Phinx™
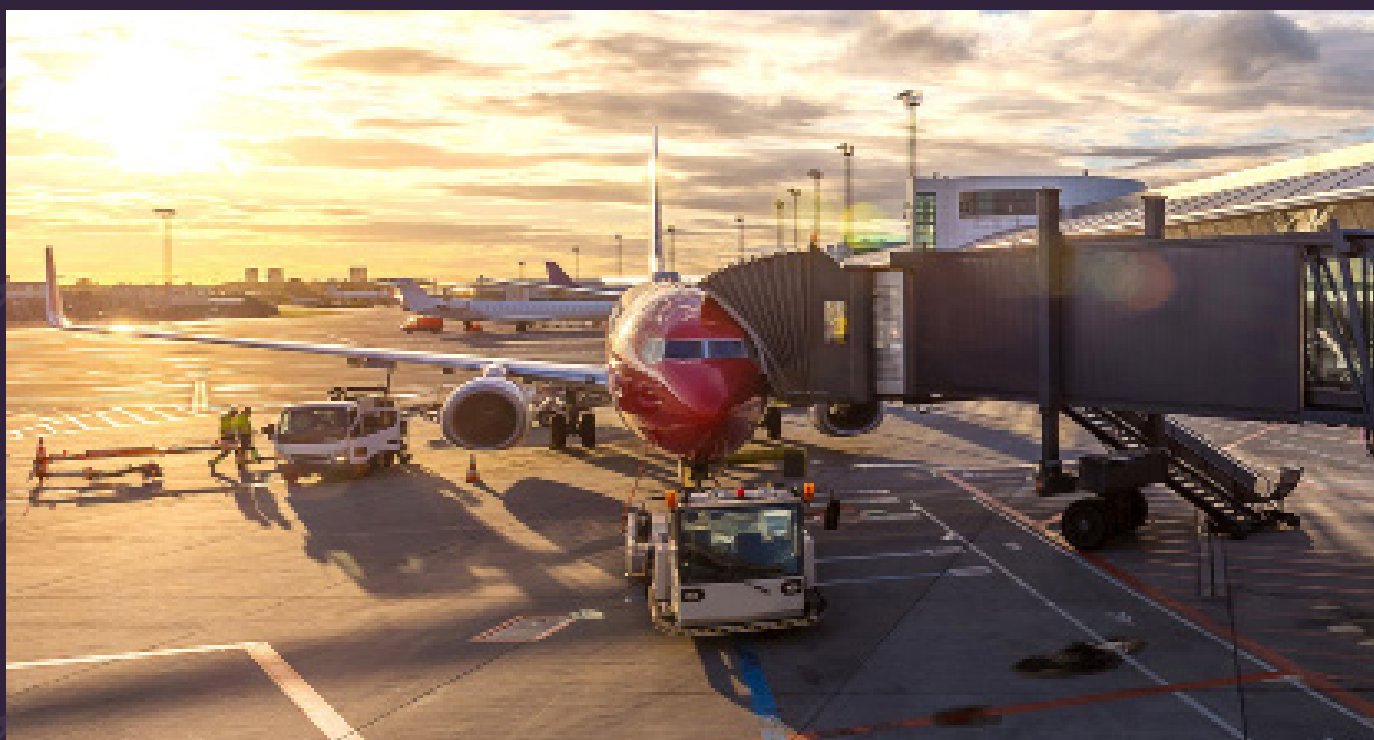
Distributed & Optic KVM Collaboration System

Phinx Applications in Air Traffic Control

AVCiT®

AVCiT ®

Solution Schematic >>>

ATCAir Traffic Control

Ground Management

Airport Apron

Control Tower

Phinx

Distance up to 25Km

Data Center

Workstation   Phinx   Phinx   Phinx   Workstation

ATC Tower

Approaching Control Room

Taxiway/Apron Area Monitoring & Management

Data Center

CCTV VMS   Phinx

Terminal Digital Signage/Video Wall

LED/LCD/DLP...

Data Center

Terminal Security Control Room

Data Center

Airline AOC & Airport AOC/EOC/TOC

LED/LCD/DLP...

