**NEC**



 **ShoreTel**



**SIEMENS**

## Black Box Recognized in Gartner Magic Quadrant

Black Box Network Services has been positioned by Gartner, Inc. in the Challengers quadrant of the Magic Quadrant for Communications Outsourcing and Professional Services North America (COPS Magic Quadrant).

(Eric Goodness, June 30, 2010)

# Integrated Communications—Delivered.

## Complete life cycle services.

Objective advice.  
Expert engineering.  
Best-of-breed communications technologies.  
Extensive experience and support.

No matter where you are in the life cycle of your communications system, Black Box can help you achieve the best and most cost-effective communications system for your environment. We can take you from the initial planning stage, through design, sourcing, and implementation to monitoring, management, and support.

### Assess and plan.

- Consulting and analysis.
- Complex communications planning.
- Expert engineering.

Think of Black Box as your communications partner. We'll work closely with you to help you define and assess your communications goals and develop a plan on how to best achieve them.

### Design.

- Elite partner relationships.
- Comprehensive, vendor-independent portfolio.
- Cross-platform expertise.

Black Box will design and engineer a communications system that meets your requirements whether it's a single-site, single-manufacturer solution or a complex, global, cross-platform solution.



### Source, implement, and secure.

- Thousands of Black Box® brand products.
- Project management.
- 3,000+ engineers.

To help you get the most cost-effective system, Black Box has all the resources needed for your deployment, starting with our extensive line of networking and infrastructure products and our project managers, and ending with extensive support staff and field technicians.

### Operate and maintain.

- 24/7 remote and field-deployable support.
- Eight Network Operations Centers (NOCs).
- Servicing 5,000,000+ communications ports.

Our job doesn't stop once your communications system is installed. Black Box offers extensive support, management, and monitoring services. With eight NOCs and our vast geographic footprint, we can solve problems remotely and also deploy people on-site in hours.



## Comprehensive Black Box solutions

- Unified communications and collaboration
- VoIP
- Managed services
- Traditional telephony
- Contact centers
- Network security
- Mobility
- Messaging
- Structured cabling
- Data centers
- Data networking
- Digital signage
- Video systems
- Network monitoring
- Wireless networks
- Technology deployments
- Networking products
- Infrastructure hardware
- Cabling
- Cabinets and racks
- KVM switching
- Network security and optimization
- Remote monitoring
- Data communications

## Centers of Excellence—24/7 call center support.

Black Box boasts six partner Centers of Excellence to better support our customers. These centers house teams, specially trained and certified, to support our partner platforms. They include:

Black Box Centers of Excellence: Avaya® | Cisco® | CommScope® | NEC® | ShoreTel® | Siemens®

## Black Box Partners.

With the broadest portfolio of manufacturer partnerships, we'll find a solution that's right for you.

Aastra®	Comview	Siemens Enterprise
Alcatel-Lucent	Convergys®	Communications
Amcom®	Coredial	Star2Star™
Aspect®	Mitel®	SunGard®
Avaya®	NEC®	Symmetrics
AVST®	PathSolutions™	Toshiba Telecom
BridgeWave	Polycom®	Verint®
Cisco®	SATMAP	
CommScope®	ShoreTel®	

## Network Operations Centers.

Get help when you need it. The personnel in our NOCs manage 5 million communications ports every year. They answer approximately 34,000 calls a month. More than 99% of trouble calls are resolved without manufacturer assistance, and our remote resolution rate is 73%.

### Black Box Network Operations Centers:

Amherst, VA	Minnetonka, MN
Amityville, NY	Murfreesboro, TN
Brecksville, OH	Nashville, TN
Houston, TX	Pittsburgh, PA

In North America, Black Box also operates 117 regional offices to support our customers at the local level.

# Integrated Communications—Delivered.

## Black Box Federal: serving those who serve.

### Communications solutions designed to make government more efficient.

For 35 years, Black Box Network Services has been delivering complete communications solutions to federal, state, and local government agencies. Black Box offers our government customers the ability to manage large enterprise projects with the agility to be responsive to their special needs. Whether your mission is to serve the citizenry, protect our borders, or defend our country from threats, both foreign and domestic, we serve those who serve.

