

User Instruction for the VIP- 382 Series "XtendaMux"™ KVM Multiplexer and Extender System

FEDERAL COMMUNICATIONS COMMISSION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which the user will be required to correct the interference at his own expense.

CE

This equipment has been tested and found to conform to the directives and standards for a Class A Information Technology Equipment type and for the Commercial and Light Industrial equipment class.

INTRODUCTION

Vetra Models VIP-382-KM-1/-2 "XtendaMux"™ series PC Keyboard/Mouse Extender System allows a PS/2 compatible keyboard and a PS/2 compatible mouse set to be located remotely from the PC as well as one set locally or in the case of the -2 version two remote sets only. The VIP-382-KMV-1/-2 models perform the same as the units mentioned above but include video capability. The KMV2 models allow the capability of Dual video and the -KS models allow a fixed (for security purpose with key removal) selection of a workstation. The XtendaMux System consists of one VIP-382-R Receiver Unit, one or two VIP-380-T Transmitter Unit(s) and one VIP-210 Power Supply for each Transmitter Unit. The Receiver Unit is powered from the PC. Please note that with the models mentioned above the monitor(s) at each workstation will be viewing the same image(s) at all times.

NOTE: If a Power Supply other than the one mentioned above is used, all claims to FCC and CE regulations cease to exist.

PREPARE FOR OPERATION

Follow these steps to install the VIP-382 Series XtendaMux

Connection of the Receiver Unit to the PC must be made while the PC is powered down

1. Connect the Receiver Unit to the PC.

(a) Use one of the male/male keyboard extension cables (6-pin DIN) supplied with the system to connect the PC's keyboard port to the 6-pin DIN female connector of the Receiver marked "TO PC KBD". An adapter, the VIP-301-5M6F (maybe purchased separately) will be needed for connecting to an AT style PC. Use the second male/male 6-pin DIN keyboard extension cable to connect the PC's mouse port to the 6-pin DIN female connector of the Receiver marked "TO PC MSE".

(b) Connect the HDD15 male/female video extension cable to the PC's female video port and the other end to the XtendaMux male connector marked "TO PC MON". For V2 models connect the HDD15 male/female video extension cable(s) to the PC's female video port(s) and the other end to the XtendaMux male connector marked "TO PC MON A" and "TO PC MON B".



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2. Connect the Local Workstation to the Receiver Unit (-1 models only).

a) Use the normal keyboard cable to connect to the 6-pin female DIN connector on the backpanel of the Receiver marked "STA-1 KBD". An adapter the VIP-301-5F6M (maybe purchased separately) will be needed for connecting an AT style keyboard to the XtendaMux. Use the normal 6-pin mouse cable to connect to the 6-pin DIN female connector on the backpanel marked "STA-1 MSE".

b) Connect the VGA monitor to the Receiver's backpanel 15-pin HDD connector marked "STA-1 MON". For the V2 version connect the monitors to "STA-1 MON A" and "STA-1 MON B"

3. Connect the remote keyboard and mouse to the Transmitter Unit (-1 and -2 models).

Use the normal keyboard cable to connect to the 6-pin female DIN Connector marked "KEYBOARD" and normal 6-pin mouse cable to connect to the 6-pin female DIN connector marked "MOUSE". An adapter the VIP-301-5F6M (maybe purchased separately) will be needed for connecting an AT style keyboard to the Transmitter.

4. Connect the Power Supply to the Transmitter Unit(s).

The Transmitter(s) are powered by an external wall plug-in supply the VIP-210 (+5Vdc 2A reg. 110 – 240 Vac 50 – 60 Hz). First plug the power output plug of this external supply into the mating jack on the front panel of the Transmitter marked "+5VDC IN", and only then plug the supply into a suitable AC power source. Since the Transmitter has no separate power on/off switch, it is recommended that the power supply be connected to an AC power source that has a power on/off switch.

