The company is founded in Denen-Chofu, Ota-ku, Tokyo to design and develop electronic products.

World’s first programmable video signal generator developed.

The Japan Broadcasting Corporation (NHK) asks us to develop HDTV-related equipment.

To cope with our expanding operations and business performance, we build the new company building that houses us now in Nakahara-ku in the city of Kawasaki.

To support our users in western Japan, we open our Kansai office in the city of Osaka.

We increase our capital to 72 million yen.

We open the Matsuyama R&D Center in the city of Matsuyama in Ehime Prefecture.

We open the Kawasaki Technology Center in the city of Kawasaki in Takatsu-ku.

The company is accredited under the ISO9001 international standard.

We open the Tottori R&D Center in Tottori prefecture.

Astrosystems, Inc. is established in Los Angeles as our U.S. marketing base.

The company is accredited under the ISO14001 international standard.

NPS, Inc. of an associated company is merged and the head office is relocated to Meguro-ku, Tokyo.

In accordance with Expo Aichi 2005 holding, we developed a Super Hi-vision Processor with NHK.

The head office is relocated to Ota-ku, Tokyo. Three offices in the metropolitan area are integrated to one building.
Main Customer

Japan
- Chubu TV. Broadcasting Co., Ltd. (CTV)
- Fuji Television Network, Incorporated (Fuji-TV)
- Japan Broadcasting Corporation (NHK)
- Kansai Teletcasting Corporation (KTV)
- Nagoya Broadcasting Network Co., Ltd. (NBN)
- Nippon Television Network Corporation (NTV)
- Tokyo Broadcasting System Television, Incorporated (TBS)
- TV Asahi Corporation
- TV TOKYO Corporation

World
- ARRI MEDIA (England)
- CANAL+ (France)
- Korean Broadcasting System (Korea)
- M6 (France)
- Munhwa Broadcasting Corp. (Korea)
- TF1 (France)

Contents

WM Series Explanation of Modes........................................... 04
HD100 10-inch LCD Waveform Monitor WM-3212 / 3215-L........ 05
HD160 16-inch LCD Waveform Monitor WM-3208 / 3208-L........ 06
HD160 16-inch LCD Waveform Monitor WM-314................. 06
WM Series Specification...................................................... 07
DM-3304 4K JVC HD Resolution 32-inch LCD Monitor.......... 08
HD100 10-inch widescreen LCD Monitor DM-3033-A............. 11
HD160 16-inch widescreen LCD Monitor DM-3032-A............. 11
HD160 16-inch widescreen LCD Monitor DM-3023-A............. 11
HD160 Space-saving 16-inch widescreen LCD Monitor DM-3109 11
HD160 16-inch LCD Monitor DM-3106-L......................... 13
HD160 16-inch LCD Monitor DM-3112-L....................... 13
HD160 16-inch LCD Monitor DM-3029-L....................... 13
HD160 16-inch LCD Monitor DM-3106............................ 13
LCD Monitor with In-G Display Function DM / WML Series...... 14
DM Series Specification...................................................... 16
DM-3400 4K 34-inch LCD Monitor................................. 18
HR-7401 HDTV Uncompressed Hard Disk Recorder........... 19
SC-2055A Super Scan Converter................................. 20
HS-7042 36-channel Splitter........................................ 22
SD-1659 SDI Multi-rate Matrix Switcher......................... 22
HC-7039B HD-SDI Multi犯规 ........................................ 23
SD-1645 HD SDI Repeater........................................... 23
SG-7816 HDTV & SDTV Sync Generator........................ 24
SG-7802A HD-SDI Test Generator................................ 24
CX-5528 Multiplex and Test over IP Interface unit........... 25
CM-5508 OFDM Modulator........................................ 25
TS-7815 TS Portable Analyzer..................................... 26
QUALITY MANAGEMENT.................................................. 28
TECHNOLOGY & PRODUCTS LINE UP.................................. 30
Company Profile.......................................................... 32
**WM Series**

**Explanation of Modes**

### Picture Mode
- **Picture**
  - Features and capabilities.
  - Display position can be moved in 1/2" or 1/4" increments.

### Waveforms Mode
- **Display of waveforms**
  - Waveforms can be selected and displayed.
  - Correlation between waveforms and picture.

### Vectorscope Mode
- **Vectorscope**
  - Images have a much finer delineation than the previous series.
  - Display allows any range enabled.

### Status Mode
- **Waveforms**
  - Signal levels in any range can be monitored using numerical values.

### Ancillary Data Mode
- **Status of ancillary data can be monitored.**

### Phase Comparison Mode
- **Phase comparison of 3 input signals and 3 sync signals can be monitored.**

### Multi Mode
- **Multi display modes can be monitored on a single screen.**

### Status Mode
- **Status of ancillary data can be monitored.**

### Comparison Mode
- **The positions of two input images can be adjusted.**

### Phase Comparison Mode
- **The difference in the level between two images can be measured.**

### Ancillary Data Mode
- **Status of ancillary data can be monitored.**

---

*Picture color changed*

*Parade of 3 waveforms*

*Parade of 4 waveforms*

*Overlay of waveforms onto picture*

*Expansion in vertical direction, displayed with one waveform*

*Pseudo-composite signal display*

*Vectorscope*

*Area scanning*

*Option*

---

*MODE 2-H MODE 3-H MODE 2-V MODE 3-V MODE 4-H MODE 5-H MODE 4-V MODE 5-V*
These are compact, multifunctional waveform monitor in the LCD monitor series. A single unit combines various functions such as source monitoring, waveform monitoring, vector scoping provided and checking audio levels. The input signal supports full HD format and SDTV (525i, 625i). It can be used in any environment due to the ability to use camera batteries as a power source. It is perfect for monitoring video material in OB vans, at location sites and in the studio.