Phinx

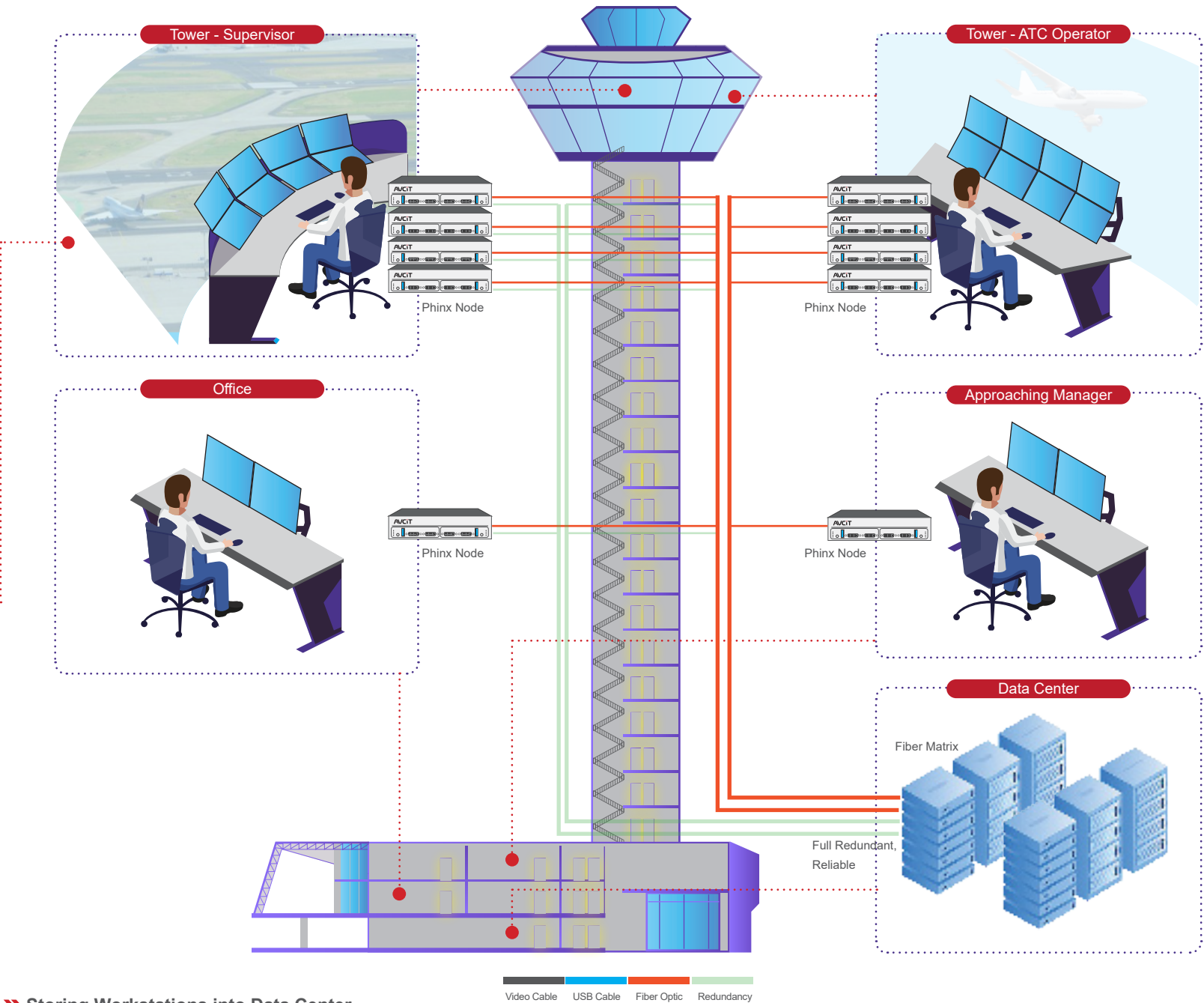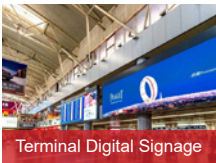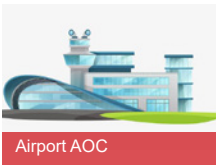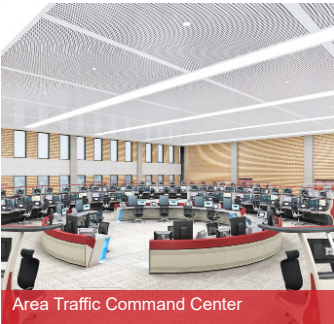Flight Information   Security Operator   Resource Manager   ......

机房

Various Applications in Air Traffic Control and Airport Managment

Stability and safety are most important things for avaition. It's required to access accurate and real-time Navigation Info, Weather Info, Aviation Info and Air Traffic Control Info etc for every flight. Every ATC operator need to process amount of informations to safeguard the flight.

