



### Multimedia Communication System (FM-C100L)

Audio-Video Teleconference System over LAN

Real-time multimedia communication of video, audio and data can be realized using the FM-C100L over LAN on your personal computer or workstation. This system, with video windows accompanied by sound, enables two parties to speak to each other while cooperating on work such as design plans.

#### **Features**

- Uses TCP/IP protocol, compatible with Ethernet which is the most widespread LAN standards.
- Uses original control technology to detect data traffic congestion during LAN communications, and to automatically switch image transmission speed without interrupting operation.
- Enables communication of video, audio and data between different LANs via WAN.

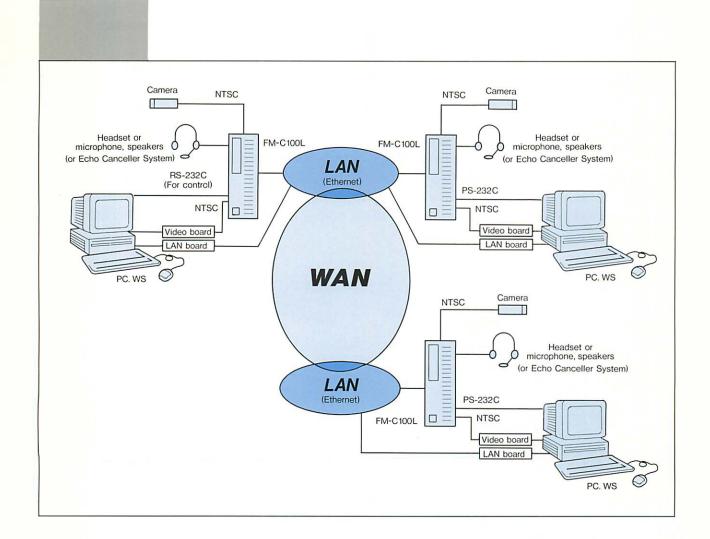




#### Specifications

| Item                        |       | Datails  |
|-----------------------------|-------|--|
| Suitable network            |       | Ethernet LAN (IEEE 802, 3)   |
| Communication speed         | Video | 16, 32, 64, 128, 192kb/s<br>(Video communication speed variable depending how busy the LAN is) |
|                             | Audio | 16kb/s   |
| Video encoding system       |       | Conforming to CCITT H.261 standard   |
| Audio encoding system       |       | Conforming to CCITT B.728 standard, 3.4kHz   |
| Video signal                |       | NTSC   |
| External control            |       | Via RS-232C or LAN   |
| External control terminal   |       | Macintosh, PC-AT or compatible, PC-9800 series (NEC), Sun, etc.                                |
| Monitor                     |       | VGA color monitor (640×480) or higher  |
| External dimensions, weight |       | 110 (W)×340 (H)×400 (D) mm, 14 kg  |

#Specification may be changed without notice.







## Team Work Station (TWS)

Multimedia System for Remote Team Work

TeamWorkStation provides the media for remotely located team members to not only hear each other's voice, see each other's facial images but also edit the same page of a document on each member's screen simultaneously when working together. This is accomplished by using a translucent video overlay technique.

#### **Features**

- Desk Images of both parties could be overlaid simultaneously
- Facial Images of both parties could be displayed simultaneously
- Pull down menu for image selection, contrast, screen movement, etc.
- Communication interface: ISDN (Basic and Primary) and Ethernet
- External video and voice input and image print out possible





