

## SERVIS™

### Cat5 Wide Band Extender

#### FE-2000CW series - NC14004-B717/U R

The **SERVIS™** family Cat5 Wide Band Extender enables the user to operate a control console with a high-resolution monitor via Cat5E UTP cable, up to a distance of 300 meters.

In addition, FE-2000CW series supports the extension for Audio function & Touch Panel control (RS-232C), as well as USB console operation.



#### ■ FEATURES

**Achieves problem-free image quality at remote distance of 300 meters**

XGA (1,024 x 768 dots) and SXGA (1,280x1,024 dots) are supported to 300 meters, UXGA (1,600x1,200 dots) to 200 meters.

**Equipped with compensating adjustments to provide optimum image quality**

Brightness and Contrast can be adjusted independently via controls on the receiver unit.

**Superior RGB color-shift correction circuit (patent pending)**

Any color shift (skew) due to differences in signal line length inside the Cat5E UTP cable are eliminated, resulting in clear and crisp reproduction of video signal.

**Superior Stereo Sound Control:**

Stereo audio is digitized to achieve clear sound transmission; Audio bandwidth up to 20KHz; 16-bit digital audio converter provides CD quality sound remotely using 44.1KHz sampling rate

**Supports RS-232C extension (Rx/D / Tx/D only) for Touch Panel control, etc.**

**Simultaneous operation for audio and touch panel can be supported:**

FE-2000CW allows the extension of RS-232C signals for both audio and touch panel with Cat5E UTP cables, as well as the keyboard, mouse, and video signals. This has applications in a variety of fields, including broadcasting systems and various types of monitoring equipment.

**Multiple platforms supported**

Our long experience as a leading keyboard design company enables these new products to support a variety of keyboard and mouse interfaces. This series provides a multi-interface platform that can be connected to any system equipped with PS/2, PC USB, SUN 8P I/O, or SUN USB simply by selecting the suitable cable. The video interface supports the D-sub15-pin as standard; 13W3 Sun video interface supported with optional conversion adaptor; Separate and Composite sync supported.

**Additional local console connection provided**

A local console can be supported by local unit in the computer room.

**Easy to configure remote system access using Cat5E UTP cables**

Installation is simple and easy using industry-standard Cat5E UTP cables, same as used in LAN applications (installation of separate remote console cable is required in addition to existing LAN cables).

**Available options for installation in equipment**

Bracket for installation into a 19-inch rack is optionally available.

**Combine with KVM switch for system-wide access**

The **SERVIS** Cat5 Extender can be combined with KVM switches (**SERVIS** series) and console drawers (**SERVIS** Drawer), enabling the remote operation of multiple servers from a distant location.