Phinx Fiber KVM Solutions provide a all-in-one collaborative and unified platform among ATC, AOC, Approching Control Center, Airport Security Control Room etc, to integrate all the workstations signal with different type and be accessed, controlled and displayed on different control centers, which increase the command efficiency for air traffic and airport management.

Air Traffic Control Tower

Approaching Control Center

Area Traffic Command Center

Airline AOC

Airport AOC

Airport TOC

Apron ControlCenter

Terminal Digital Signage

Airport Security Center

Tower - Supervisor

Phinx Node

Tower - ATC Operator

Phinx Node

Office

Phinx Node

Approaching Manager

Phinx Node

Data Center

Fiber Matrix

Full Redundant, Reliable

Video Cable   USB Cable   Fiber Optic   Redundancy

### Storing Workstations into Data Center

In Airport Control Tower, operators have to highly concentrate their attention on mission critical. Therefore, it's very important to provide them with a comfortable, quiet and cooling work environment. However, the heat and noise generated by computers in limited space of control tower, and the computer maintenance works, will create many undesired disturbance.

AVCiT's Phinx Fiber KVM system allow to separate computersfrom operator console desk and store them into centralized data center, where is well-cooling, safe and easier to manage.

The signal of keyboard, video and mouse could be extended from data center to operator console, and allow operator to remotely access and control computers on multiple monitors by one keyboard & mouse. With leading image processing technology, Phinx System ensure the image quality and latency after long distance transmission, and makes operator feel like operating the workstation locally.
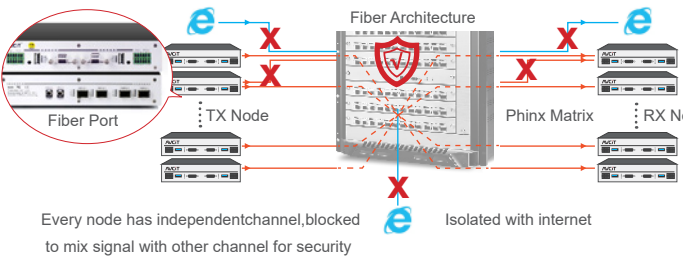
High Stability & Full Redundancy

Benefit from preventive strategies and nanosecond monitoring, Phinx Fiber KVM Matrix system can realize 365 x 24 non-stop & redundancy KVM system, in Airport Control Center, Tower, AOC, EOC, TOC and other KVM systems, which is with no black screen splash, no pause or noise could be detected by user, even in the case of failure of an point. For example, any point of A, B, C or D is failure will not affect the system running.

PC   HDMI   TX Node   A   B Phinx Matirx C   Fiber   D   RX Node
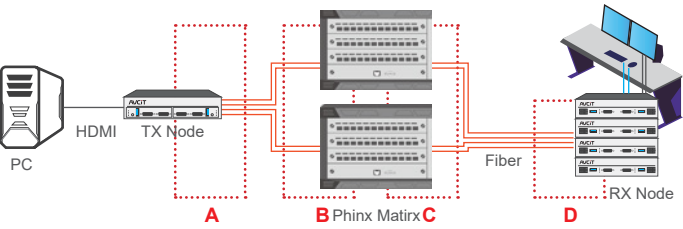
Fiber Based and FPGA Architecture

Solution is based on FPGA processing technology and transmit data over fiber with abundant bandwidth for each channel. The whole system is isolated with internet and not avaible to access internet due to different protocol to avoid the Virus, Hacker attack etc.

Fiber Port   TX Node   Fiber Architecture   Phinx Matrix   RX Node

Every node has independentchannel,blocked to mix signal with other channel for security   Isolated with internet

Extremely Low latency

In order to minimize the fatigue and maxmum the efficiency of operators, Phinx Fiber KVM Matrix system achieves a point-to-point latency up to 0.004s, fixed the inaccurate mouse pointing and mouse drifting due to latency; with a great user experience,which is same to the local computer mouse.