### Government solutions.

- TDM, VoIP, and unified communications and collaboration for facility, campus, base, metropolitan, and enterprise networks.
- Communications facilities design and implementation.
- Complete network solutions, including planning, design, installation, and maintenance of small (<1000 nodes) to large (>100,000 nodes) campus-based networks.
- Transport: SONET and Dense Wave-Division Multiplexing.
- Passive Optical Networks (PON/GPON).
- Physical layer, inside and outside plant systems.
- More than 18,000 products on the GSA Schedule.
- Same-day response to GSA pricing requests.
- Mil spec packaging.
- Smart Bundle™ services for staging.
- Custom products.



### Government Contracts

GSA Schedule 70 # GS-35F-0158J

Cage Code: 59951

DUNS# 082254871

Federal ID# 25-1272662

GSA Schedule 70 # GS-35F-0087L

Avaya GSA Schedule # GS-35F-4366G

Avaya GSA Schedule # GS-35F-0156V

GSA Connections GS00T03AHD0017

US Air Force NETCENTS

DISA Encore

US Army IMOD W91QUZ06D0027

US Army LTLCS W15P7T07DH001

US Navy SPAWAR

FAA DTFAWA07C00028—SONET Cable Loop

NASA (SEWP IV)

Black Box accepts all government purchasing cards.

WAWF Invoicing.

## Make the smart call with Black Box Resale Services.

### Refurbished telephone equipment—certified and guaranteed.

Save with one of the best warranties in the industry. Get a risk-free, two-year warranty on most refurbished products and a five-year warranty on most refurbished and repaired phones.

### Advance replacement and repair programs.

Eliminate downtime with our 24-hour advance replacement and five-day repair turnaround programs.

### Wide selection of new and refurbished equipment.

Choose from one of the largest selections anywhere with more than 15,000 products from all leading manufacturers.

### Go green.

Keep equipment that can be refurbished out of landfills with our free disposal services and Buy Back program.

## You'll get IT at Black Box: technology solutions, FREE support and same-day shipping.

### Products from A to Z.

From cables and networking switches to security solutions and digital signage systems, you'll find everything you need to expand, upgrade, and complete your network.

### Custom products.

Have a unique challenge? We'll design a one-of-a-kind solution.

### Same-day shipping.

We ship 99.96% of all in-stock products the same day.

### Free, 24/7, live Tech Support.

Product questions? Contact our FREE Tech Support at 724-746-5500 or go to [blackbox.com](http://blackbox.com).

We ship  
99.96%  
of all products  
the same day!



# Integrated Communications—Delivered.

## Case Study: University of South Alabama

**Project:** VoIP-based communications system

**Major benefit:** Cost-effective unified communications

**Major challenges:** Hybrid system  
Phased migration

### The background.

More than 15,000 students attend the University of South Alabama (USA) in Mobile, AL. The university employs approximately 5,500 faculty and staff and consists of 10 schools and colleges. Its health system, including the College of Medicine, Mitchell Cancer Institute, and two hospitals, provides state-of-the-art care for 250,000 patients annually.

The university is one of the fastest growing in the state and is undergoing a 10-year construction program valued in excess of \$475 million. Because of that, David Blough, CIO, University of South Alabama Hospitals, wanted to take advantage of new VoIP technologies to improve communications.

“We wanted to replace our aging telephone system,” explained Mr. Blough. “It was installed in 1988, and we could no longer get parts for it and we couldn’t upgrade it. We wanted to install new systems before the old one crashed and we wouldn’t be able to get it back up.”

He sought proposals for a multiyear, phased-in replacement of the current telecommunications systems. They were to be considered a long-term solution and be capable of meeting the university’s current telecommunications and voice messaging needs and offer the potential for future enhancements and expansion.

### What’s your best solution?

Mr. Blough took a novel approach when bidding out the project. Instead of putting together a typical 100-page bid specification, he put together a 6-page request for proposal describing the university’s current voice and data environment and the desired solution. His goal was to deploy a cost-effective communications system that would minimize risk and appear seamless to end users during the multi-phased migration. He wanted to increase capacity, gain flexibility, streamline operations, and leverage his existing infrastructure. In addition, he also wanted the vendors to submit a detailed implementation plan as part of the RFP. “I wanted to know how the vendor will take us from our current box to a new box without totally disrupting campus communications,” he added. “Hopefully, this way, we’ll get the best solution each vendor has to offer instead of asking the vendor to fit to what we wanted,” he said. His plan worked. After reviewing the proposals, he narrowed the list to three vendors. After site visits and presentations, he chose Black Box.

### A new IP-based system, less manpower.

The university chose a new communications solution based on Black Box’s recommendation. It gives the university advanced IP-based communications, including capabilities such as mobility; centralized

management; a standards-based, IT-oriented architecture; plus multimedia-enabled, end-user communications.

