

## *Generation 2 Still Video Transceiver*

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### Protocol Document

## **Generation 2 Still Video Transceiver**

ELECTRONIC PHOTOGRAPHY DIVISION

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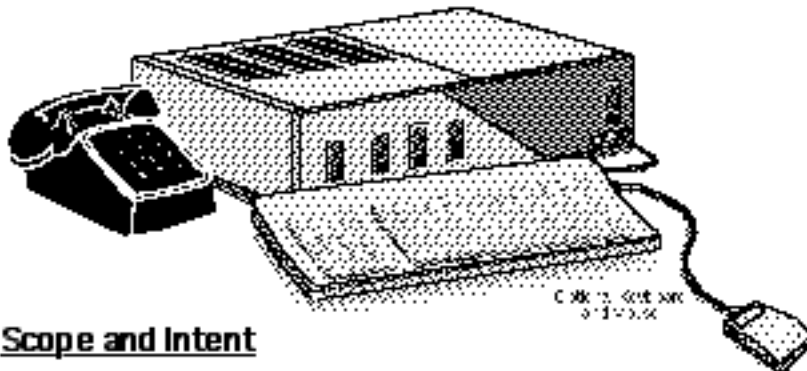
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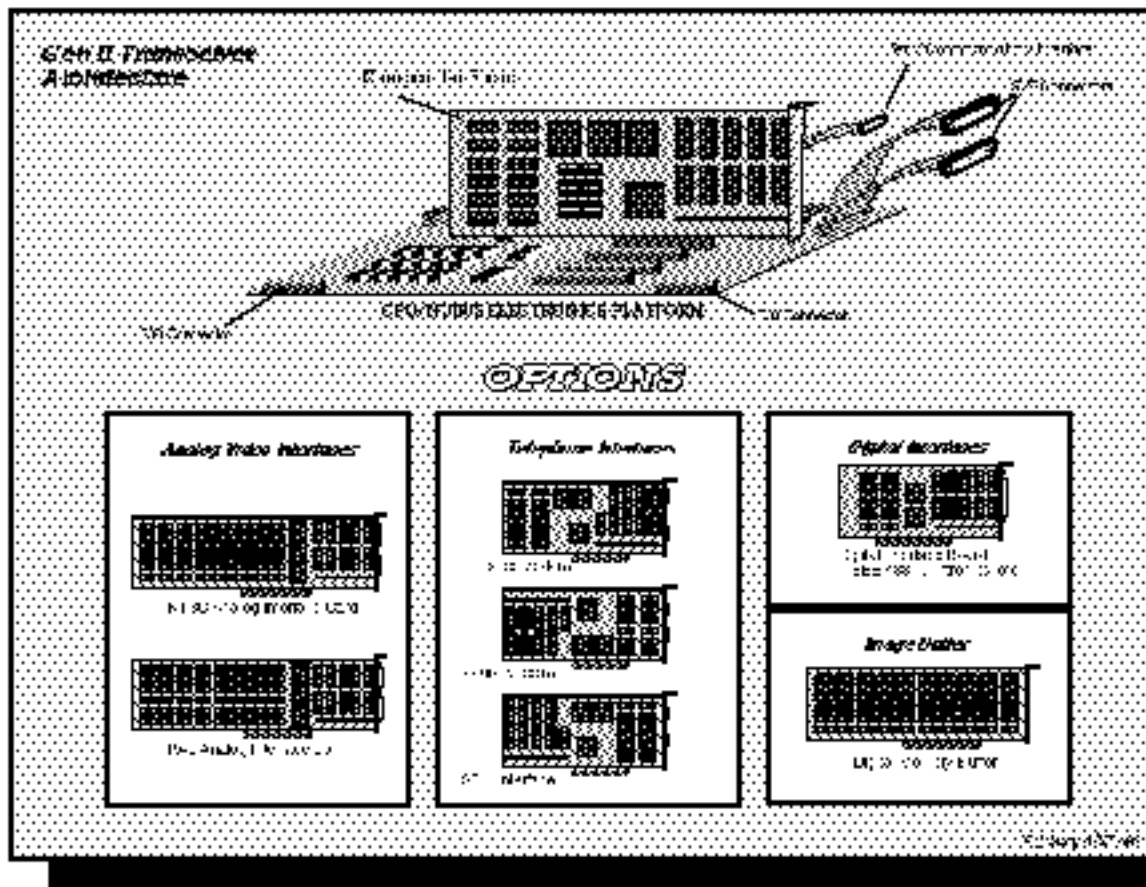
## Generation 2 Still Video Transceiver



### Scope and Intent

The Gen 2 Still Video Transceiver is similar in concept to the SY9600 but with a wider variety of interface options and higher performance. This product will conform to the Gen 2 Still Video System General Requirements and Specifications for digital and analog compatibility with all the Gen 2 EPD products. The Gen 2 Still Video Transceiver is required to be transmission compatible with the SY9600 Still Video Transceiver. This product is intended for sale in the United States, Europe, and Japan.