**Features**

**Auto-Tracing of Input Signals**

The input signal supports 23 kinds of HDTV and SDTV (525i-SDI) image formats. The monitor supports auto-tracing of all input signals and distinguishes frame rates of 1/1,000 and 1/1,001 automatically, eliminating troublesome settings.

**Employs LCD with High Brightness and Wide Viewing Angle**

A highly portable LCD with a wide viewing angle has been employed, allowing viewing from the side. It also offers the low power consumption and compact design expected of LCD monitors.

**Multi-functional from Waveform to Audio Checking**

The monitor is equipped with numerous functions required for checking HDTV images from all aspects, functioning as multiple monitor devices in a single unit.

**Specification**

<table>
<thead>
<tr>
<th>WM-3215</th>
<th>WM-3208</th>
<th>WM-3014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Size</td>
<td>15 Inch</td>
<td>8 Inch</td>
</tr>
<tr>
<td>LCD Panel Specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCD Panel</td>
<td>15&quot; LCD</td>
<td>8&quot; LCD</td>
</tr>
<tr>
<td>Brightness</td>
<td>300cd/m²</td>
<td>300cd/m²</td>
</tr>
<tr>
<td>Viewing angle</td>
<td>110° above and below, 110° left and right</td>
<td>110° above and below, 110° left and right</td>
</tr>
<tr>
<td>Signal Format</td>
<td>HDTV</td>
<td>HDTV</td>
</tr>
<tr>
<td></td>
<td>SMPTE 1250A</td>
<td>SMPTE 1250A</td>
</tr>
<tr>
<td></td>
<td>SMPTE 1250A</td>
<td>SMPTE 1250A</td>
</tr>
<tr>
<td>Input Signal</td>
<td>SDI/YPbPr 4:4:4</td>
<td>SDI/YPbPr 4:4:4</td>
</tr>
<tr>
<td></td>
<td>SDI/YPbPr 4:4:4</td>
<td>SDI/YPbPr 4:4:4</td>
</tr>
<tr>
<td></td>
<td>SDI/YPbPr 4:4:4</td>
<td>SDI/YPbPr 4:4:4</td>
</tr>
<tr>
<td>Output Signal</td>
<td>SDI loopthrough output</td>
<td>SDI loopthrough output</td>
</tr>
<tr>
<td>Other Specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Consumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating temperature range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating humidity range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WM-3215/3215-L HD/SD 15-inch LCD Waveform Monitor**

**WM-3208/3208-L HD/SD 8-inch LCD Waveform Monitor**

**WM-3014 HD/SD 6-inch LCD Waveform Monitor**

**LINE UP**

**Monitor Line Up 2007**

**LCD Waveform Monitor**

**WM-3215**

**WM-3208**

**WM-3014**

**HD/SD LCD Waveform Monitor**

**HD/SD LCD Waveform Monitor**

**HD/SD LCD Waveform Monitor**

**HD/SD LCD Waveform Monitor**
**DM-3024 Native HD Resolution 24inch LCD Monitor**

Ideal for use in Studios and OB Vans!!

The DM-3024 is an LCD picture monitor with native HD resolution LCD panel (1920 x 1080). It is ideally suited for use in a wide range of applications including the monitoring of the images taken during live broadcasts or in studios and non-linear editing, and its slim-line dimensions and light weight make it perfect for carrying around.

The monitor comes with a wide array of functions including brightness adjustments, contrast adjustments, chroma adjustments and marker displays, and its video input and output expansion capability has been further stepped up by incorporating a 4-system module slot design. It supports many different video standards including HD/1-SDI, Dual Link HD-SDI, component, composite, analog RGB (PC) and DVI.

**Features**

- 24 inch native resolution LCD.
- Quad split function (4 HD/1-SDI modules are necessary).
- Dual Link HD-SDI supported (2 HD/1-SDI modules are necessary)
- A broad spectrum of display and adjustment functions (brightness, contrast, macro, filter, monochrome, gamma, same-magnification display functions, marker display function) is provided.
- Time code display function
- Audio level display function
- With a single touch of a front switch, whether or not to display the input channels, same-magnification display, monochrome-only and markers is determined.
- External control using an infrared-ray remote controller can be exercised.

**Specifications**

<table>
<thead>
<tr>
<th>TV system</th>
<th>HDTV, SDTV and PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>Input dependent upon 4 modules selected</td>
</tr>
<tr>
<td>SDI Input Module</td>
<td>SDI s/1Ch (Lo-priority x1Ch) Compliant to SMPTE 292M, 311M, 355M and BTA-5-04F standard</td>
</tr>
<tr>
<td>SDTV Composite Input Module</td>
<td>NTSC/PAL composite x1Ch Compliant to SMPTE 170M, ITU-R601-4 standard</td>
</tr>
<tr>
<td>HDTV Analog Input Module</td>
<td>HDTV analog Y/PbPr signals x1Ch</td>
</tr>
<tr>
<td>DVI Input Module</td>
<td>DVI-D x1Ch (24bit), WUXGA, UXGA, UXGA, SXGA, SXGA, VGA</td>
</tr>
<tr>
<td>Digital Signal Only</td>
<td></td>
</tr>
</tbody>
</table>

