EVOLVE TO CONNECT
EVX-LINK OPPORTUNITIES GUIDE

Vertex Standard

EVX-Link

COM   STATUS   POWER

EVX-Link

A better way to extend your reach.

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WHO SHOULD USE EVX-LINK?

EVX-Link is the perfect solution for customers looking to maximize flexibility, portability and expandability of their communications infrastructure all at a very cost effective price.

EVX-Link provides a seamless and reliable connection via the use of an existing Local Area Network (LAN) or Wide Area Network (WAN) internet connection. This allows customers to quickly and easily connect up to 32 different sites for DMR operation.

EVX-Link is FLEXIBLE and allows usage of existing radio and infrastructure, including repeaters, but depending on the size of your coverage needs, does not require a repeater to operate. Users can achieve multi-site capability with radio to radio communication alone.

EVX-Link is PORTABLE and can be moved to anywhere in the coverage zone an EVX mobile radio can receive a signal, so you are not limited to a centralized point of your coverage area.

EVX-Link is EXPANDABLE. Each site can add EVX-Link equipment and with some basic programming updates to your radios, you can expand your system with existing DMR radios on your new site.

The purpose of this guide is to provide some simple examples of opportunities the EVX-Link system can provide as a value added solution that will improve your communication capability and increase your productivity and efficiency.

Technical Note:

When using a router, the network address and port translation (NAPT) is necessary. The following UDP (user datagram protocol) port must be connectable (2100). The EVX-Link cannot change the UDP port.

REQUIREMENTS LEGEND

EVX-Link

EVX Mobile (EVX-5300 or EVX-5400)
Includes: mobile, antenna & power supply

Router

Wireless Bridge

WI-FI Router

Cellular Modem

Repeater

Satellite Up-link

Cellular Up-link

SIMPLE WIDE AREA NETWORK
CONNECTING TWO OR MORE SITES
WAN Configuration

NEEDS AND SITUATION

Staying connected with crews in multi-site situations is essential for productivity and efficiency.

In this commercial example, these two buildings share a maintenance crew.
Work tasks are set at the beginning of each shift but priorities change throughout the day and team members need to react quickly.
Cell phones haven't been a good way for the crew to connect due to dead zone coverage and building barriers.
Budgets can be tight, which places a higher value on productive, efficient and expandable solutions to meet requirements.

REQUIREMENTS for each location:

EQUIPMENT

EVX-Link
EVX Mobile

IP PROVIDED RESOURCES
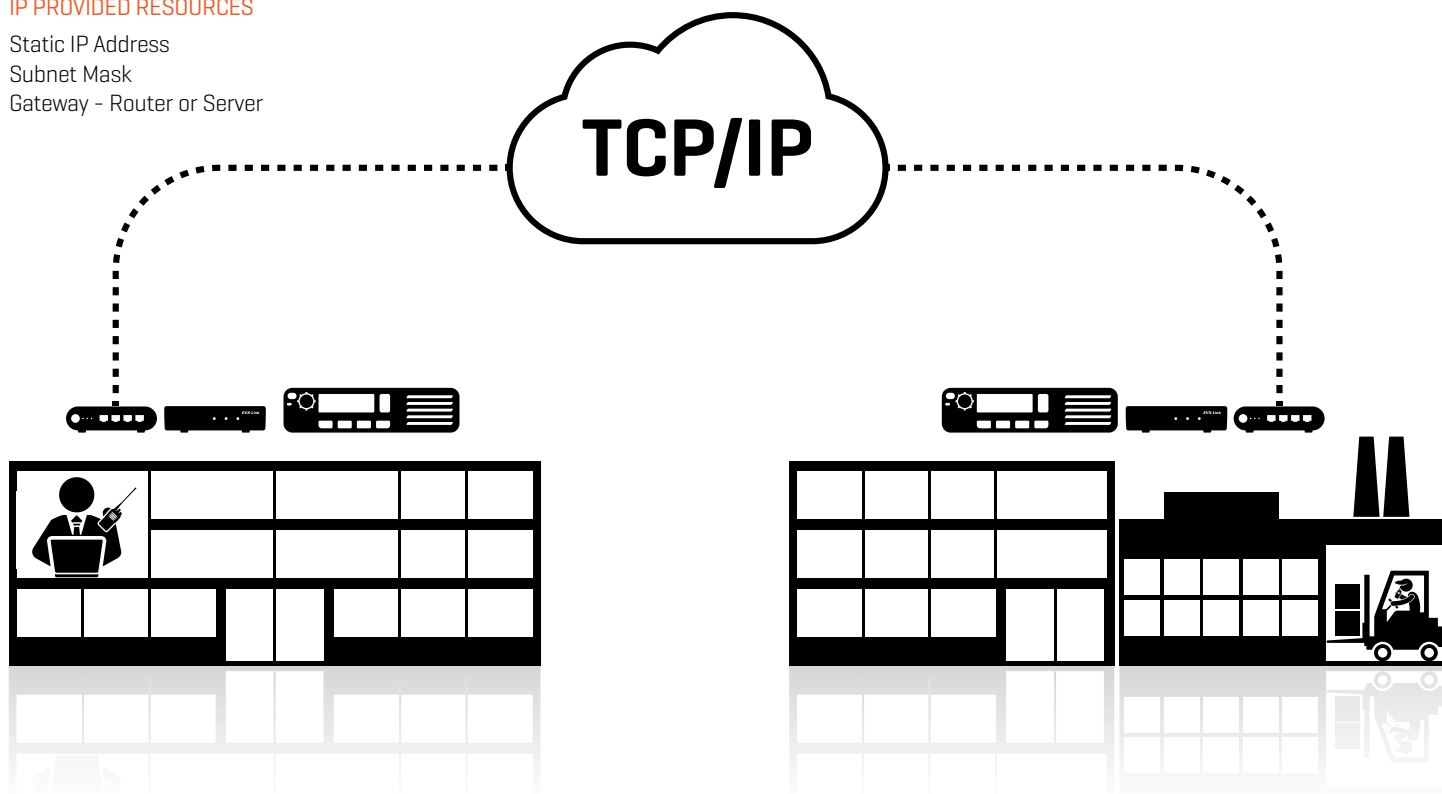
Static IP Address
Subnet Mask
Gateway - Router or Server

EVX-LINK SOLUTION

Many companies can benefit from staying connected with their crews in multi-site situations.

The EVX-Link system allows two previously independent maintenance crews to be connected as a single large group. When work tasks change, supervisors can connect with specific groups or individuals to address an issue right away with no delays or barriers.
The distractions of cell phones and their lack of adequate coverage is not an issue since the radios respond crystal clear in all situations. Connecting with the crew anyway you want and in real time increases efficiency, maximizing productivity.
As the company expands, the communications connectivity can expand along with it, with up to 32 sites connected quickly and at a small expense with the addition of EVX-Link systems at the new sites.

TCP/IP

MIXED BANDS, LOCAL AREA NETWORK
CROSSBAND OPERATIONS SOLUTION
LAN Configuration

NEEDS AND SITUATION

In this example of a property management operation, outsourcing services like security and maintenance support is a more effective way for them to minimize operating expenses and maximize profitability.