“This new system can easily mesh with our legacy communications infrastructure, which still has a lot of life left in it,” said Mr. Blough. “With this system and Black Box’s help, we can manage our VoIP migration at our own pace. It’s also reducing our manpower needs in doing moves, adds and changes,” he added. “Departments are moving all the time. Now with VoIP, they can pick up their phone and move themselves.”

### A well-planned, phased-in migration.

One of the primary reasons Mr. Blough chose Black Box was its implementation plan and its expertise and experience in supporting both older and newer technologies.

“Black Box is able to make the old and the new work together,” he explained.


The older campus communications infrastructure consists of an aging copper backbone. Mr. Blough wanted to upgrade it, but he didn’t have the budget to run new CAT6 cable and fiber throughout the campus. So Black Box devised a plan to use the existing infrastructure while migrating to the new system, one building at a time.

The multiyear plan developed by Black Box is enabling the university to upgrade its communications technology with minimal impact on end users and with no disruption of campus communications. It’s also helping the university build a foundation of IP telephony and advanced communications at a pace that makes financial and functional sense.

### A trusted partner.

From the initial bid through the communications migration, Black Box has earned the trust of the university team. “We have a lot of confidence in Black Box,” said Mr. Blough. “Being familiar with the university and campus, they were able to meet our needs better than other vendors. They have a good understanding of what we need. And they give us very good technical help.”





## Case Study: Ft. Bragg

**Project:** Voice and data communications systems and infrastructure

**Major benefit:** Unified communications

**Major challenges:** Complex hybrid system  
No downtime  
Hard-stop schedule

### The background.

Ft. Bragg, NC is best known as the home of the U.S. Army Airborne Forces and is the largest army installation and airborne facility in the world. The most notable units stationed there include the XVIII Airborne Corps HQ, the 82nd Airborne Division, the United States Army Special Operations Command (USASOC), and the Joint Special Operations Command (JSOC). The United States Army Forces Command (FORSCOM) and the US Army Reserve Command (USARC) are in the process of relocating from Fort McPherson, Georgia to Fort Bragg in 2011.

FORSCOM is the Army's largest Command consisting of over 750,000 Active Army, US Army Reservist, and Army National Guard soldiers. The base is the Department of Defense's cornerstone for rapid deployment of ground forces to defend the United States' interests around the world.

A critical component of the Army's arsenal at Ft. Bragg is its communications system, which Black Box is providing. To improve its defenses, the Army is moving towards unified communications, combining voice, data, and video in one package designed to support the soldier anywhere on the globe. That means soldiers will have a universal e-mail address, one telephone number, universal file storage, and a standard collaboration tool set. The systems they train on at Ft. Bragg will be the same systems used in the field and will enable the warfighter to immediately enter the battle upon arriving in theater.

### The original contract: IMOD.

In 2008, the Army awarded Black Box the I3MP Infrastructure Modernization (IMOD) project for Ft. Bragg. This four-year, \$58 million task order calls for Black Box to Engineer, Furnish, Install, Test, and Secure (EFIT&S) an integrated telecommunications infrastructure consisting of multiple vendor platforms including communications shelters, power systems, inside and outside plant infrastructure, IP data network systems, and DWDM and SONET optical transport systems.

### Hard work pays off: expansion.

In 2009, the U.S. Army awarded Black Box an I3MP expansion task order to provide a state-of-the-art, IP-based voice solution. The project will upgrade and expand the existing time-division multiplexing (TDM) switching infrastructure to a Voice over Internet Protocol (VoIP)/TDM hybrid system. In 2011, the U.S. Army took over Pope AFB that adjoins Ft. Bragg and awarded Black Box an additional I3MP task order to extend the Ft. Bragg network infrastructure and modernize Pope AFB, now known as Pope Army Airfield. The new orders expand the project time frame to five years and raise its value to more than \$110 million.

### Upgrading a "city" with no downtime.

At 251 square miles, if Ft. Bragg were a city, it would be the third largest in North Carolina, including army personnel, civilians, and families. Because it is a BRAC (Base Realignment and Closure) site with the largest Command in the Army relocating to Ft. Bragg, the schedule for all communications upgrades is set by Congress, and the deadlines are "hard-stop" dates, meaning they can't be changed. "Right now, it's like a city under construction," explained Mr. Tony Schneider, Black Box Network Services Vice President of Army Programs.