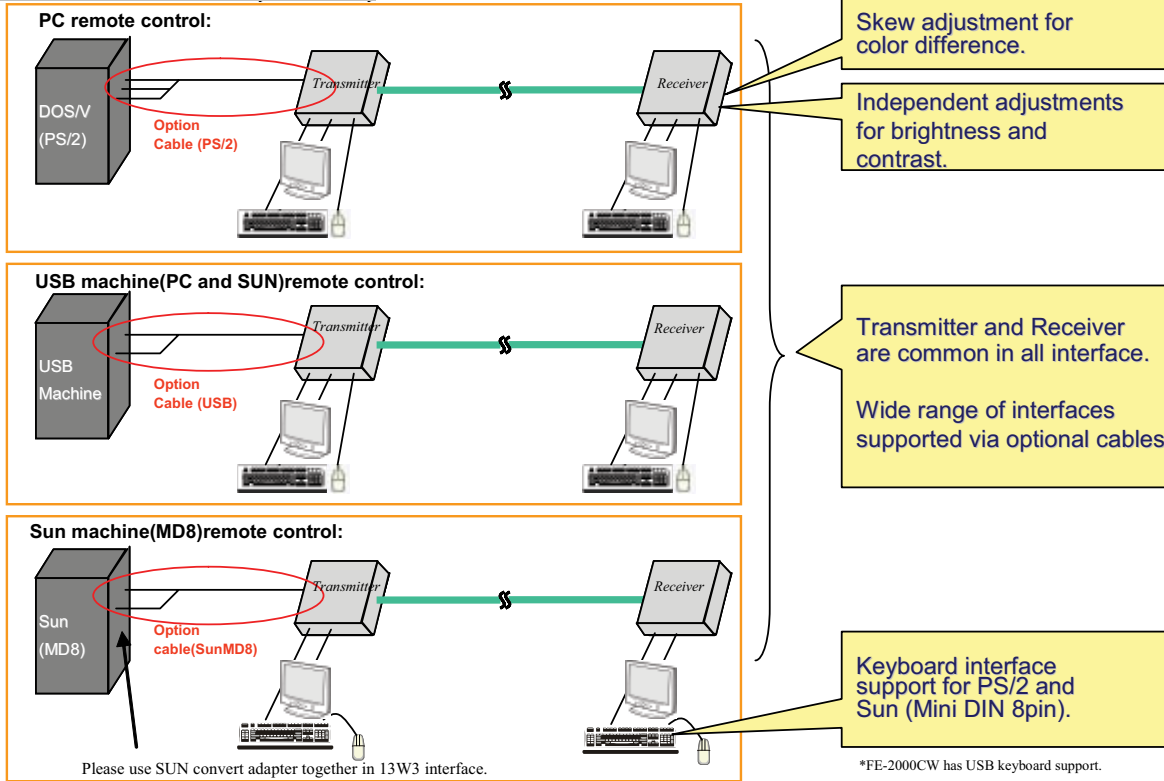
# FE-2000CW Series

## ■ SPECIFICATIONS

Model		FE-2000CW		
Part Number		NC14004-B717/U R		
Unit		Local Extender(Transmitter)	Remote Extender(Receiver)	
LED Display	Power (green)	1 each	1 each	
	USB Active (green)	2 each	2 each	
Console	Keyboard	PS/2 Interface: Mini-Din 6pin, Female x 1	PS/2 Interface: Mini-Din 6pin, Female x 1	
		Sun I/O Interface: Mini-Din 8pin, Female x 1	Sun I/O Interface: Mini-Din 8pin, Female x 1	
	Mouse	PS/2 Interface: Mini-Din 6pin, Female x 1	PS/2 Interface: Mini-Din 6pin, Female x 1	
	USB	USB Type A x 2	USB Type A x 2	
	Audio	Stereo Mini-Jack: Audio Lineout x 1	Stereo Mini-Jack: Audio Lineout x 1	
	Serial	-	Mini D-Sub 9pin male	
Server / PC port	Interface for Server/PC side	Keyboard	PS/2, USB, Sun USB and I/O	-
		Mouse	PS/2, USB, Sun USB and I/O	-
		Audio	Audio lineout	-
		Monitor	Analog RGB, Separate Sync and Composite Sync.	-
		Serial	RS232C: TxD and RxD only, no flow control	RS232C: TxD and RxD only, no flow control
	Connector for Unit side	Keyboard/Mouse/ Monitor	Mini D-Sub 15pin female, required for unique cable for support server	-
		Audio	Stereo Mini-Jack: Audio Line in x 1	-
		Serial	Mini D-Sub 9pin male	-
Monitor	Resolution, refresh rate	1600 x 1200 (max), 75Hz		
	Signal supported	Separate Syn and Cposite Sync.		
Connection between Transmitter and Receiver unit	Data Transmission	Fujitsu Component Limited unique data transmission		
	Console control port	RJ45 (Cat5) 8 line x 1		
	Audio and Serial control port	RJ45 (Cat5) 8 line x 1		
	Cable	Cat5E UTP cable		
	Distance (by monitor resolution)	UXGA: 1600x1200	200 m	
		SXGA: 1280x1024	300 m	
XGA: 1024x768		300 m		
Monitor Graphic adjustment	RGB Skew	-	Adjustable by Control Knob (max @ 20ns), located on the bottom of unit	
	Gain Adjustment/Brightness	-	Adjustable by Control Knob on Front panel	
	Equalizer adjustment/Focus	-	Adjustable by Control Knob on Front panel	
Keyboard Country Code		Supported by Dip Switch setting	-	
Power Supply/Power Consumption		5VDC/0.8A (max)	DC5V/0.9A (max)	
Operating temperature/Humidity		0 to 40 degrees C, 10 to 80 %RH (must be free of condensation)		
Storage temperature		-20 to 60 degrees C		
Size(WxDxH)		220 x 110 x 42 mm, (0.9 Kg)	220 x 110 x 42 mm, (0.9 Kg)	
Included accessories		2 adaptors (AC power cable not included, must be purchased separately for specific country support), User manual, 4 masking sticker, 8 Rubber feet, 2 cable clamp, 1 adjustment Stylus, 2 ferrite cores		