5. Connect the Transmitter(s) to the Receiver Unit.

Use a quality RS-232 cable with DB9 female/female connectors wired as follows:

| | SIGNAL |
|------------------|--------|
| PIN 2 TO PIN 2 | RXD |
| PIN 3 TO PIN 3 | TXD |
| PIN 7 TO PIN 7 | RTS |
| PIN 8 TO PIN 8 | CTS |
| PIN 5 TO PIN 5 | GND |
| SHIELD TO SHIELD | SHIELD |

For the -1 model connect one end of the cable to the Transmitter's back panel DB-9 connector marked "RS-232" and the other end to the Receiver's back panel marked "STA-2 REMOTE". For the -2 model connect the Transmitters to the connectors on the back panel of the Receiver marked "STA-1 REMOTE" and "STA-2 REMOTE".

6. Connect Remote Monitors to the Receiver Unit (All Models).

It is recommended that a good quality coax VGA HDD-15 pin male/female extension cable be used at all times to connect all remote monitors to the Receiver unit. Anything of a lesser quality will cause degradation of the video signals to the remote monitors. These cables maybe purchased from Vetra separately.

a) For KMV Models (Single Monitor PC)

For the -1 model connect one end of the cable to the remote monitor and the other end to the Receiver's back panel connector marked "STA-2 MON IN". For the -2 model connect the monitors to the connectors on the back panel of the Receiver marked "STA-1 MON IN" and "STA-2 MON IN".

b) For KMV2 Models (Dual Head Monitor PC)

For the -1 model connect one end of the cables to the remote monitors and the other end to the Receiver's back panel connectors marked "STA-2 MON A" and "STA-2 MON B". For the -2 model connect the monitors to the connectors on the back panel of the Receiver "marked "STA-1 MON A", "STA-1 MON B", "STA-2 MON A" and "STA-2 MON B".

OPERATION

1) Power Up Sequence

There is no power supply supplied with the Receiver Unit. The Receiver derives its power when the PC is powered on. A power jack marked "+5VDC IN" on the backpanel of the Receiver is provided in case an external power supply is needed. A separate power source may be required if the keyboard and PS/2 mouse being used draw more current than can be provided by the PC. If a separate power source is required we recommend the VIP-210 (+5Vdc 2A reg. 110 – 240 Vac 50 – 60 HZ) an external wall supply, which may be purchased from Vetra separately. It is also recommended that the power supply be connected to an AC power source that has a power on/off switch.

Note: Some of the new Internet keyboards require as much as 500 ma. Also the new Optical PS/2 mice may require as much as 100 ma to operate.

With the Receiver and Transmitter Units connected, the Extender System is ready for operation. The Transmitter can be powered up at any time. It does not have to be coordinated with the power up of the PC. If the Transmitter is powered up after the PC is powered up, it is possible that the keyboard status indicators, Caps, Num, and Scroll Lock, may be "out of step". This can be corrected by operating any one of the respective keys or the movement of the mouse. This will cause a "refresh" to the keyboard updating the indicator leds.

When the PC is powered up, you may observe random selection of the "ACTIVE STATION" leds on the front panel of the Receiver for a few seconds. This is normal. The Receiver is initializing each of the input devices. The order and final selected station depends on the response time of each device.

2) Workstation Selection (not available on KS Models)

To switch from one Workstation to another there must be a 3-5 second delay between keyboard and or mouse inputs from one Workstation before the XtendaMux recognizes keyboard and/or mouse inputs of the next Workstation. Note that the front panel ACTIVE STATION leds of the XtendaMux will switch to the current Workstation currently being used.

3) Lock and Release (not available on KS Models)

Either Workstation has the option of locking out the other Workstation for uninterrupted input to the PC. To accomplish this the user must first be the current ACTIVE STATION, then by pressing and releasing the **Left Shift** key **three** times user will lock out the other Workstation's (keyboard and mouse inputs), but the monitors at both workstations will be viewing the same image. To release this feature the same workstation that activated the lock out must press and release the **Right Shift** key **three** times. This will set the XtendaMux back to the 3-5 second delay between Workstations.