Latency≤ 4 ms

HDMI   Fiber   HDMI

TX Node   Phinx Matrix   RX Node
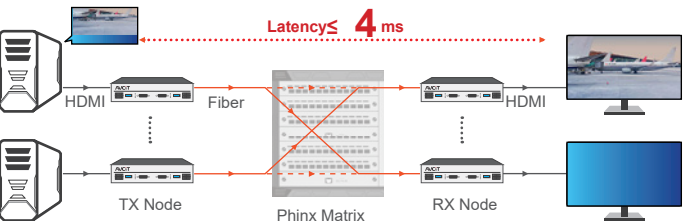
FPGA structure with 4:4:4 chroma

Large video wall system is AOC 's critical visual center to display different images from different workstations by HDMI, DVI, RTSP steaming or other formats, with high image quality requirement. Phinx System desinged by FPGA structure with leading image processing technology, ensure the uncompressed image transmission over 12 G bandwidth fiber in 4:4:4 chroma, without frame loss, or any mosaic.


4:4:4 VS 4:2:0
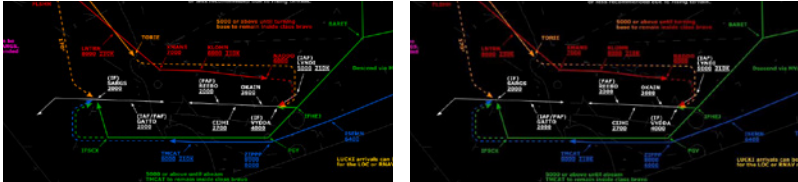
Simplify your workspace by smart mouse

For daily works, ATC Operator shall access multiple workstations, including Radar, Flight Information, CCTV etc. Phinx System allows operator to access and control multiple workstations on multiple monitors by single set keyboard & mouse at the same time, which will decrease the monitor and KB & M quanity but increase operator working efficiency. Operator could also share his current monitor content to large video wall or colleague's monitor by PUSH feature for easier collaboration.
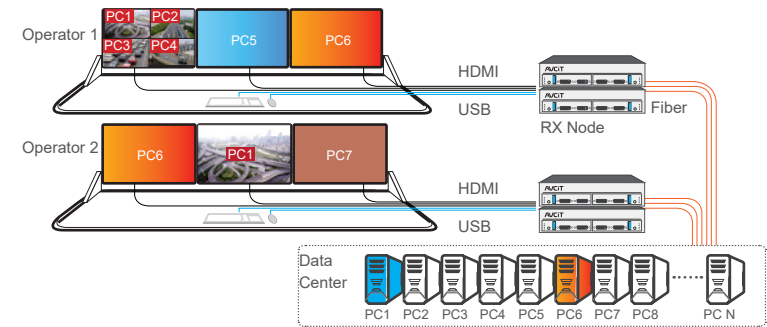
Dynamic KVM

Phinx system enables operator to access and control up to 4 workstations on single monitor simultaneously by flexible multi-view layout, such as Quad View, Picture-in-Picture, Four view etc. Operator with dual monitors could use one for daily work,the other one for monitoring.

Full View   PiP   Quad View   Four View   Resize   Smart Mouse
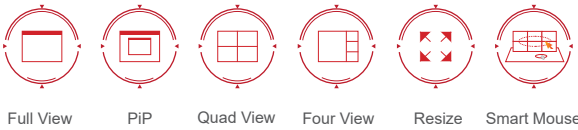
Visualized Collaboration by GET and PUSH

Phinx system is flexible to equip operator with single or multiple monitors to manage remote workstations installed at data center, monitors group could be M*N.Operator could set OSD hotkey for GET/PUSH feature and is able get access multiple output of on relative monitors simultaneously. To increase collaboration efficiency,operator could push their monitor's content to video wall or other operator's monitor and make voice call.


Permission Assignment

Airport Control Room are equiped with different operator console for different tasks management. Administrator could assign the workstation access permission for every operator, who could login account at any Workspace Console to control their permssioned workstations.


Visualized Video Wall Control & Management

Phinx System is with built-in video wall control feature for DLP, LED or LCD screens,with visualized management software, which is able to preview the source and content displayed on video wall in real time. Controlling software could be runned on Windows, iOS or B/S device. To have such a function, just insert a VW module card into Phinx, no additional video wall controller required.
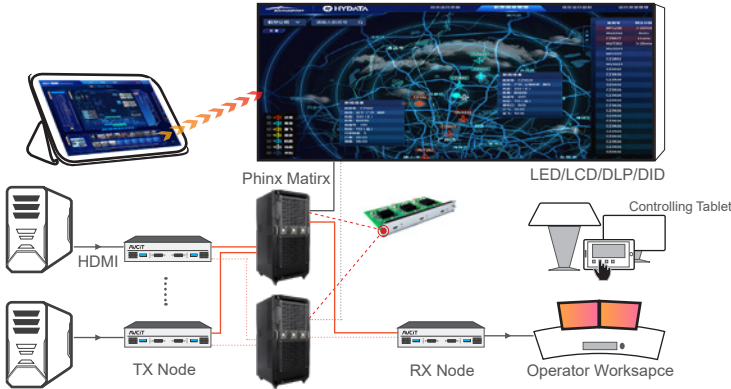
Safeguard for important flight

