IPX Series

AV Evolution for an Industry Revolution

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IPX-TC1 Facts

The IPX-TC1 is the industry's first 4K/UHD Zero Compression Zero Latency 10GbE transceiver. Simplicity, reliability, and scalability make the IPX Series the solution for today and tomorrow.

01. Eliminates the typical receiver/transmitter topology of today's extenders.

02. Simplifies inventory with only one SKU.

03. Better serviceability. With one device, configurable as a transmitter or receiver, the IPX can be interchanged as necessary when troubleshooting.

04. Reliability is increased utilizing distributed topology and IP switches.

05. Scalability is only limited by the infrastructure of the network. In addition, a port on a switch can be used as an input or output. For example, a 24 Port 10GbE switch can be a 1x23, 23x1, 12x12, 3x21, etc.

06. When configured as a transmitter the 2 HDMI input ports can be routed to the HDMI output for local viewing and/or to be streamed over the network.

07. When configured as a receiver the 2 HDMI input ports or one of the IP streams can be routed to the HDMI output.

08. Integrated IP Control allows custom web pages to be loaded for remote control from any device with a web browser (PC, tablet, phone, etc.)

09. The RS-232 and IR control ports are not just pass-through, but integrated into the IP control as well, for use by the served up web pages or 3rd party control.

10. Analog Audio embedding and de-embedding for full audio flexibility.

11. Audio via Dante® option for full digital end to end distribution. Allows use with all Dante® products on the market for equalizing, amplification, mixing, recording and more.

12. 10/100/1000Mbps PoE LAN port eliminates need for a separate cable run of the local network.

13. USB 2.0 option is full 480Mbps and can be configured as a Host or a Device, another industry first.

14. 10GbE RJ-45 and 48vDC ports also PoE capable. For the fiber version of the IPX the 48vDC can be used with a PoE switch as a power source to deliver remote power with the fiber cable. IPBaseT Product partner West Penn has made a Plenum rated OM3 with 1 pair 18 AWG copper in a single sheathing pre-terminated to simplify the infrastructure of fiber installs.

15. The IPX can be controlled via PC, integrated web server, 3rd party control system, or, another industry first, channel mapping. Each IPX unit configured as a

transmitter can be mapped same as a TV channel (1, 2, 3, etc). The unit's HDMI inputs are then the tenths (HDMI Input one = .1, HDMI Input two = .2), creating a mapping infrastructure for a transmitter's HDMI inputs selectable as **X**.1, **X**.2 (where **X** is the number of the transmitter unit). Any IPX units configured as a receiver, can use an IR remote control device, similar to a TV IR remote, to change channels just like a TV set (Channels 1.1, 1.2, 2.1, 2.2, etc). For an end user the system now becomes just as easy and familiar as changing a channel on a TV set, but in reality they are changing/switching an AV matrix switch across a facility.

16. The IPX Series can seamlessly switch between similar resolutions/refresh rates.

17. The IPX Series can create 4K videowall modes of operation.

18. Rack mounts for dual IPX-TC1 in a 1RU (**IPX-TC1-RK1**) or 12 IPX-TC1 in a 5RU (**IPX-TC1-RK5**) are available.

19. Simplified and reduced cost for rack installation of fiber using passive SFP+ patch cables (**IPX-SFP-PPC-1**). One cable is less than half the cost of 2 fiber SFP+ modules with fiber cable.

20. Performs best with unshielded CAT cable saving infrastructure expense.

IPX-TCW3 Facts

The IPX-TCW3 is the industry's first 4K/UHD Zero Compression Zero Latency 10GbE transceiver wall plate. It has the same functionality as the IPX-TC1 device, but in a 3 gang low depth wall plate. Available in white or black.

Common issues with Card Cage Technology & Topology

01. Limited scalability because of fixed configurations of inputs vs outputs. Most common available matrix on market is 4x4, 8x8, 16x16, and 32x32. Some manufacturers do go higher with 64x64 and 128x128. A very limited number will go higher than that, but the cost becomes extremely expensive due to the custom nature of the solution.

02. Card Cage is proprietary and non-interchangeable with other manufacturers.

03. Proprietary Infrastructure is limited to the configuration relative to time of installation, with no scalability provision, especially over time.

04. High part count, making inventory and spare parts costly. A typical Card Cage system could require up to 8 unique parts. Example:

    a) Card Cage

    b) HDMI Input Card

    c) HDMI Output Card

    d) CAT Extender Input Card

    e) CAT Extender Output Card

    f) CAT receiver unit for display

    g) CAT transmitter unit for wall plate

    h) Ethernet switch

05. More difficult to troubleshoot as transmitter and receiver units are not interchangeable. Only receivers can be swapped for receivers and transmitters for transmitters.

06. Less reliable due to the complexity of the backplane and the interaction of so many different parts.

07. Cost, especially as the system becomes larger. The larger the system, the more expensive vs the IPX Series especially with fiber. Fiber systems can be almost twice as much as the IPX Series.

08. Serviceability is not very good, as it is very difficult to bypass or re-route the AV signal when an issue occurs, due to the incompatibility of the input/output card types. For example, you can't patch an HDMI input to a CAT extender output.

09. Warranty of card cage not as good as some IP switch manufacturers which have limited lifetime warranties.

10. Requires expensive shielded CAT cable for optimal results.

Industry Firsts

01. Transceiver Device, which eliminates the need for 2 different SKUs (TX & RX)
02. Transceiver Wall Plate, which eliminates the need for another 2 different SKUs (TX & RX)
03. Device & Wall Plate available in both fiber and copper 10GbE versions.
04. Dante® Audio utilized with a video IP product.
05. Selectable Host/Device USB 2.0 port over IP allowing which side the computer vs peripheral is located.
06. IP Channel mapping allowing a transceiver when set to receive mode to use an IR remote to change the configuration of the matrix, but with simplicity of working like a TV remote.
07. PoE over 10GbE IP and power input.
08. Remote power over fiber using a single plenum rated sheathing with OM3 and 1 pair 18 AWG copper. Allows use of standard PoE+ Ethernet switch to supply power to units.
09. IR & RS232 control can be used as pass-through or local control.

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