The security agency contracted to support our property management site uses VHF frequencies, which are incompatible with the UHF frequency the management company utilizes on site.
The property management manager has no means of communicating directly with their hired security contractors with their current equipment.
There is a considerable additional expense to purchase radios compatible with their current frequency band for distribution for the security personnel, not to mention, the added responsibility of keeping track of that equipment easily.
However, without investment in this costly additional radio purchase, the property management company is at risk of not being able to connect to security if a situation arises because their radios are incompatible.
Having security easily accessible will significantly improve response time.
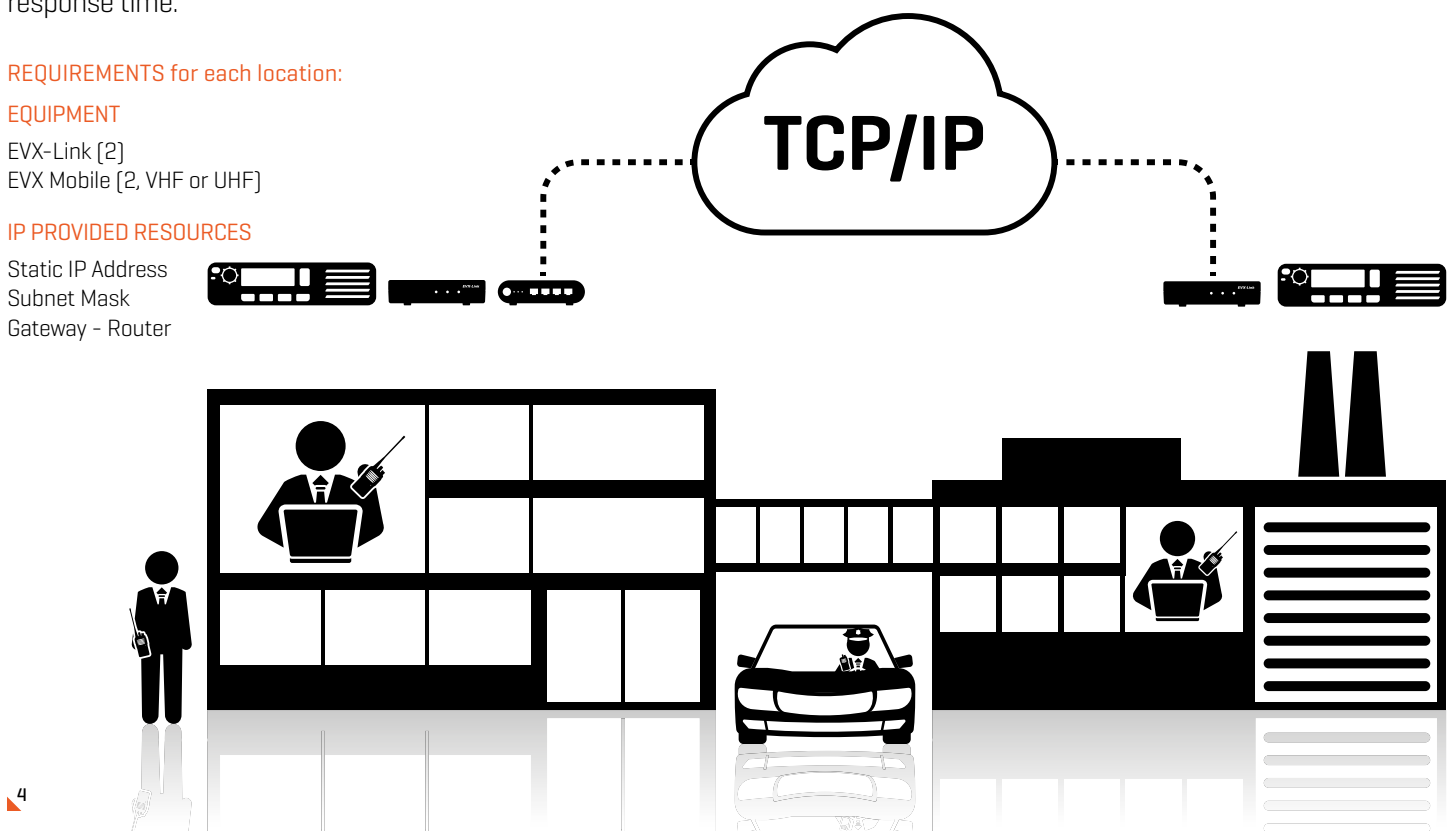
EVX–LINK SOLUTION