**Signal formats supported**

- 1920 x 1080 50i/59.94i, 1536 x 1080 50i/59.94i, 1408 x 1080 50i/59.94i, 1024 x 768 50i/59.94i, 768 x 768 50i/59.94i
- 1920 x 1080 24p/30p/25p/24.98p/23.98p
- 1280 x 720 50i/50p/59.94i, 1024 x 768 50i/59.94i, 1280 x 720 25p, 1280 x 720 24p, 1280 x 720 25p/24p/23.98p
- 720 x 576 50i, 720 x 576 50i

**General specifications**

- Supply voltage: AC 100 to 240V (50/60Hz)
- Operating temperature range: -15 to 35C (no condensation)
- Operating humidity range: 30 to 80% (no condensation)
- Dimensions: 592 (W) x 392 (H) x 144 (D) mm
- Weight: Approx. 9kg (20lbs)

The dimensions, specifications and other details, given here are subject to change without notice due to improvements.
The 16:9 wide-screen LCD monitor series is a line-up of LCD monitors for broadcasting business applications. Its models incorporate liquid-crystal displays with a high brightness, high contrast and wide view angle in the 16:9 wide-screen format so that the HDTV images can fill the screen, and they can be used for monitoring images in studios, for instance. The extensive line-up ranges from the compact 9-inch model to the 32-inch type which is the largest available in the industry. The units support the HDTV and SDTV image formats which now play such an essential role in broadcasting business applications. Brightness adjustment, contrast adjustment, chroma adjustment and marker displays are among the many functions which are provided to enable the image quality and display the images to be adjusted.
The 4:3 LCD monitor series designed for broadcasting businesses can indicate time codes and statuses outside the image display area while the input images are displayed. The extensive line-up ranges from the ultra-portable 6-inch type to the 15-inch model. The units support the HDTV and SDTV image formats which now play such an essential role in broadcasting business applications. Brightness adjustment, contrast adjustment, chroma adjustment and marker displays are among the many functions which are provided to enable the image quality and display the images to be adjusted. The line-up includes models which can be powered by camera batteries and models which support ID displays so users can choose the exact model that dovetails with the intended applications.
In creating the DM/WM-L series with ID display function, ASTRODESIGN carried over the basic performance of the DM series/WM series which already has a proven track record of sales to many broadcast stations and production studios into its new series as a key building block, and it added an ID display function to the content monitor for Sub studio and OB Van. The series supports multiple HD format, SD format (NTSC and PAL) and composite input signals so its units can be used to construct monitor walls which are highly compatible with conventional display systems.

**FEATURES**

- **Space savings**
  Since even the ID display unit is contained inside the space which accommodates one LCD monitor, there is no more dead space behind the monitor wall and, in addition, the work space is significantly increased.

- **Cost savings and low power consumption**
  Since one unit is equipped with both ID display and monitor function, there is no need for users to purchase the monitor and ID display unit separately. Another advantage of this all-in-one feature is that less power is consumed.

- **Operating ease**
  The SIP-3300 software program (for Windows) specially designed for the DM/L series makes easy work of operations involving ID displays, tally displays and simple waveform displays.

- IDs can be entered from the keyboard so the displays can be changed quickly.

**LOCATION**

- Studio
- OB van

**LCD MONITOR OPTION**

- Changes may be made without notice to improve specifications and appearance.

- **Light Shielding Hood**
  Only for larger models

- **IR Remote Control**
  For DM-01 to DM-04, DM-088, DM-092A, DM-5000

- **Carrying Case**
  Only for larger models

- **Camera mount kit**
Employing the new liquid crystal, the monitors provide high-brightness, high-contrast and a wide field of vision. The field of vision extends 170 degree horizontally and is ideal for a wide variety of applications. 

**Input System**
- Monitor: PSD
- Power supply: 100/200V
- Frequency: 50/60Hz

**Input Format**
- Composite: 1080i, 720p, 576i, 480i, 480p
- YUV: 1080i, 720p, 576i, 480i, 480p
- SDTV: 1080i, 720p, 576i, 480i, 480p
- HDTV: 1080i, 720p, 576i, 480i, 480p

**General Specifications**
- Power consumption: 20W
- Operating temperature range: 0°C to 40°C
- Operating humidity range: 20% to 80%
- Display size: 32”
- Viewing angle: 170° left and right
- Brightness: 350cd/m²
- Backlight adjustment: Yes

**Accessories**
- Camera mount kit
- Tilt stand
- Stand
- IR remote control
- EIA compliant double rack mount kit
- EIA compliant single rack mount kit
- Light shielding hood
- SDI loopthrough output
- SDI loopthrough input
- Camera mount kit
- Tilt stand
- Stand
PRODUCTS LINE UP

LCD MONITOR

DM-3400 4K2K 56inch LCD Monitor

Supports 4K2K format and More real than real
DM-3400 is 56 inches 4K2K monitor that can process cinema 4K2K format or HD-SDI multi format. This monitor has 4 inputs of DVI-D and 4 inputs of HD-SDI (Dual Link). Brightness and color temperature, gamma can be adjusted by a wireless remote controller.

Features

- Supports 4K2K (3840x2160) and 2K1K (1920x1080) format.
- Multi-rate support (60p, 60i, 24p/sF) and automatically detection of the field/frame frequency.
- HD-SDI input is compliant to ITU-R BT.1769.
- HD-SDI input is x1ch or x4ch or x8ch. Supports YUV 4:2:2 and RGB 4:4:4 (Dual Link).
- DVI-D (Digital signal only) x4ch input.
- Brightness, contrast, gamma and color temperature of picture quality can be adjusted by wireless remote controller.