4) Key Switch Selection (KS models only)

The key switch option of the XtendaMux allows lockout/tagout of a Workstation with key removal. The operator selects which Workstation (1 or 2) to be active with the PC. The other Workstation is locked out from communication to the PC but the monitor views the same image at all times. There is no active selection thru keyboard, mouse, or touch screen inputs as mentioned above. To select a Workstation, you must use the key.

THEORY OF OPERATION

The VIP-382 Series XtendaMux System uses a proprietary RS-232 protocol to communicate between the Transmitter Unit and the Receiver Unit. The RS-232 protocol permits essentially unlimited distance between the two units by use of standard RS-232 techniques to extend distance. Keyboard and mouse data are multiplexed onto one data stream for transmission. Transmission data rate is 9600 baud.

The Transmitter will assert RTS (DB9 pin 7) when either the remote keyboard or mouse is activated. The Transmitter will also send data only when incoming CTS (which is checked at DB9 pin 8) is asserted.

SPECIFICATIONS

| Model Number | Height | Width | Depth | Weight |
|-------------------|-----------------|------------------|------------------|--------------|
| VIP-382-KM-1 | 2.63" (6.68 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 1 oz. |
| VIP-382-KM-1-KS | 2.63" (6.68 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 2 oz. |
| VIP-382-KM-2 | 2.63" (6.68 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 3 oz. |
| VIP-382-KM-2-KS | 2.63" (6.68 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 4 oz. |
| VIP-382-KMV-1 | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 6 oz. |
| VIP-382-KMV-1-KS | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 7 oz. |
| VIP-382-KMV-2 | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 8 oz. |
| VIP-382-KMV-2-KS | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 9 oz. |
| VIP-382-KMV2-1 | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 8 oz. |
| VIP-382-KMV2-1-KS | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 9 oz. |
| VIP-382-KMV2-2-KS | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 10 oz. |
| VIP-382-KMV2-2 | 3.38" (8.59 cm) | 6.06" (15.39 cm) | 6.32" (16.05 cm) | 1 lb. 11 oz. |
| Transmitter | 1.50" (3.80 cm) | 5.10" (12.95 cm) | 5.30" (13.46 cm) | 10 oz. |

Environmental Operating Temp: 5 to 104 deg. F (-15 - 40 deg. C)
 Storage Temp: -4 to 122 deg. F (-20 - 50 deg. C)

Supported Hardware: Computer: IBM PC/AT, PS/2 and 100% compatibles
 Video Monitors: VGA, SVGA
 Maximum Resolution: up to 1600 x 1200 to 75 Hz
 Peripherals: AT and PS/2 keyboards, PS/2 mouse, IntelliMouse (PS/2 only)

PARTS LIST

| Model Number | VIP-380-T Transmitter | VIP-300-6MM-06 Ext. Cable | VIP-302-VGA-06 VGA Ext. Cable | VIP-210 Power Supply |
|-------------------|--------------------------|------------------------------|----------------------------------|-------------------------|
| VIP-382-KM-1 | 1 | 2 | 0 | 1 |
| VIP-382-KM-1-KS | 1 | 2 | 0 | 1 |
| VIP-382-KM-2 | 2 | 2 | 0 | 2 |
| VIP-382-KM-2-KS | 2 | 2 | 0 | 2 |
| VIP-382-KMV-1 | 1 | 2 | 1 | 1 |
| VIP-382-KMV-1-KS | 1 | 2 | 1 | 1 |
| VIP-382-KMV-2 | 2 | 2 | 1 | 2 |
| VIP-382-KMV-2-KS | 2 | 2 | 1 | 2 |
| VIP-382-KMV2-1 | 1 | 2 | 2 | 1 |
| VIP-382-KMV2-1-KS | 1 | 2 | 2 | 1 |
| VIP-382-KMV2-2-KS | 2 | 2 | 2 | 2 |
| VIP-382-KMV2-2 | 2 | 2 | 2 | 2 |