EVX-Link solves cross banding issues with very little additional expense.
Because the EVX-Link translates the voice and data communications received by the mobile radio into data to send over IP, the original transmitting band of the radio is irrelevant to what is received and transmitted over the EVX-Link system.
Simply connecting a UHF mobile to one EVX-Link and a second VHF mobile to a second EVX-Link will allow both DMR solutions to operate harmoniously, as if they were the same band.
Now any of the property management team can report suspicious activity directly to the security agency, potentially saving money in potential damages or keeping the facility safe and secure in real time.
Not to mention the cost saving experienced by only adding small amount of support infrastructure rather than a more costly amount of additional radios to deploy.

REQUIREMENTS for each location:

EQUIPMENT

EVX-Link (2)
EVX Mobile (2, VHF or UHF)

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - Router

TCP/IP

CROSS COUNTY WIDE AREA NETWORK
CONNECTING SITES WITH DIFFERENT EXISTING INFRASTRUCTURES
WAN Configuration

NEEDS AND SITUATION

A county school district has been fortunate to have allocated previous funds to radio and infrastructure purposes, but each school procured materials independently as needs arose.

Now the district wants to connect all three sites, but are concerned that the previous infrastructure and radio purchases made will become obsolete now that the entire district requires connectivity.

In an age where student safety is paramount, the district wants to be instantly aware of any situations that may compromise the safety of their students.

Unfortunately, as often is the case the district's budget is tight, and they need the best solution to connect, but in a cost effective manner.
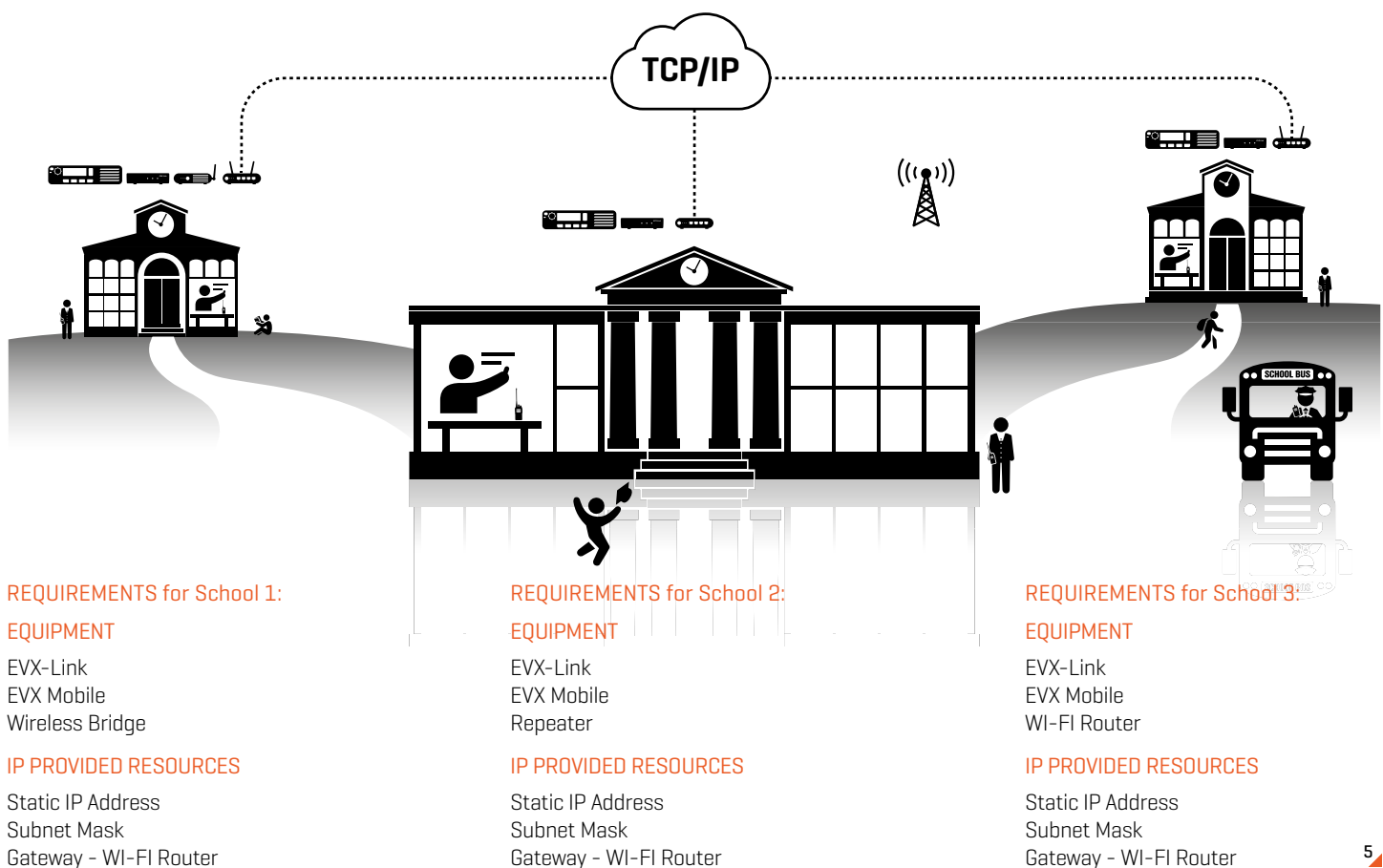
EVX-LINK SOLUTION