#### Specifications

#### TWS BOX

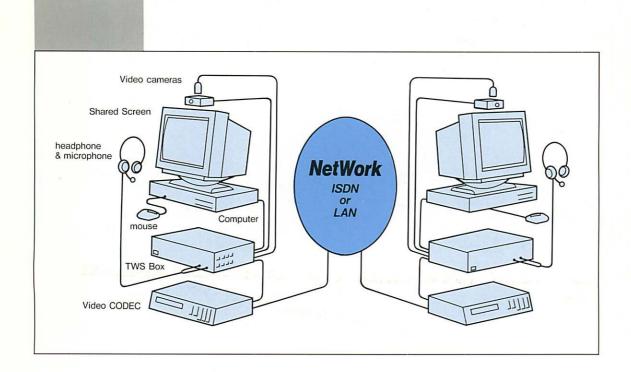
| Item             | Details   |
|------------------|---|
| Voice I/O        | mini jack×2 (microphone, speaker), RCA jack×2 (external input, external output)                 |
| Video I/O        | RCA jack×4 (Desktop image input, face image input, external image input, image output)          |
| External Control | via RS-232C Dsub 25 pin×2: TWS BOX control and low speed data Dsub 9 pin×1: CODEC power control |

#### Video CODEC for network (ISDN or LAN)

| External dimensions | 110 (W)×400 (D)×340 (H) : for LAN<br>350 (W)×352 (D)×115 (H) : for ISDN |  |
|---------------------|---|--|
|---------------------|---|--|

#### Other Component

| CPU           | PC-AT or compatible PC-9800 series (NEC)                  |
|---------------|---|
| Image Board   | One that could overlay Video signal and PC display signal |
| RS232C        | 2 ports necessary   |
| Monitor       | Analog RGB Monitor (640×480 or above)                     |
| Camera        | 2 NTCS color cameras                                      |
| Voice I/O     | Headset (or hands-free speech system; optional)           |
| Video Printer | Optional  |









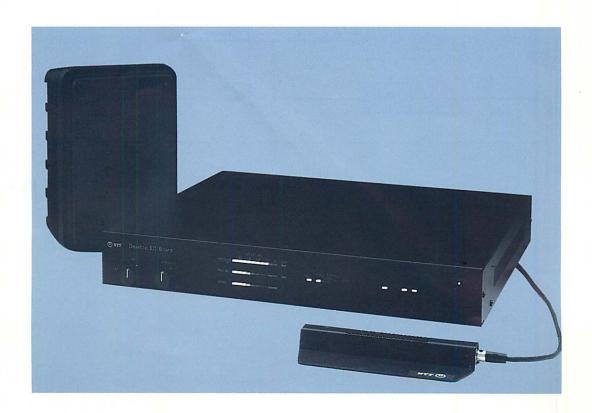
# SmoothTalk (Echo Canceller)

**High Performance Acoustic Echo Canceller** 

SmoothTalk provides a comfortable full duplex, hands-free telecommunication environment when using loudspeaker (s) and microphone(s) in audio/video teleconference and personal multimedia teleconference. The seamless acoustic environment created by the SmoothTalk allows two parties to talk to each other as if they were in the same room, regardless of the microphone position.

#### **Features**

- Digital elimination of acoustic echo and howling.
- High quality audio teleconferencing with smooth talk.
- Four times faster echo cancellation by newly developed adaptive algorithm.
- Fully simultaneous conversation by new double-talk control technique.
- No annoying initial training tones.





#### Specifications

| Item                                  | Details  |  |
|---------------------------------------|--|--|
| Frequency response                    | 100Hz-7.3kHz   |  |
| Echo cancellation span                | 125ms  |  |
| Acoustic echo return loss enhancement | 35dB   |  |
| Analog 4-wire line in/out             | Phono (RCA) connector, $-9 \text{dBm}$ nominal, $+9 \text{dBm}$ maximum, $11 \text{k}\Omega/600\Omega$ |  |
| Audio in                              | Switchable with a microphone and an external mixer Input.  |  |
| Audio out                             | Switchable with a loudspeaker and an external power amplifier.   |  |
| Power requirements                    | 90-110V AC, 50/60Hz, 20W   |  |
| Dimensions                            | 420mm (W)×60mm (H)×350mm (D)   |  |
| Weight                                | 4.0kg  |  |

