THE COMMBOX™ SOLUTION

PHOENIX

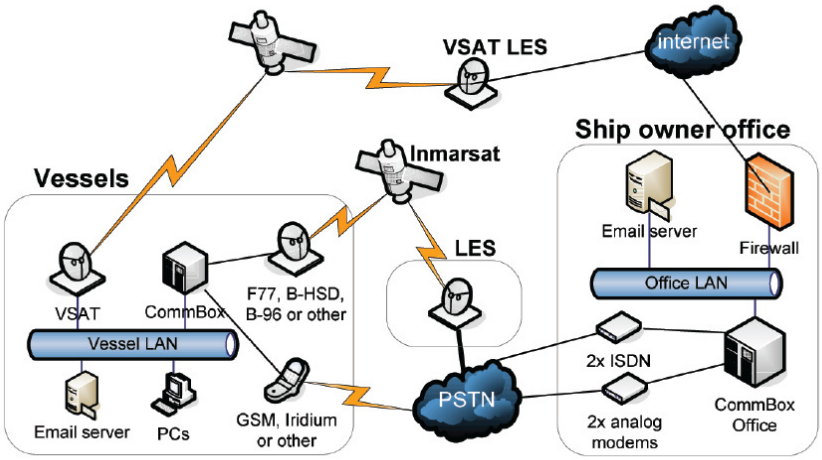
About CommBox™

The CommBox™ system is designed to give ship owners and operators the most cost efficient and flexible communication experience between ships and shore. A range of products and applications are available as part of the CommBox™ system enabling a solution to be tailored to best suit the requirements of the users.

Possessing the ability to connect all communication equipment in conjunction with compatibility with all known carriers the CommBox™ system allows vessels to most efficiently utilise communication equipment, select best possible coverage and significantly reduce the data transfer bandwidth required by the vessel.

The system acts as a total solution for ship-to-shore data communication, acting as a web, email and file server. If these servers already exist the CommBox™ system can act as a relay server with all benefits regarding data security, optimisation and compression still being obtained. Land and airborne applications can also experience benefits from implementing CommBox™ .

The CommBox™ system is a total solution for ship-to-shore data communication



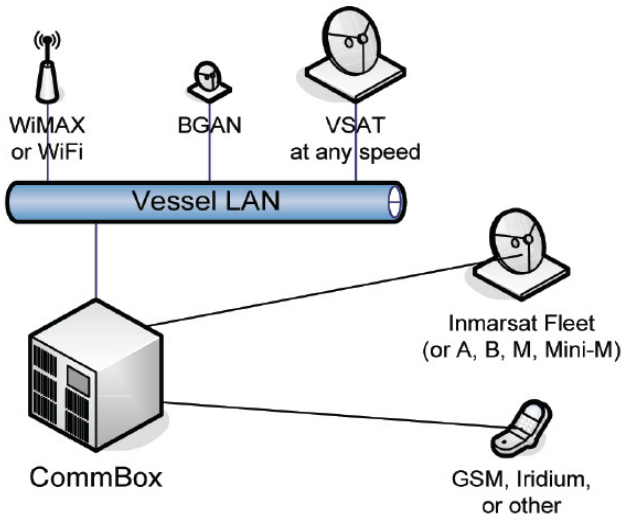
The CommBox™ QuickBlue40 (left) is an example of one of the products installed on vessels to optimize date transfer between ship and shore, communication and setup methods for the CommBox™ system can be adapted to best suit clients needs (right)

Least Cost Routing and Switching

- Continuously monitors all predefined carriers
- Switching to the carrier providing the unit with the most cost efficient access
- Carrier selection can be determined using a combination of speed, cost, overhead, availability and carrier type
- Compatible with all known carriers
- Ability to resume on any carrier after a break has occurred

IP Routing

- Full IP routing enables both ship-to-shore and shore–to-ship access to remote file systems
- Multiple compression minimise amount of transferred data
- Makes full use of firewall and VPN to maintain highest level of security



CommBox allows connection to all vessel communication equipment eliminating the need to manually switch between or purchase further equipment to gain access to other systems

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Phoenix Engineering Systems

With over 25 years experience in developing and producing innovative, efficient and practical solutions to a range of clients Phoenix pride themselves in providing their customers with the know how, methodology, tools and ongoing support to effect lasting and sustainable process and technical improvements for their business performance and products.

By implementing a CommBox™ solution with Phoenix you will be gaining experienced and local support, ensuring that your firm will be provided with required assistance in a timely and accurate manner. Phoenix's proven track record in technology based fields is exhibited by the praised from clients, both existing and past.

"Phoenix provided us a range of engineering support at short notice. Phoenix were able to provide both turnkey solutions and on-site support. Phoenix cover a broad skill base from project management, systems, software, mechanical, electrical and safety engineering. Tasks included the design and installation of a trial CCTV system on an in service RailCorp train; the design of a wireless data acquisition system on an in service RailCorp train, development of safety fault and event trees, software integration support and systems engineering support. With each task, Phoenix demonstrated great flexibility, innovation and application."