EVX-Link offers a Turn Key solution without changing the existing infrastructure of each school.

With the EVX-Link system, each school's administrators, education, maintenance and security staff will have the ability to talk either internally in their site or to other school sites as needed.

Schools with larger coverage needs on site will be able to continue use of their repeater systems to reach the farthest reaches of their campus, and schools that only use radio-to-radio connections will now have the power to communicate across the county to share information and receive administrator updates.

Transportation operations can be improved as buses or other vehicles can now integrate smoothly and connect with any of the facilities to report delays or other safety concerns.

For flexibility and safety, EVX-Link is the perfect cost effective solution.

TCP/IP

REQUIREMENTS for School 1:

EQUIPMENT

EVX-Link
EVX Mobile
Wireless Bridge

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - WI-FI Router

REQUIREMENTS for School 2:

EQUIPMENT

EVX-Link
EVX Mobile
Repeater

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - WI-FI Router

REQUIREMENTS for School 3:

EQUIPMENT

EVX-Link
EVX Mobile
WI-FI Router

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - WI-FI Router

MULTI-FLOOR BUILDINGS LAN AREA NETWORK
CONNECTING A MULTI-LEVEL BUILDING ACROSS ALL FLOORS WITH NO BARRIERS
LAN Configuration

NEEDS AND SITUATION

Structuring communications systems for coverage of multi-floor buildings has often been a costly and labor intensive process.