The Gen 2 Still Video Transceiver architecture will be as shown below:



The purpose of this document is to define the options which will be developed. The exact product configurations that will be sold, and how they will be bundled is not covered. This will be included in later revisions when the market needs are better defined.

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## Generation 2 Still Video Transceiver

### 1. Chassis & Power supply

- Easy to use standalone operation.
- Universal power supply. (110/220 VAC, 50/60Hz)

### 2. Compaider Board

NOTE: The amount of compression is dependent on the scene content, the numbers given below are approximate for a typical 768X484RGB image.

- 4 user selectable compression modes:
  - a. Fast "field quality" mode  
*nominal compression of 0.32 bits/pixel, 75:1 compression*
  - b. Visually lossless for full quality RGB continuous tone images without embedded text & graphics.  
*nominal compression of 1.25 bits/pixel, 19:1 compression*
  - c. Visually lossless for full quality RGB input continuous tone images with or without embedded text & graphics.  
*nominal compression of 2 bits/pixel, 12:1 compression*
  - d. Bit preserving, totally lossless.  
*nominal compression of 4 bits/pixel, 6:1 compression*
- Preview image for quick image identification  
compressed B&W image = 0.1 bits/pixel  
compressed color image = 0.12 bits/pixel
- Compression speed  
< 4 seconds for any of the user selectable compression modes including the time required to create the preview image.

### 3. Common NUBUS/CPU platform

- SCSI Interface for control and image data transfer.
  - 1 Megabit/sec transfer rate.
    - 768X484 Image = 0.2 sec. at 0.32 bits/pixel
    - = 0.7 sec. at 1.25 bits/pixel
    - = 1.0 sec. at 2 bits/pixel
    - = 2.0 sec. at 4 bits/pixel
- RS-232 Interface for control.

*Optional, may be a separate board for part of the NUBUS/SCSI platform TBD.*

- Keyboard Interface for image annotation.
- Mouse interface for user interaction using a real time pointer.

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### 4. Analog Interface Options

- Composite video, RGB, and YC inputs and outputs, either NTSC or PAL.  
(2 different boards)
- 768X484 for NTSC using 768X512X28 bit digital framestore  
(8 bits/color and 4 bit graphics plane, graphics plane optional)
- 768X575 for PAL using 768X768X28 bit digital framestore  
(8 bits/color and 4 bit graphics plane, graphics plane optional)

Transmission from an NTSC unit to a PAL unit or visa versa is TBD.

### 5. Other Digital Interface Options

- Other digital interfaces such as IEEE 488, etc. can be supported if/when the need(s) are defined.

### 6. Telephone Interface Options

- Modem board with option to support point to multi point transmission using Alliance™ bridge (or equivalent) Typical site connections are 3 - 8 locations.  
Up to 14.4Kbps transmission over standard telephone lines with automatic fall back for noisy phone lines

768X484 Image = 15 sec. at 0.32 bits/pixel including preview image  
= 47 sec. at 1.25 bits/pixel including preview image  
= 72 sec. at 2 bits/pixel including preview image  
= 141 sec. at 4 bits/pixel including preview image

- Secure Modem Interface (STU-III)  
2400 bps of image data over secure telephone lines. (Note: Data Rate set by STU-III).  
768X484 Image = 1.5 min. at 0.32 bits/pixel including preview image  
= 4.7 min. at 1.25 bits/pixel including preview image  
= 7.2 min. at 2 bits/pixel including preview image  
= 14.1 min. at 4 bits/pixel including preview image

- ISDN Board with option to support point to multi point transmission using Alliance™ bridge (or equivalent).  
64Kbps transmission over ISDN phone lines  
768X484 Image = 3 sec. at 0.32 bits/pixel including preview image  
= 11 sec. at 1.25 bits/pixel including preview image  
= 16 sec. at 2 bits/pixel including preview image  
= 32 sec. at 4 bits/pixel including preview image

56Kbps leased lines also supported with the ISDN board.

ISDN board will interface directly to the ISDN line or to the digital interface on an ISDN phone. - TBD

### 7. Digital Memory Option

- Digital Memory board to store up to 4 images.
- Allows receiver to receive and store up to 4 images which can be recalled for viewing or recording by an external device.

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## ***Generation 2 Still Video Transceiver***

- Allows transmitter to store and transmit up to 4 images for rapid recall for viewing or transmission.

### **Spin off Products include:**

1. Use of the compander board in a Mac II Computer without modification.  
Mac II software required to address this market.
2. Use of the compander board and any of the three telephone interface options in a Mac II computer without modification. Mac II software required to address this market. This is a very important product spin off in that with the proper Mac II software it would allow a Mac II to transceive images directly to from a Gen 2 Still Video Transceiver.

**Customer Availability** - 2nd Quarter 1990

(CA based on 6 weeks after SA)