Specifications

<table>
<thead>
<tr>
<th>Display</th>
<th>Input/Output signal</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display resolution</td>
<td>3840x2160 (1920x1080 x4ch)</td>
<td>AES/EBU audio input</td>
</tr>
<tr>
<td>Brightness</td>
<td>500cd/m²</td>
<td>Input x1 / Output x1 (HD-SDI embedded audio output)</td>
</tr>
<tr>
<td>Contrast</td>
<td>1300:1</td>
<td>General specifications</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th>Input/Output signal and Recording mode</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD-SDI</td>
<td>1920x1080DDI, 1920x1080, 1920x1080, 1920x1080 (4:2:2)</td>
<td>HDD extended terminal</td>
</tr>
<tr>
<td>DVI</td>
<td>1920x1080DDI (Dual Link supported)</td>
<td>2G Fiber Channel SFP x2</td>
</tr>
</tbody>
</table>

General specifications

- Supply voltage: AC 100–240V
- Power consumption: Approx. 500W
- Operating temperature range: 5°C ~ 40°C
- Operating humidity range: 30% ~ 85% (non-condensing)
- Dimensions: 200(W) x 790(D) x 240(H) mm (including support parts for wall display)
- Weight: Approx. 46.5 kg

PRODUCTS LINE UP

STUDIO EQUIPMENTS

HR-7401 HDTV Uncompressed Hard Disk Recorder

The world first compact size uncompressed digital format (RGB 4:4:4) supported disk recorder.
The HR-7401 is a hard disk recorder that plays and records uncompressed HDTV signals. It uses a reliable fiber channel hard disk as a recording medium. The HR-7401 achieves a maximum of 60mm (YUV 4:2:2 Sampling) recording/playing operations per unit. Its 19-inch compact half-rack size body and portability offer mobility and space-saving convenience for desk-top editing, as well as for CM and film shooting that require high-quality images.
- Portable uncompressed recorder which can be held in one hand
- Changing disk packs allows long-time recording
- Combination of operability and fast response like a VTR

Features

- The recording time is up to 30 minutes in Dual Link (RGB 4:4:4)
- Disk Pack can be exchanged easily
- Embedded audio can be recorded (up to 16ch) / played (2 channels are selected among 1 to 8ch)

Specifications

<table>
<thead>
<tr>
<th>Input/Output signal</th>
<th>HD-SDI/Dual Link-HD-SDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input/Output signal and Recording mode</td>
<td>1920x1080DDI, 1920x1080, 1920x1080 (4:2:2) / 60min.</td>
</tr>
<tr>
<td>Dual Link (RGB 4:4:4): 30min.</td>
<td></td>
</tr>
<tr>
<td>External Reference</td>
<td>HD Analog In Level, BBS</td>
</tr>
</tbody>
</table>

General specifications

- Main Unit: DC12V or 24V / Exclusive Power Unit: AC100 ~ 240V (35/60Hz)
- Weight: Approx. 10.5kg (23.1lbs)
- Exclusive Power Unit: Dimensions: 210(W) x 176(H) x 54(D) mm (excluding fixed side)
- Weight: Approx.: 12.9kg (28.4lbs)
Let us put you in command of all of your visual materials.

The SC-205SA Super Scan Converter is compatible with many kinds of visual standards including HD/SDI, NTSC/PAL, DVI and analogue RGB. ASTRODESIGN incorporated its original astrosnap and TERA high-quality imaging technologies to offer converted images of dramatically high quality. System design consisting of program production to projectors and other large image systems tends to be complex, but the SC-205SA, compatible with numerous interfaces with high quality, makes it simple and is suitable for a wide range of applications.

The following are examples of usage made possible through combinations of input/output modules.

### Interface

- **D1-SDI**
- **HD-SDI**
- **RGB/YPbPr/YCbCr**
- **DVI**
- **Composite**
- **DualLink HD-SDI**

#### Use case 1: Upward or downward conversion

**Up Conversion**
- SDTV (NTSC/PAL) → HDTV

**Down Conversion**
- HDTV (1080i/54, 1080p, etc.) → SDTV (NTSC/PAL)

#### Use case 2: Format conversion

**Format Conversion**
- HDTV (1080i/54, 1080p, etc.) → HDTV (1080i/54, 1080p, etc.)

#### Use case 3: Scan conversion

**Scan Conversion**
- PC Signal (XGA, UXGA, etc.) → HDTV (1080i/54, 1080p, etc.)

#### Use case 4: Aspect ratio conversion

**Aspect ratio Conversion**
- HDTV (1080i/54, 1080p, etc.) → HDTV (1080i/54, 1080p, etc.)

### Features

- **Slot-in architecture of 2 channels for input and output respectively**
- **Complete control over multi-format conversion**
  - HD(1080p) ↔ NTSC/PAL
  - HD(1080i) ↔ D1-SDI
  - D1-SDI ↔ DVI
- **10-bit processing realized for internal processing**