In this hotel example, the hotel manager has a need for coverage throughout the entire building, from the underground garage to the penthouse level.
The hotel manager is responsible for directing many different independent operations such as security, maintenance, cleaning services, catering and the underground garage services to ensure that the guest experience is flawless.
The natural design of a multi-floor building limits the effectiveness of radio-to-radio communications requiring an infrastructure based solution to be able to connect to personnel operating on different floors of the building.
The hotel management investigated many potential solutions, including multiple repeaters to cover the varying levels of the building. The solution was workable, but was costly and labor intensive to set up the appropriate installation of the equipment. Interoperability and productivity improvements for the staff are important aspects management can identify for providing return on their communication investment.
But, more critical, is ensuring communications are effective to ensure the safety of the guests in an emergency situation. Communication improvements are paramount to running a smooth operation.
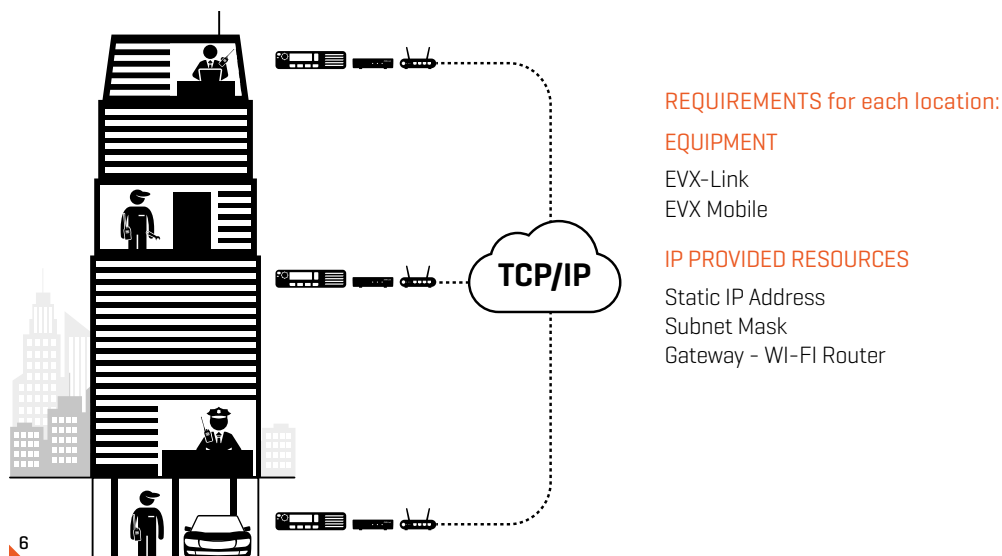
EVX-LINK SOLUTION

EVX-Link is a perfect solution to meet the hotel's requirements.

The EVX-Link system is a fraction of the cost of a repeater, even before you factor in the expense of time, money and resources to install a repeater based system fully. Utilizing the IP based connectivity of the EVX-Link system strategically on different floors of the building, communication is seamless even in natural RF communications impediments.
By utilizing the digital DMR setup the EVX-Link system enables, the hotel manager and team leads can now interface with specific groups or even individuals to address issues or keep regular daily activities get completed on time by communicating directly with the responsible resources.
Because the entire building is connected, management can have peace of mind that in an emergency, all radio operators will be alerted to any potential urgent communications for coordination of emergency procedures.
But, most compelling, is the ease of setting up the equipment, and potential inclusion of existing radio or infrastructure already in use.
For productivity, price considerations and installation, the EVX-Link system is a smart choice for this hotel.

REQUIREMENTS for each location:

EQUIPMENT
EVX-Link
EVX Mobile

IP PROVIDED RESOURCES
Static IP Address
Subnet Mask
Gateway - WI-FI Router

MULTIPLE ENVIRONMENT WIDE AREA NETWORK
CONNECTING A MULTI TERRAIN ROUTE WITH NO GAPS
WAN Configuration

NEEDS AND SITUATION

EVX-Link systems are not constrained by limitations in internet accessibility.