Godfrey Lewin — Information Communications Technology Design Manager

Downer EDI Rail

"Phoenix has been able to work seamlessly with our management group to actively seek and gain full understanding of our business strategy and culture before proposing logical and viable solutions. Phoenix then commits itself through the implementation process to ensure the desired results are achieved.

The depth of their management skills and their collaborative approach to solutions has been a key factor in successfully completing their projects in time.

We have engaged Phoenix on a number of sensitive projects, they have respected the business sensitivity and the outcomes have exceeded expectation."

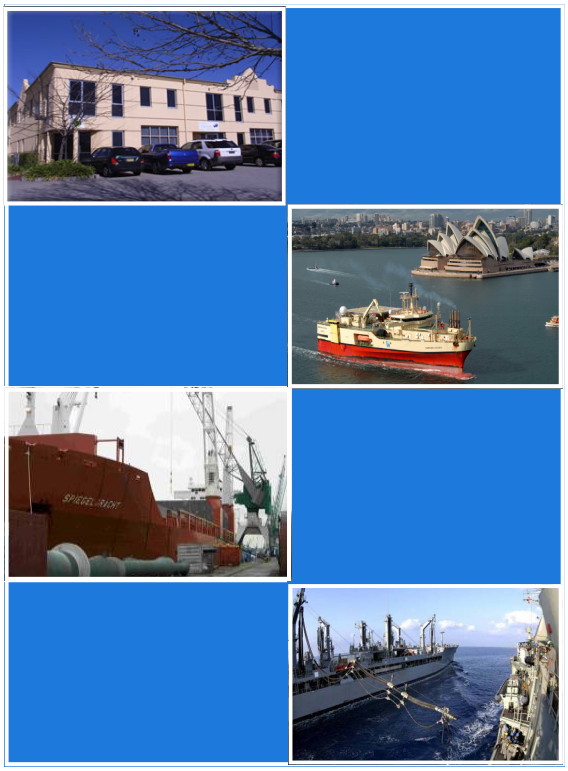
Chris Jenkins—Managing Director

Thales Australia

"Phoenix assisted us in managing a very important project by providing systems engineering and project management skills. We have found their experienced staff to be very helpful in helping to keep our project on scope and on time."

Dale Lambert—VP of Engineering

I/0 Marine Imaging Systems Division USA



International Operators

Over 700 of vessels are currently experiencing the benefits of the CommBox™ solution.

BW Group

Jan De Nul

Odfjell

F. Laeisz Shipping Group

Fugro

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COMMBOX™ APPLICATIONS

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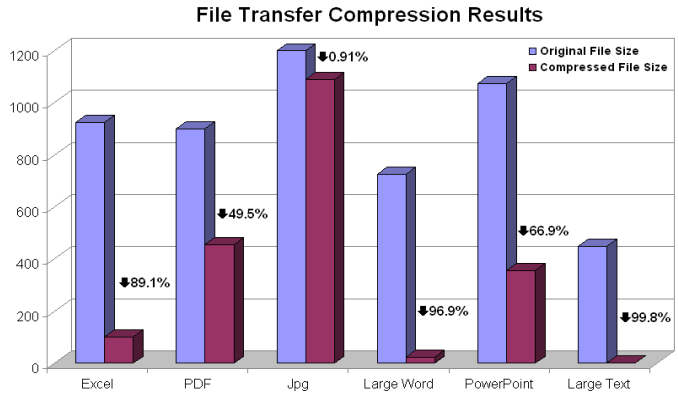


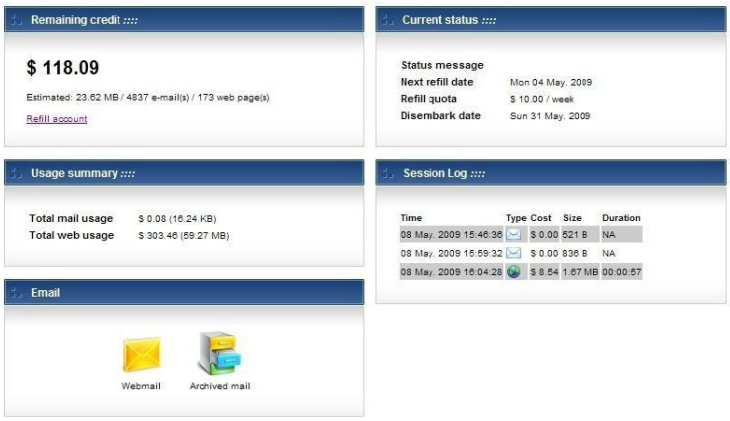
Comparison of file sizes pre and post compression using the QuickFile functionality of CommBox. Even further data reductions can be achieved through the use of DiffSync.

