Ethernet-based Display Graphics Distribution System

FlexNetViewer

FlexNetViewer is an IEEE802.3u-compliant display graphics distribution system that can extend the monitor screen capability of a PC. The transmitter, GRP-VL-S-01, converts the VGA input image signals into LAN packet signals before transmitting them. The receiver, GRP-VL-R-01, converts received LAN packets into VGA image signals in order to transfer them to the monitor(s). When using both transmitter and receiver, monitors can be connected in a 1:1 or 1:N configuration independent of the application's hardware or OS.
In addition, FlexNetViewer has serial (RS-232C) and digital (4ch non-isolated LVTTL-level inputs, 4ch non-isolated LVTTL-level outputs) I/O Application utilities provide a variety of connectivity options, allowing the PC to be used as a transmitter or receiver.

Ethernet-based
Display Graphics Transmitter
GRP-VL-S-01
[RP-VL-S-01]

Ethernet-based
Display Graphics Receiver
GRP-VL-R-01
[RP-VL-R-01]

Patent pending

Left: GRP-VL-S-01 Right: GRP-VL-R-01
"FlexNetVirwer" has been applying for a registered trade mark.
Specifications subject to change without notice.

Features of FlexNetVirwer

●Monitor distance can be extended via Ethernet
When the cable length between a PC and monitor is limited, it can be easily extended by using commercially-available Ethernet cable (category 5 or higher). RGB image signals are converted into LAN packet signals before being transmitted. This prevents deterioration of the image data even when transmitted over a a long distance.

●Multi-monitor configurations
Using multiple receivers allows the image shown on the transmitter monitor screen to be shown on multiple monitors simultaneously. This requires the same number of receivers (GRP-VL-R-01) as monitors.

●Transmission independent of hardware or OS
When using both the transmitter (GRP-VL-S-01) and the receiver (GRP-VLR-01), transmitting screen images does not depend upon a specific platform (hardware or OS). The same screen images can be sent to monitors in a 1:1 or 1:N configuration without requiring complicated utility setups.

●Application utilities provide a variety of connectivity options, allowing the PC to act as transmitter or receiver
The transmitter (GRP-VL-S-01) and receiver (GRP-VL-R-01) can be connected in a variety of configurations including 1-to-1. By installing application utilities, the PC can serve as a transmitter for receivers or as a receiver for transmitters.

●Remote serial and digital I/O functions *1
By using the supplied application utilities both the transmitter (GRP-VL-S-01) and receiver (GRP-VL-R-01) can communicate with remote serial and digital I/O data devices. An RS-232C-compatible touch panel can also be used to extend the distance between display and host PC.

●Function Libraries *2
A range of function libraries including those for transmission and displaying of screen images and remote serial and digital I/O are available.

●Optional LCD monitor mounting adapter
An optional adapter is available to mount the receiver on the back of an LCD monitor. The adapter is VESA-compliant (75mm x 75mm or 100mm x 100mm).

*1: Requires Host Management Utility
*2: Image Viewer, Image Transmission Utility, Host Management Utility and Function Libraries can be downloaded from CONTEC's web site. Supported OS: Windows Vista, XP and 2000

■ Specifications

Model	GRP-VL-S-01 (Transmitter)	GRP-VL-R-01 (Receiver)
VGA		
Input port	RGB (15-pin HD-SUB) ×1	-
Output port	RGB (15-pin HD-SUB) ×1	
Resolution	VGA(640×480), SVGA(800×600), XGA(1024×768)	
Horizontal frequency	VGA(31.4kHz), SVGA(37.8kHz), GA(1024×768(48.3kHz)	
Vertical frequency	60Hz	
Frame rate (Max.)	10 Frames (VGA), 7 Frames (SVGA), 6 Frames (XGA) *1	
Display color	32768 colors	
Digital I/O		
I/O connector	10-pin Right-angle Pin Header (2.54mm Pitch) ×1 *2	
Input channels	4	
Input type	LVTTL-level input (positive logic) *3	
Output channels	4	
Output type	LVTTL-level input (positive logic)	
Response time (Max.)	200nsec *4	
Wiring distance	1.5m (Max.) *5	
Serial I/O		
I/O connector	9-pin D-SUB ×1	
Channels	1ch	
Interface type	RS-232C (TXD, RXD, RTS, CTS, DTR, DSR)	
System method	Asynchronous	
Baud rate	110bps ~ 38400bps *6	
Data length	7, 8 bits; 1, 2 stop bits *6	
Parity check	even, odd, non-parity	
Wiring distance	15m (Max.) *7	

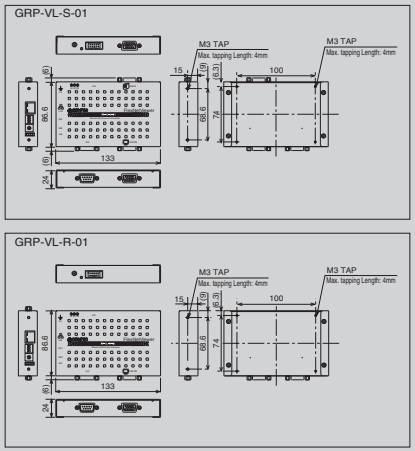
Model	GRP-VL-S-01 (Transmitter)	GRP-VL-R-01 (Receiver)
LAN		
I/O connector	RJ-45 connector ×1	
Ethernet standard	IEEE802.3u (100BASE-TX) *8	
Data Transmission Rate	100Mbps *8	
Supported Protocols	UDP, TCP, DHCP, IP, ARP	
Number of connected devices	64 (using Remote Serial & Digital I/O function) *9	
Others		
Dimensions (mm)	133(W) × 86.6(D) × 24(H)	
Temp. / Humidity	0~50°C, 10~90%RH (no condensation)	
Power supply	AC Adapter: 5VDC 2A(Max.) (included attachment)	
Current Consumption (Max.)	5VDC 1100mA	5VDC 820mA
Weight	340g	320g