In this simplified transportation example, our train line travels through many different types of environments over the course of its route.
There are some areas, like the main station and the city on the route that have easy access to internet connectivity, enabling the train to stay in contact with both central control and other trains on the route.
However, more rural or difficult terrain environments will likely not have easy, or even any existing infrastructure for internet accessibility.
Different connectivity solutions are possible, such as using satellite uplink connections or cellular modem connections for remote area coverage, but a product is needed to leverage these alternative internet connectivity solutions.
The train needs to relay information about track conditions or equipment challenges to facilitate on-time scheduling and alert trailing trains of potential delays.
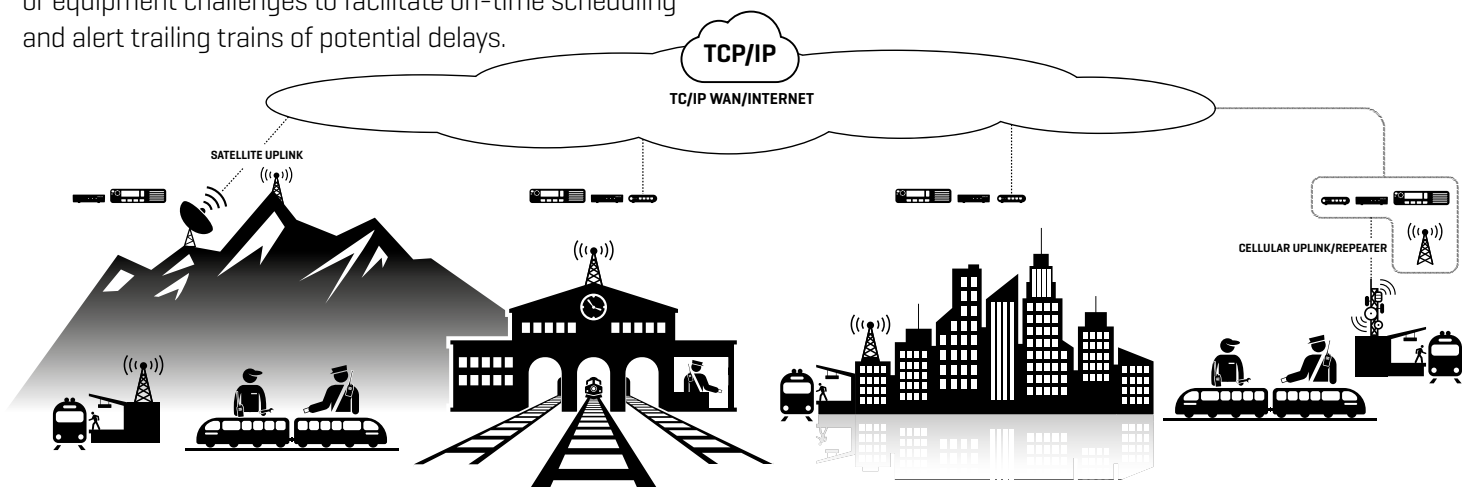
EVX-LINK SOLUTION

Utilizing EVX-Link, (and possibly some other repeater and infrastructure support) the train route is connected without communication gaps.

EVX-Link can interface with satellite or cellular internet solutions, enabling EVX-Link to operate in any environment, regardless of remoteness.
Our conductors are able to stay in contact and alert both control and other trains of the environment and any situations that may arise during the trip.
By utilizing the site search functionality of the EVX subscribers, the mobile radios on the train are able to shift from one site to the next when the signal gets stronger at a closer site, providing the ability to always be within range of a nearby communication source.

TCP/IP

TC/IP WAN/INTERNET

SATELLITE UPLINK

CELLULAR UPLINK/REPEATER

REQUIREMENTS for the remote mountain range:

EQUIPMENT

EVX-Link
EVX Mobile
Repeater(s)

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - Satellite Up-link

REQUIREMENTS for the main station:

EQUIPMENT

EVX-Link
EVX Mobile
Repeater

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - Router

REQUIREMENTS for the city:

EQUIPMENT

EVX-Link
EVX Mobile
Repeater(s)
Router

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - Router

REQUIREMENTS for the prairie:

EQUIPMENT

EVX-Link
EVX Mobile
Repeater

IP PROVIDED RESOURCES

Static IP Address
Subnet Mask
Gateway - Cellular Modem

NO BOUNDARIES: GEOGRAPHIC REACH THAT EXTENDS YOUR NETWORK AROUND THE WORLD

We at Vertex Standard know the power and effectiveness of the EVX-Link system first hand as we use it ourselves to connect management across the entire globe. EVX-Link eliminates any barriers and has no boundaries which enables us to have crystal clear communications.
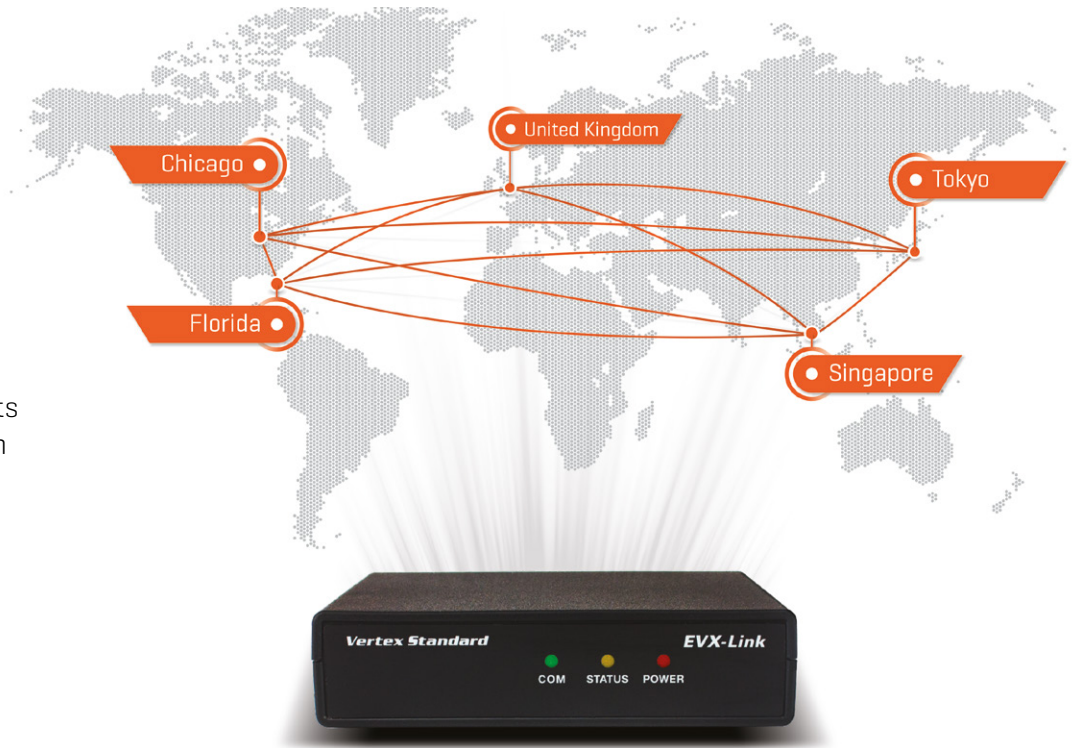
Why is EVX-Link Better?

EVX-Link is the next evolution in expanding your reach. EVX-Link was designed to be a flexible, portable, expandable and a cost-effective solution for connection multi-site requirements.

Flexible: Equipment requirements are limited, the EVX-Link system is easily integrated into existing subscriber and infrastructure configurations.

Portable: EVX-Link is supported by both traditional internet connectivity and other wi-fi resources. EVX-Link can be moved throughout your coverage zone as your footprint evolves.

Expandable: Add EVX-Link to any existing DMR tier 2 subscribers and infrastructure, or add equipment in the future as your customer's communications need evolve.

Cost-effective: The EVX-Link configuration compares very favorably to other IP based connectivity solutions. Connect for less with the EVX-Link.

The benefits of EVX-Link are:

▼ **Build on your existing network** – Your existing network can be used since there is no need to replace existing equipment

▼ **No repeater required** – Works with either on-site or repeater-based systems - or a mix of both

▼ **Versatile Coverage** – Place EVX-Link anywhere in each desired coverage area

▼ **Compatible with** – All RF Bands and any DMR digital platform

▼ **Simple set up and configuration** – All you need is electric power and a Ethernet connection at each EVX-Link location

▼ **Expandable Coverage** – Up to 32 sites

▼ **Affordability** – A cost-effective solution over traditional systems using IP connections which works with any DMR digital platform

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