### Specifications

- **Scan mode**
  - Progressive / Interlace
  - Max 165MHz / Max 2560x1580
  - Interlace input: Max 74.25MHz / Max 1920x1080
- **AD sampling clock frequency / resolution**
  - 150KHz / 24 bits
  - 150Hz
- **RGB / Component; 10 bits each**
- **NTSC-M, PAL-B, D, G, H or I**
- **VBS, Y/C, Y/R-Y/B-Yx 1 each**
- **Dot clock frequency: 13.5 to 165 MHz**
- **R/Pr/Cr, G/Y, B/Pb/Cb, HS/CS, VS x 1ch (BNC)**
- **F-1002, S-005B, S-006B standards / SMPTE 299M, 272M standards complied with**
- **SDI embedded audio signal supported**
- **RS-232C (D-Sub 9 pin) / RS-422 (D-Sub 9 pin: option at shipping)**
- **AC 100 _ 240V 50/60Hz**
- **Power consumption**
  - 5TFDBTF
- **Operating temperature range**
  - 0°C to 40°C / 32°F to 104°F
- **Humidity**
  - 80%RH (non-condensing)
- **Outside dimensions**
  - 76W MAX
- **Weight**
  - 17.0” x 1.7” x 17.0” (1U)
  - Approx. 6.5kg (14.3lbs) (with all 4 slots mounted)
- **Input/Output Signal System**
  - Input signals: IM-581, IM-583, IM-584, IM-585, IM-586, IM-588
  - Output signals: OM-593, OM-594, OM-595, OM-596
- **Control System**
  - General Specifications
    - Input/Output Interface (module name)
      - NTSC/PAL
      - RGB/YPbPr/YCbCr
      - D1-SDI HD-SDI DVIDual Link HD-SDI
      - AM-1500 audio processor (optional)
      - F-1002, S-005B, S-006B standards / SMPTE 299M, 272M standards complied with
      - TERA high-definition contour correction technology
      - ASTRODESIGN incorporated its original astrosnap and TERA high-definition scaling conversion technology
      - HD(1080i50) ↔ NTSC/PAL
      - HD(1080i59.94) ↔ NTSC/PAL
      - HDTV(1080i) ↔ SDTV
      - HDTV(1080i) 10-bit processing realized for internal processing
### Specifications

**Input/Output signal**
- **HD-SDI signal**
  - Compliant to SMPTE 295M, 296M, BTA-S-018-04B
- **Reference Input**
  - SMPTE 374M (compared to RS-170)
- **Display frame**
  - Square ratio: 100% to 60% and frame display are available.
  - Squeeze ratio per channel frame: 100% to 85%
- **Display Mode**
  - Selectable between 1:1, 1:6, 1:6, 1:1
- **Display frame and character per each channel**
  - Frame: 256 color, color selectable by external tally signal.
  - Character: 25 characters, 256 color, edge and background color setting available.
- **External interface**
  - RS-422: 150BaseT/1000Base TX Ethernet
- **General specification**
  - **Power Voltage**
    - AC100-240V 50/60Hz
  - **Power consumption**
    - 30W MAX
  - **Dimensions**
    - 432(W) x 440(D) x 435(H) [mm] (1U)
  - **Weight**
    - Approx. 5.3kg

### Features

- The number of the input output channels constitutes it as a unit of 4 channel unit, and a combination is possible freely (Ex: 4x4, 4x16, 8x8, 16x16, etc.)
- HD-SDI, D1-SDI and DVB-ASI signal available
- A stable switching is possible by remote switching by blanking change (*It can not switch by blanking change in the case of DVB-ASI signal input*)
- It is equipped with convenient pre-asset memory (16 kinds at the maximum)
- Small and lightweight (1U size, 5kg)

---

### Specifications

**Input/Output signal**
- **Signal format**
  - SMPTE 295M
  - SMPTE 296M
  - DVB-ASI
- **HD-SDI signal**
  - 75ohm 16 channels (BNC)
- **Signal amplitude**
  - 1.2Vpp ± 0.7% (1.0)
- **External sync input**
  - 60MHz at SMPTE295M (1035), 27MHz (1200), 166MHz (720P)
- **External control**
  - RS-422A: 3-wire (3pin) or 4-wire (4pin)
- **General specification**
  - **Power Voltage**
    - AC100-240V 50/60Hz
  - **Power consumption**
    - Min: 3W
  - **Dimensions**
    - 432(W) x 444(D) x 160(H) [mm] (2U)
  - **Weight**
    - Approx. 16.5kg (3.5 lbs)

### Features

- It proposes an advanced production style.
  - Ten settings can be saved in memory.
  - You can expand up to 4 units by adding input.
  - Allows compensation of various images such as gain, wrap, clip, and gamma.
  - Adjustment to delay images (three frames maximum) and to audio delay (maximum 200ms).
  - Supports AES/EBU audio input with an optional audio board.
  - Gain adjustment and phase inversion of audio 1ch, 2ch and 5.1ch are supported.
  - Allows down-mixing 5.1ch to 2ch stereo.
  - 2ch stereo can be converted to mono sound mixing.

---

### Specifications

**Television system**
- **Input signal**
  - HD-SDI compliant to SMPTE295M, BTA-S-018-04B, SMPTE296M, 1ch and loopthrough output with 1U unit
  - **Output signal**
    - HD-SDI compliant to SMPTE295M, BTA-S-018-04B, SMPTE296M, 3ch with in 1U unit
  - **Number of Input/Output**
    - Max: 4 input/output board can be equipped
  - **Supported signal format**
    - 1920x1080 24-29.97Hz
  - **General specification**
    - **Power consumption**
      - AC100-240V 50/60Hz
    - **Dimensions**
      - 430(W) x 88(W) x 440(H) [mm] (2U)
    - **Weight**
      - Approx. 10.9kg

### Features

- SMPTE 295M, BTA-S-018-04B standards compliant (1.495Gbps SDI signals).
- SMPTE 274M, SMPTE 296M and BTA S-001B standards compliant.
- Supporting HDTV video full format — 1080i, 1035i, 720p, 24p, 24sF, etc.
- Automatic switching to field frequency rates of 60Hz or 60/1.001Hz.
- Lightweight and compact in size.