QuickFile™ File Transfer

- Automated file transfer moves files to and from the vessel
- Ship-to-shore and shore-to-ship synchronization of files and directories
- File compression provides cost saving with respect to transferred data and time
- Differential file synchronization feature further reduces transferred data
- Multiple protocols for fetching and delivering files (FTP, CIFS, NAS, email)
- Unlimited transfer jobs per vessel
- Transaction logs held by each vessel

QuickMail™ Email

- Standard POP3/SMTP and IMAP with encryption
- Ability to use current email server or server provided by CommBox™
- Configurable acknowledgement upon successful delivery of emails
- Configurable restrictions on mail use and users
- Capable of split billing on incoming and outgoing emails
- Advanced multi compression minimizes transfer size
- Automatic notification when user breaches restrictions
- Email accounts and content capable of roaming between vessels with use of QuickCrew™



A selection of summary and status windows displayed when using the CommBox™ email server webmail

Web-surfing without QuickWeb

Compressed & optimized with QuickWeb

Example of webpage viewed without the aid of the CommBox™ application QuickWeb™ (left) as compared to a web page viewed utilizing this tool to reduce the amount of transferred data.

QuickWeb™ Web Optimisation

- Reduce cost on pay-per-byte carriers
- Optimise bandwidth on fixed price carriers
- Removes all unnecessary data including advertisements
- Transfers and displays compressed images with full images obtainable on request
- Full web caching for all users on the vessel further minimising transfer data
- Ability to block downloads and streaming media
- URL based web filter
- Can be either locked to prepaid or open to free use
- User accounts capable of roaming with crew members with use of QuickCrew™

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COMMBOX™ TECHNICAL SPECIFICATIONS

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QuickBlue40

Ethernet: 2x 10/100 Base-TX RJ-45 connector, Auto Sense or fixed, max 100 meter

Storage: 1x Type II Compact Flash slot, and optional 2.5" Slim

Hard Disk for cache

Serial ports: 4x RS-232, max 230Kbit. USB ports: 2x USB 2.0

System Control: power on/off switch, reset button

LED indicators: power LED, hard disk active LED

Anti-vibration: up to 5g rms (5-500Hz) and anti-shock: up to 100g

Operating temperature: -15°C to 60°C

Operating Humidity: 5 to 95% @ 40°C, non-condensing

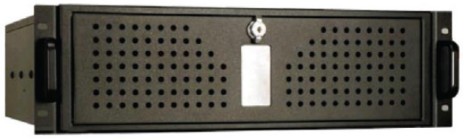
Power: DC 9-30V or AC 100-240VAC @ 50-60Hz, typical consumption: 15W

Mounting: wall-mount (default), DIN rail

Equipment size: 212mm x 64mm x 107mm (WxHxD)

Net weight: 2.2kg

QuickHUB10



Ethernet: 2x 10/100/1000 Base-TX RJ-45 connector, auto sense or fixed

Hard Disk Storage: 1x 74GB default installed and 1x DVD reader

Serial ports: 2x RS-232, max 230Kbit. USB: 4x USB 2.0 (2 in front)

System Control: power on/off switch, reset button

LED indicators: power LED, hard disk active LED

RAID level 1 as a option

Redundant power as a option

Operating temperature: 0 to 50°C

Operating Humidity: 5 to 95%@40°C, non-condensing

Power: AC 100-240VAC@50-60Hz, typical consumption: 150W

Mounting: 19" rack mount (and rails included)

Equipment size: 482mm x 133mm x 660mm (WxHxD)

Net weight: 20kg

QuickRack20

Ethernet: 2x 10/100 and 6x 10/100/1000 Base-TX RJ-45 connector, auto sense or fixed

Storage: 1x Type II Compact Flash, and 3.5" hard disk

Serial ports: 2x RS-232, max 230Kbit, USB: 2x USB 2.0

System Control: power on/off switch, reset button

LED indicators: power LED, hard disk active LED

Anti-vibration: up to 1.5grms (5-500Hz) and anti-shock: up to 20g

Operating temperature: -15°C to 60°C

Operating Humidity: 10 to 80% @ 40°C, non-condensing

Power: AC 100-240VAC @ 50-60Hz, typical consumption: 50W

Mounting: 19" rack mount

Equipment size: 431mm x 44mm x 380mm (WxHxD)

Net weight: 6.4kg

QuickHUB20

Ethernet: 2x 10/100/1000 Base-TX RJ-45 connector, auto sense or fixed

Hard Disk Storage: 2x 74GB RAID level 1 default installed and 1x DVD reader

Serial ports: 2x RS-232, max 230Kbit. USB: 4x USB 2.0 (2 in front)

System Control: power on/off switch, reset button

LED indicators: power LED, hard disk active LED

Redundant power as a option

Operating temperature: 0 to 50°C

Operating Humidity: 5 to 95%@40°C, non-condensing

Power: AC 100-240VAC@50-60Hz, typical consumption: 150W

Mounting: 19" rack mount (and rails included)

Equipment size: 482mm x 133mm x 660mm (WxHxD)

Net weight: 20kg

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