The new converged voice/data system Black Box is providing at Ft. Bragg is the largest and most complex that Black Box has delivered to the Army. It is a carrier class system, which means only 17 seconds of downtime are allowed every year. "The system is on 24/7, 365 days a year," continued Mr. Schneider. "We engineer 'flash cutovers' of the legacy systems to the new infrastructure with no disruption in service."

### A working group methodology.

To manage this vast project, Black Box employs a teaming approach with Subject-Matter Experts (SME) assigned to lead each of the teams responsible for each of the various subsystems being deployed. The team leaders interface and collaborate daily with their Army counterparts on-site.

"Our project management approach of using ground-level working groups to collaborate and make decisions has been greatly received by the Army," explains Mr. Schneider. "As this project is very fast moving, we have been able to solve problems and make technological changes quickly. In fact, 94% of issues that have arisen have been solved at the ground level. This methodology has enabled us to meet and beat schedules to the delight of our customer. Because of our performance, we've built a great relationship and trust with the Army and we are delivering an excellent customer experience."

"Although Ft. Bragg is Black Box's largest Army project, our Black Box teams are deployed on many other Army posts worldwide, many of which have the same BRAC time considerations. All are part of transforming the Army's communications systems to the Global Network Enterprise Construct (GNEC). Our Black Box team is truly humbled and grateful to support our country's warfighters by this most ambitious implementation. We look forward to continuing to live up to and exceed the high expectations of the U.S. Army," said Mr. Schneider.

# Integrated Communications—Delivered.

## Case Study: Joy Mining Machinery

**Project: New digital signage network**

**Major benefit: Improved productivity and morale**

**Major challenge: Centralizing control of the company's branding and messaging**

### About Joy Mining Machinery.

Active on five continents and with a network of 55 facilities spanning China, Russia, India, Poland, the United Kingdom, Australia, South Africa, and the United States, Joy Mining Machinery, a subsidiary of Joy Global, Inc., is a worldwide leader in the manufacture of underground mining equipment and is headquartered 20 miles north of Pittsburgh, PA.

### Consistent branding, instant communication.

With Joy Mining customers and employees spread from Tychy, Poland to Tianjin, China, implementing and maintaining a common corporate culture is a challenge. To help solve the situation, the Joy Mining Machinery marketing team proposed a network of digital video displays in facility lobbies that would convey both local and company-wide information, unified under a consistent graphic look.

"We knew that to control the branding and messaging, we would have to manage the network from our graphics and video production unit," recalled Chuck Fickter, Marketing Information Manager for Joy Mining. "The only way to do that is with a powerful, easy-to-operate content management system."

### The solution.

After a couple of "fits and starts," as Fickter described it, the Joy Mining team discovered the iCOMPEL™ digital signage appliance from Black Box. "Many of the units we looked at were complicated to use. Others didn't have all the functions we wanted," he stated. "But iCOMPEL is very easy to hook up, with software that's easy to learn."

"Almost all of our 55 facilities eventually received a digital display in their lobbies, all controlled by iCOMPEL devices," said Fickter. The screens show content such as product information, company news, and the like. There is also a message center that can be controlled by the local office to post specific messages like on-time delivery statistics, or to welcome guests or customers.

### An asset takes off.

Little did anyone know at that point how far the project would go. First, Joy Mining Machinery's engineering staff came to Fickter with an idea. "We were presented with the notion of using the digital screens to provide engineering metrics—performance data and the like. We saw the potential and immediately began rolling out the information to 19 screens around the network," said Fickter.

Next, the Human Resource Department approached Fickter. "They told us about how they are required to post job bids and awards in the company's union facilities. Normally, that requires a whole day or more of driving from one location to the next, just to post information on bulletin boards," Fickter recalled. "If we installed dedicated screens



in employee-only areas, HR said we could instantly eliminate that step and save the company a ton of time and money."

Possibly the most innovative idea, however, came from Operational Excellence: Use digital screens on the factory floor to display "Kanban" inventory information in real time. Kanban, a Just-in-Time manufacturing discipline, tells workers which parts are in inventory, which are in transit and in what bins particular parts are found. Traditionally, the Kanban system uses paper tickets to relay inventory information. By switching to digital displays, the company could eliminate paper and provide faster, more detailed updates.

Joy Mining has installed a number of Kanban displays at its Franklin, PA manufacturing plant with impressive results. Its next move is to link the Franklin facility to other Pennsylvania plants as well as its South African operations. The solution will instantly communicate manufacturing and inventory information about essential equipment and parts, even around the world.