---

### Specifications

**Television system**
- **Input signal**
  - SMPTE 295M, 296M, BTA-S-001B standards compliant
- **Output signal**
  - SMPTE 295M, 296M, BTA-S-001B standards compliant
- **Power Voltage**
  - AC120/240V 50/60Hz
- **Power consumption**
  - Min: 3.3W
- **Dimensions**
  - 418(W) x 253(W) x 368(H) [3.5" x 11" x 14.5"]
- **Weight**
  - Approx. 16.5kg (3.5 lbs)
Both Sync(HDV & SDTV) and HD patterns can be generated

**Features**
- Frame synchronization
- Pattern generating function on HD-SDI output
- Genlocking
- Embedded audio generating function
- Internal synchronization
- Phase adjusting function

**Specifications**

<table>
<thead>
<tr>
<th>Output signal</th>
<th>Analog sync output</th>
<th>HD analog interlace sync or SDTV BB sync (for each 2 distribution)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>HD sync/Compliant to SMPTE255M, SMPTE239M and BTA-S-018.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BB sync/NTSC/PAL-60 PAL BB.</td>
</tr>
<tr>
<td>HD-SDI output</td>
<td>HD-SDI signal 1/4 for 4 distribution) Compliant to SMPTE255M (internal generated pattern)</td>
<td></td>
</tr>
<tr>
<td>Embedded audio output</td>
<td>48kHz. The amplitude is adjustable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compliant to SMPTE239M</td>
<td></td>
</tr>
<tr>
<td>Reference sync input</td>
<td>1ch (SD analog interlace sync or NTSC BB sync)</td>
<td></td>
</tr>
<tr>
<td>General specification</td>
<td>Power Voltage</td>
<td>DC12V (5V to 18V)</td>
</tr>
<tr>
<td></td>
<td>Power consumption</td>
<td>Max 20W</td>
</tr>
<tr>
<td></td>
<td>Dimension</td>
<td>210(W) x 449(H) x 310(D)mm (1U half size)</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>Approx. 2.0kg</td>
</tr>
</tbody>
</table>

SG-5526

Multiplexer and TS over IP interface unit

**Features**
- TS multiplexer of 1U half rack size
- DVB-ASI 4 input, DVB-ASI 2 distribution output (Throughput 100Mbps)
- It is possible as TS over IP Gateway.
- Only as for the single course, it is throughput 20Mbps at a time.
- Other than normal MUX, it is possible as ground digital broadcasting, broadcast satellite digital broadcasting, REMUX of plural cable (Y) TS.
- A multiplex of sections, a section filters of PID, and a PDI change is possible (It can change setting in real-time).

**Specifications**

<table>
<thead>
<tr>
<th>Input</th>
<th>External CLK Input</th>
<th>Frame sync</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DVB-ASI/4 (Bit rate: 10kbps~100Mbps MAX 100Mbps)</td>
<td>1ch (10MHz)</td>
</tr>
<tr>
<td></td>
<td>DVB-ASI/2 (For each distribution, Bit rate: 10kbps~150Mbps MAX 100Mbps)</td>
<td>1ch (Frame sync of ground digital broadcasting)</td>
</tr>
<tr>
<td>Output</td>
<td>TS</td>
<td>DVB-ASI/1 (For each distribution, Bit rate: 10kbps~150Mbps MAX 100Mbps)</td>
</tr>
<tr>
<td></td>
<td>Ethernet</td>
<td>BNC connector</td>
</tr>
<tr>
<td></td>
<td>ALARM</td>
<td>1ch (The point of contact: OPEN/CLOSE) D-sub 15pin</td>
</tr>
<tr>
<td>General specification</td>
<td>Voltage</td>
<td>AC100 to 240V (50/60Hz)</td>
</tr>
<tr>
<td></td>
<td>Power consumption</td>
<td>Max 30W</td>
</tr>
<tr>
<td></td>
<td>Dimension</td>
<td>210(W) x 449(H) x 310(D)mm (excluding projected parts)</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>Approx. 1.7kg</td>
</tr>
</tbody>
</table>

SG-7802A

HD-SDI Test Generator

**Features**
- SMPTE 255M, BTA-S-004 standard conformity.
- Various test pattern displays.
- User data management by with a memory card.
- Ultimate lightweight and portable.
- Frame lock to external reference signal.
- Memory function eliminates settings at POWER-ON.
- 10 kinds of test pattern.

**Specifications**

<table>
<thead>
<tr>
<th>Video output signal</th>
<th>HD-SDI signal compliant to SMPTE255M, BTA-S-004x4ch</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD-SDI synchronized</td>
<td>HD-SDI signal compliant to SMPTE255M, BTA-S-004x4ch</td>
</tr>
<tr>
<td>Audio output signal</td>
<td>SMPTE 255M, 274M, 232M and PAL/NTSC</td>
</tr>
<tr>
<td>External sync signal</td>
<td>SMPTE 255M, 274M, 232M and PAL/NTSC</td>
</tr>
<tr>
<td>Control</td>
<td>RS-232C (D-Sub 9pin 1ch, USB, IEEE 1394)</td>
</tr>
<tr>
<td>General specification</td>
<td>Power Voltage</td>
</tr>
<tr>
<td></td>
<td>Power consumption</td>
</tr>
<tr>
<td></td>
<td>Dimension</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
</tr>
</tbody>
</table>

CM-5606

OFDM Modulator

**Simple & Compact, and high efficiency**

**Features**
- Real-time OFDM modulation from Broadcasting TS or MPEG-2 TS (Compliant to ARIB STD-B31, Japanese ISDB-T format).
- RF output to VHF - 12ch, UHF - 62ch (62ch - 770MHz).
- Monitoring of an input signal situation is possible by the alarm output.
- It is modulated by modulation parameter which accepted TMCC information.
- IF/F clock output (50MHz/240MHz/RX0.5MHz)
- Reference clock input (4.128MHz/10MHz)
- Compact design (1U half size)