In order to safeguard some important flights as best as possible, higher permission is required for ATC Operator. Phinx System allows supervisor configure the workstation exclusive permission for the operator. Four permissions could be assigned according to operator level, including Exclusive,Share, View Only and Private.
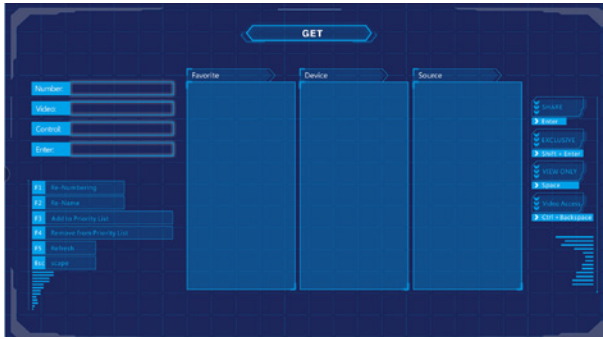

Operation & Maintenance Platform

Airport Control Room is highly critical environment and should be equiped with professional maintenance platform. AVCiT provide the Visualized Operation & Maintenance Platform for Phinx Fiber KVM System, by which all the critical devices and TX/RX node, logs, failure information and abnormal alert etc, could be monitored by visual chart and the failure information will be PoP in real time.


Available for multiple signal format and various resolution

Resolution up to 3840x2160@60Hz (compatible with 4960x2160p@60Hz), 3840x2160@60Hz, 1920x1200@60Hz, 1080p@60Hz and downward compatibility. Available for different signal format, including HDMI, VGA, DVI, DP,AV and SDI etc.

Various Resolution：

Different Interface Port：
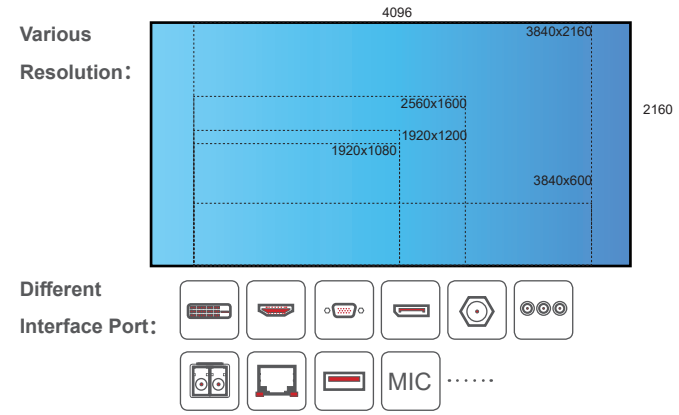
Bidirectional Audio Transmission and Internal Call

Operator could get the audio simultaneously when accessing the workstation image by OSD. Workstation's audio could also be transmitted to Amplifier via node's audio port. For better collaboration, Phinx System allow operators to make voice call with each other by OSD.

MIC   RX Node   Phinx Matrix   TX Node   MIC
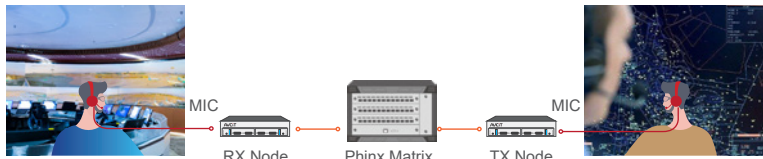
Various Enclosure available

Phinx System is with various size of host/enclosure according projectrequirement, including 36,72,144, 288 and 576. Every fiber I/O could be connected with TX node or RX node,which will be detected automatically.

Plug & Play, detect the TX or RX node automatically.

Optional enclosure from 36-57 6 channels

Transparent USB

AOC Operators need to transmit USB disk or U-Key data from operator desk to the workstation mounted at data center, Phinx System allows operator access and control the relative workstation by OSD and just insert USB disk at monitor's RX Node to transmit data.

OSD

AVCiT

Phinx™

Distributed & Visualized Fiber KVM Collaboration System

AVCiT Technology

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