*1: Frame rate may decrease with frequently updated images (e.g. animation).
*2: Use the included crimp connector.
*3: 5V-tolerant input enabled.
*4: TTL response speed. The actual throughput depends on host PC and LAN equipment.
*5: Actual extendable signal distance may be shorter, depending on the cable used and wiring conditions.
*6: Can be set via software.
*7: Actual extendable signal distance may be shorter, depending on the cable used and wiring conditions.
*8: 10BASE-T (10Mbps), IEEE802.3x flow control (10Mbps) are not supported.
*9: The number of units that can be connected varies depending on the application as shown on the next page.

■ Optional Accessories

Name	Description
CF Card (Fixed Disk Mode)	
GBRK-VL01-75	VESA-compliant adapter (75mm x 75mm)
GBRK-VL01-100	VESA-compliant adapter (100mm x 100mm)

Dimensions



Unit: (mm)

■ Connectable Devices

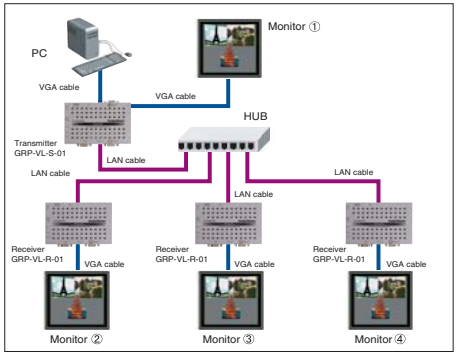
Transmitter	Receiver	Screen Image	Remote Serial I/O	Remote Digital I/O	Number of connected devices
Use	Use	Same	Use	Use	1 Transmitter to 64 Receivers
Use	Use	Same	Use	Use	1 Transmitter to 64 Receivers
Use	Use	Same	Use	Use	1 Transmitter to 64 Receivers
Use	Use	Same	Use	Use	1 Transmitter to 512 Receivers*1
PC ×1	Use	Same	Use	Use	64 Receivers
PC ×1	Use	Same	Use	Use	64 Receivers
PC ×1	Use	Same	Use	Use	No limitation
PC ×1	Use	Same	Use	Use	No limitation
PC ×1	Use	Different	Use	Use	16 Receivers
PC ×1	Use	Different	Use	Use	16 Receivers
PC ×1	Use	Different	Use	Use	16 Receivers
PC ×1	Use	Different	Use	Use	16 Receivers
Use	PC ×1	Different	Use	Use	32 Transmitters *2
Use	PC ×1	Different	Use	-	32 Transmitters *2
Use	PC ×1	Different	-	Use	65535 Transmitters *2*3
Use	PC ×1	Different	-	-	65535 Transmitters *2*3

*1: When set up with flow control via host management utility
*2: Maximum number of devices image viewer will support
*3: Number dependent upon TCP/IP restrictions in PC and LAN environments

■ System Configuration

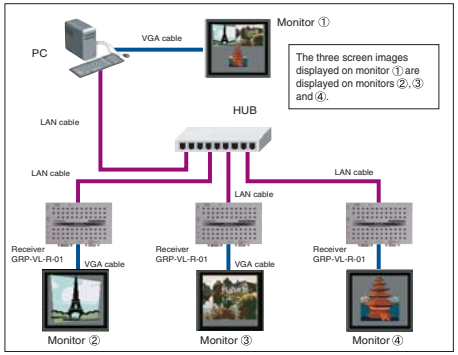
(1) Display a screen image on multiple monitors
(Transmitter ⇔ Receiver)

▼NOTE:
There may be a decrease in the image quality due to compatibility issues between these units and the host PC - please request an evaluation unit for testing purposes.



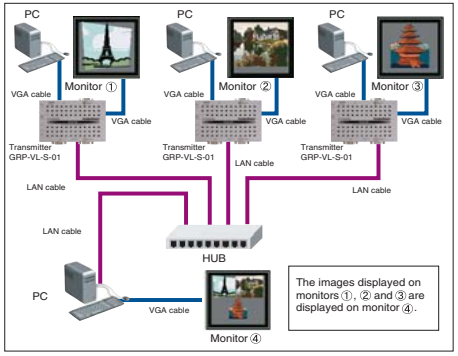
(2) Display different window screen on specified monitors
PC (through use of Utilities) ⇔Receiver

Requires use of Image Traqnsmission Utility.



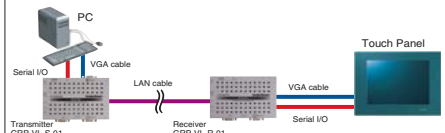
(3) Monitoring multiple PCs remotely
Transmitter ⇔ PC (through use of Utilities)

Requires use of Image Viewer Application.



(4) Other functions

◆Remote Serial I/O function
This function enables remote control of RS-232C device when connected to the receiver
Touch panel monitors can be remotely located when connecting through the SIO port of the receiver.
Multiple monitors can be connected, controlling the same or individual windows.
Note: Some RS-232C devices cannot communicate with the receiver due to compatibility issues
- please request an evaluation unit for testing purposes.



◆Remote Digital I/O function
Through the use of the Remote Digital I/O Library, remote digital I/O signals can be controlled when connected through receivers.