**Specifications**

<table>
<thead>
<tr>
<th>RF output</th>
<th>Frequency</th>
<th>UNF: 1ch - 2kHz, 65kHz (400kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency deviation</td>
<td>Less than 0.01ppm</td>
</tr>
<tr>
<td></td>
<td>Linearity</td>
<td>Less than 0.01ppm</td>
</tr>
<tr>
<td></td>
<td>Variable range</td>
<td>±10dBm ~ ±5dBm / ±0.1dBm step</td>
</tr>
<tr>
<td></td>
<td>Connector</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>Channel</td>
<td>1ch</td>
</tr>
<tr>
<td>Input signal</td>
<td>TS</td>
<td>BB-T format (Compliant to ARIB STD-B31)</td>
</tr>
<tr>
<td>General specification</td>
<td>Power Voltage</td>
<td>DC12V ±15%</td>
</tr>
<tr>
<td></td>
<td>Power consumption</td>
<td>Max 15W</td>
</tr>
<tr>
<td></td>
<td>Dimension</td>
<td>210(W) x 449(H) x 310(D)mm (excluding projected parts)</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>Approx. 5.0kg</td>
</tr>
</tbody>
</table>
Simple, Clear.
Imagine anyone being able to easily check what they want without needing specialized TS-related knowledge.
Real-Time Information Gathering, Measurement Functions for Immediate Understanding of Fundamental TS Parameters.

The TS-7815 is a portable TS (Transport Stream) analyzer that performs TS analysis based on the MPEG2 standard (ISO/IEC 13818). And, not only DVB standard but ATSC (option) standard is supported. Featuring operations that don’t require detailed TS-related knowledge. Designed with user-friendliness in mind to be easily usable by anyone. Measurement features include TS bit rate measurement, PID summary display, section summary display, program tree display, PCR jitter measurement, PTS/DTS analysis, and more, enabling you to perform real-time analysis of fundamental TS parameters.

Features
- DVB standard and ATSC standard (optional) is supported.
- Analysis results display on LCD monitor (6.3-inch XGA) (external output is supported)
- Support for automatic (ETSI TR 101 290) and manually-triggered TS data recording, log output, and alarm output
- Support for offline analysis of recorded TS data (PID map display etc.) Real-time eye pattern display
- Saving screen to bitmap file on CompactFlash
- Network (FTP and SNMP) support

Specifications
- TS Input: DVBASI (2 systems; only ch 1 with through-out)
- TS Output: DVBASI (through output for one input only)
- Input/output TS packets: 1.88 Mbyte
- Time analysis: Real-time PCR jitter measurement
- Power consumption: 25W
- Operating temperature range: 5 to 40°C
- Operating humidity range: 40 to 90% RH (dry condensation)
- Dimensions: 210(W) × 133(H) × 20(D) mm (8.3" × 5.2" × 8.3"; 3U half-rack size)
- Weight: Approx. 2kg (4.4lbs)

View Modes
- Per-PID Information Display (Per-PID Display) While displaying SAP (Service Access Point) layer information (i.e. Broadcasting TS input and TISP) for each PID, the bit rate is displayed as a numeric value or bar graph based on the received packet count.
  - Display Content: Bit rate (bit rate per second, packets per second), Real-time PCR jitter measurement, PTS/DTS delay etc.

Section Summary Display
- A summary is displayed for each type of Section items. Displayed only with Section.
  - Display Content: PSI/SI table, PAT, Si, Service ID, TS ID, original network ID, PSI/SI period

Per-Program Stream Analysis Display
- A summary view of the TS (Transport Stream) data containing a program is displayed. The bit rate for each ES can also be displayed.
  - Display Content: PSI/SI table, PAT, PAT, Service ID, Table ID, Table ID Extension, version number, Service ID, TS ID, original network ID, PSI/SI period

Section Analysis Display
- Detailed analysis of Section items is displayed. The bit rate for each ES can also be displayed.
  - Display Content: PSI/SI table, PAT, PAT, Service ID, Table ID, Table ID Extension, version number, Service ID, TS ID, original network ID, PSI/SI period

Per-PID Stream Analysis Display
- Detailed analysis of the PID information for each PID containing a program is displayed. The bit rate for each ES can also be displayed.
  - Display Content: PSI/SI table, PAT, Service ID, Table ID, Table ID Extension, version number, Service ID, TS ID, original network ID, PSI/SI period

PCR Analysis / Interval and Jitter Measurement Display
- PCR interval and jitter measurement is displayed for specified PID.
  - Display Content: PCR interval period bar graph display, PCR jitter line graph display, PMT program number, graph display of PCR PID and PES PID included in PTS/DTS

Digital Broadcast Analysis Display (ISDB)
- ISDB analysis is performed on TS reception (204 byte) of digital terrestrial broadcasting and digital BS broadcasting.
  - Display Content: Input TS and FSYNC IN frame period, TS packet count for each layer, ISDB(TMCC) information layer map, IIP packet binary dump and packet structure, IIP packet structure detail

MGT/VCT Analysis Display
- A tree view of the content of MGT and VCT is displayed.
  - Display Content: MGT/VCT information, channel information of VCT

Log Display
- Time and date log is displayed with the log contents for each record.
  - Display Content: Time, date, log contents, log contents for each record

Always-Visible Display
- Always-Visible View is always displayed with the section of the log display.
  - Display Content: Section View, always displayed with the log contents for each record

Log Display
- Time and date log is displayed with the log contents for each record.
  - Display Content: Time, date, log contents, log contents for each record

General Specifications
- Power voltage: DC 12V (10 to 16V supported), 4-pin male Carmon connector
- Power consumption: 20W
- Operating temperature range: 5 to 40°C
- Operating humidity range: 40 to 90% RH (dry condensation)

View Modes
- Per-PID Information Display (Per-PID Display) While displaying SAP (Service Access Point) layer information (i.e. Broadcasting TS input and TISP) for each PID, the bit rate is displayed as a numeric value or bar graph based on the received packet count.
  - Display Content: Bit rate (bit rate per second, packets per second), Real-time PCR jitter measurement, PTS/DTS delay etc.