### Productivity and morale improve.

"We discover new uses for digital displays almost every day," Fickter stated. "A recent employee survey, for example, indicated a desire for more awareness of what different Joy Mining facilities around the world are doing. That sparked the concept of 'Joy TV'—an in-house video channel that will produce and distribute 'Facility Focus' documentaries about various Joy Mining activities and people."

Fickter, as well as the marketing and production teams, are both excited and a bit surprised by the hugely positive and imaginative response to the introduction of the iCOMPEL powered digital display network. "Suddenly, what was once intended to be simply a coordinated display system for lobby guests has become a global, interconnected, and highly strategic set of tools," he said. "We're continually impressed by the potential of our displays."

## Awards and accolades:

### Cisco Customer Satisfaction Excellence

Black Box was recognized with the Customer Satisfaction Excellence Gold Star from Cisco, the highest distinction a partner can achieve within the Cisco Channel Partner Program. This is the third consecutive year Black Box has received this award, which is based on delivering outstanding customer service to customers in the U.S.

### Honda Supplier of the Year

Black Box was recognized as the 2010 Supplier of the Year for Information Systems—Managed Services, which encompasses the management of servers, related hardware, and various software and mobile devices. Black Box supports Honda's NEC® and Cisco® voice infrastructure, as well as the integration of Cisco voice into Honda's data infrastructure.

### Top 100 IT Integrator on VAR 500 list

Black Box was named to *VARBusiness* magazine's (now *CRN* magazine) 2011 VAR 500. Black Box was ranked as the 27th top technology integrator in North America, up from 69th last year. This marks the tenth consecutive year Black Box has appeared on the list of Top 100 IT solution providers.

### Aspect Service Excellence Award

For the fourth year in a row, Black Box Network Services has been honored by Aspect for exceptional service performance. Black Box received the highest satisfaction ratings of any Aspect North American partner for resolving customer issues. Additionally, the award recognized Black Box for the quantity and quality of technical resources it devoted to Aspect unified communications applications for contact center and services offerings.

### Black Box Wins Top Sales Awards from AVST

Black Box received two top awards from AVST for 2011: Highest Overall Sales and Highest Individual Sale.

### ShoreTel 2011 Circle of Excellence Award

Black Box received the highest honor ShoreTel bestows upon a partner. The Circle of Excellence award recognizes outstanding achievement in sales and customer satisfaction.

### Black Box Named CRN Tech Innovator for iCOMPEL

Black Box won Everything Channel's CRN Tech Innovators Award for its iCOMPEL digital signage platform.

### iCOMPEL Named TMC Solutions Product of the Year

For the third year in a row, Technology Marketing Corporation (TMC) named the Black Box® iCOMPEL™ digital signage appliance its Communications Solution Product of the Year.

### Veri-NAC and Intelli-Pass Named Winners of 2011 Global Excellence Award

*Info Security Products Guide*, the industry's leading information security research and advisory guide, has named Veri-NAC™ and Intelli-Pass™ winners of 2011 Global Excellence Awards in the Data Leakage-Protection/Extrusion Prevention and Intrusion Detection/Prevention categories respectively.

### Veri-NAC Named a Product Innovation

*Network Products Guide (NPG)*, the industry's leading technology research and advisory guide, named Veri-NAC a Product Innovation in the Network Access Control category.

### SpaceGAIN Cables and Panels win Reader Trust Award

*Network Products Guide (NPG)*, the industry's leading technology research and advisory guide, named SpaceGAIN™ right-angle cables and angled patch panels a winner of the Best Products and Services Award.

### VirtuaCore Receives R&D 100 Award

*R&D Magazine* recognized the Black Box VirtuaCore™ Desktop Virtualization Computer Sharing System as a top technology product. Every year, the publication salutes the 100 most technologically significant products introduced to the market.

### Black Box Catalog wins Multichannel Merchant Silver Award

The *Black Box® Catalog* won a Silver award in the Computer and High-Tech Equipment category from *Multichannel Merchant* (MCM). This is the 16th consecutive year the catalog has been honored by MCM.



## Innovative solutions for today's complex communications challenges.



Complete life cycle services for today's integrated communications.

Black Box is a leading communications system integrator dedicated to designing, sourcing, implementing, and maintaining today's complex communications solutions.

- » Integrated communications.
- » Technology products.
- » 24/7 support.
- » 35 years of proven experience.

Black Box (NASDAQ Global Select: BBOX) serves more than 175,000 clients from 198 offices in 141 countries around the world. Black Box is headquartered near Pittsburgh, PA.

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