## Keyboard, Mouse and Monitor extension

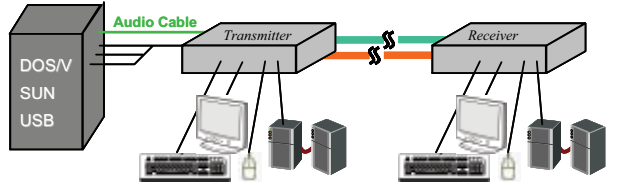
### FE-1000CW/FE-2000CW (Common)



## Audio and RS-232C Extension (FE-2000CW only)

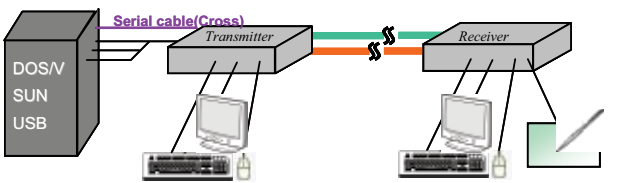
### Noise-free high quality digital audio transmission

#### Sound remote control:

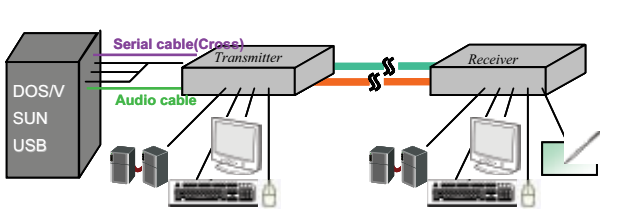


### Touch panel remote control (RS-232C)

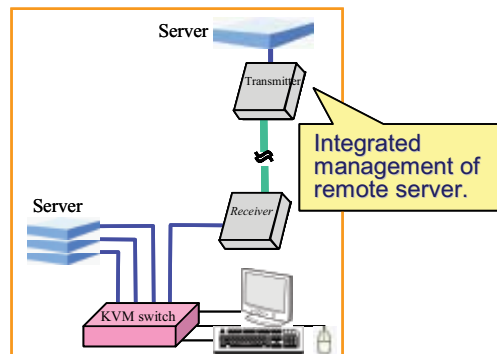
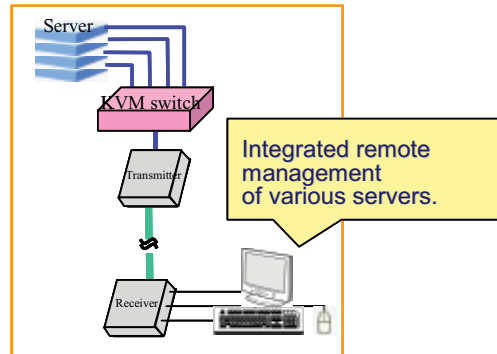
#### Touch panel remote control:



#### Sound and touch panel control:



## Combination with KVM switch



# FE-2000CW Series

## ■ OPTIONAL ACCESSORIES

Item	Part Number	Description	
Optional Interface Cables	PS/2	NC14000-B602 R	1.8m cable
		NC14000-B603 R	3.0m cable
		NC14000-B605 R	5.0m cable
	USB	NC14000-B102 R	1.8m cable
		NC14000-B103 R	3.0m cable
		NC14000-B105 R	5.0m cable
	SUN MD8	NC14000-B202 R	1.8m cable
		NC14000-B203 R	3.0m cable
		NC14000-B205 R	5.0m cable
Sun Convert Adaptor	NC14003-T042/ADP	13W3 converting to DB15HD	
AC Adaptor	NC14003-T055 R	In case local is connected to the KVM which does not provide the power	
AC Adaptor power cable	NC14004-T077 R	USA version	
Audio cable	NC14004-B722 R	Connects the server to the transmitter	
Rack mount panel	NC14004-B323/B R	19" rack mount panel for FE-2000 series	
L-shape metal bracket kit (2pcs)	NC14004-B370 R	Magnet brackets for FE-1000 series	
VESA metal holder	NC14004-B371 R	Metal holder for FE-1000 series	

**Note:**

**Cat5 cables:**

1. Cat5E cables are required for connection between the local and remote units, whose transmission performance shall be higher than 350 MHz UTP. Otherwise, the the transmission performace cannot be controlled by skew adjustment.
2. The connection type shall be straight connection. In addition, it shall be decided T568A or T568B inside the system.
3. STP cable cannot be used.

**Serial cable:**

1. The serial connection cable between the system and the local for FE-2000 series shall be used with standard RS232C cross cable.

## ■ SERVIS Families

KVM			
Model/Series		Part Number	Description
SERVIS MULTI: FS-1004MT	4-port KVM	NC14004-B042 R	FS-1004MT 4-port multi KVM switch
SERVIS MULTI: FS-1008MT	8-port KVM	NC14004-B082 R	FS-1008MT 8-port multi KVM switch
SERVIS MULTI: FS-1016MT	16-port KVM	NC14004-B162 R	FS-1016MT 16-port multi KVM switch
DRAWER			
Model/Series		Part Number	Description
SERVIS LCD Drawer: FD-1000AT	Basic model	NC14004-B402/US R	15" AT Console drawer, US version (LCD:XGA, Input Device I/F: PS/2)
	with built-in 8-port Multi-KVM	NC14004-B412/US R	15" AT Console drawer, US version with 8-port multi-KVM pre-installed (LCD:XGA)
	with built-in 16-port Multi-KVM	NC14004-B422/US R	15" AT Console drawer, US version with 16-port multi-KVM pre-installed (LCD:XGA)
SERVIS LCD Drawer: FD-1000MT	Basic model	NC14010-B452/US R	17" Console drawer, US version (LCD: SXGA, Input Device multi-interface)
	with built-in 8-port Multi-KVM	NC14010-B462/US R	17" Console drawer, US version with 8-port multi-KVM pre-installed (LCD: SXGA)
	with built-in 16-port Multi-KVM	NC14010-B472/US R	17" Console drawer, US version with 16-port multi-KVM pre-installed (LCD: SXGA)
Cat5Extender			
Model/Series		Part Number	Description
Cat5 Wide Band: FE-1000CW		NC14004-B721/U R	300 m Cat5 Extender Kit of local and remote units, remote unit to be console port only, compact size: 110 (W) x 100 (D) x 25 (H)mm
Cat5 Wide Band: FE-2000CW		NC14004-B717/U R	300 m Cat5 Extender Kit of local and remote units , remote unit to be console port only, support audio and touchpanel (RS232: TxD, RxD only)

# FE-2000CW Series

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