Section Summary Display
- A summary is displayed for each type of Section items. Displayed only with Section.
  - Display Content: PSI/SI table, PAT, Si, Service ID, TS ID, original network ID, PSI/SI period

Per-Program Stream Analysis Display
- A summary view of the TS (Transport Stream) data containing a program is displayed. The bit rate for each ES can also be displayed.
  - Display Content: PSI/SI table, PAT, PAT, Service ID, Table ID, Table ID Extension, version number, Service ID, TS ID, original network ID, PSI/SI period

Section Analysis Display
- Detailed analysis of Section items is displayed. The bit rate for each ES can also be displayed.
  - Display Content: PSI/SI table, PAT, Service ID, Table ID, Table ID Extension, version number, Service ID, TS ID, original network ID, PSI/SI period

Per-PID Stream Analysis Display
- Detailed analysis of the PID information for each PID containing a program is displayed. The bit rate for each ES can also be displayed.
  - Display Content: PSI/SI table, PAT, Service ID, Table ID, Table ID Extension, version number, Service ID, TS ID, original network ID, PSI/SI period

PCR Analysis / Interval and Jitter Measurement Display
- PCR interval and jitter measurement is displayed for specified PID.
  - Display Content: PCR interval period bar graph display, PCR jitter line graph display, PMT program number, graph display of PCR PID and PES PID included in PTS/DTS

Digital Broadcast Analysis Display (ISDB)
- ISDB analysis is performed on TS reception (204 byte) of digital terrestrial broadcasting and digital BS broadcasting.
  - Display Content: Input TS and FSYNC IN frame period, TS packet count for each layer, ISDB(TMCC) information layer map, IIP packet binary dump and packet structure, IIP packet structure detail

MGT/VCT Analysis Display
- A tree view of the content of MGT and VCT is displayed.
  - Display Content: MGT/VCT information, channel information of VCT

Log Display
- Time and date log is displayed with the log contents for each record.
  - Display Content: Time, date, log contents, log contents for each record

Always-Visible Display
- Always-Visible View is always displayed with the section of the log display.
  - Display Content: Section View, always displayed with the log contents for each record

Log Display
- Time and date log is displayed with the log contents for each record.
  - Display Content: Time, date, log contents, log contents for each record
In March 1997 we obtained an ISO9001 certification. In March 2003, the company’s certification was upgraded to comply with ISO9001:2000.

**Application range**
Design, development, assembly, and adjustment of video processing and video processing products.

**Products**
Video signal generators, scan converters, HDTV studio equipment, MPEG2 encoders and decoders

In December 1999 we obtained an ISO14001 certification. In December 2006, the company’s certification was upgraded to comply with ISO14001:2004.

**Registration range**
Head Office, NAKAHARA business department, TAKATSU business department.

**Basic vision**
To pursue our vision of “becoming a division that delights society by creating new value,” we use our home page and other communication tools to spell out our social and environmental policies. By publicizing our corporate mission—to bring human society into closer harmony with the earth’s environment through the introduction of products and services with a reduced environmental load—we hope to garner the approval and support of the public.

---

**Reliability and Safety**
To ensure that customers can easily use our products, we carry out reliability tests during the development phase of every new prototype. Every series of tests conducted features evaluation of specifications and design, a design review, environmental trials, and reliability tests. To assure product safety we carry out various tests using in-house rules based on IEC standards and specific laws and regulations that pertain to different countries.

**CE marking**
Products are designed and manufactured according to EC Safety Directives (low-voltage directives and EMC directives for EU countries), and all products that are confirmed to comply with EC directives bear the CE logo.

**Inspection and Calibration**
To ensure that customers can easily use our products, we carry out reliability tests during the development phase of every new prototype. Every series of tests conducted features evaluation of specifications and design, a design review, environmental trials, and reliability tests. To assure product safety we carry out various tests using in-house rules based on IEC standards and specific laws and regulations that pertain to different countries.

**Repair**
(a) We will repair any product that fails during the guarantee period (1 year) at our own expense, provided that failure is not due to carelessness nor incorrect handling of the product. After expiration of the guarantee period we will make repairs at the customers’ expense.
(b) Send the product to us and we will repair it.
(c) When replacement or repair parts are not available, when the product reliability cannot be maintained even after repairs, or when repairs will require great expense or time, we will consult with you before beginning the repairs.

**General overview of a traceability system**

- **BIPN**
- **NIST**
- **AIST**
- **NICT**
- **JEMIC**
- **JQA**

**Calibration Laboratory**
Calibration Standard 1
Calibration Standard 2
Calibration Standard 3, 4...

**Products**
Create Next!

Frontier technology

High-speed, multi-gray-scale image depiction technology
As images have come to adopt digital technology more and more, so has the demand arisen for greater powers of expressing those images by introducing multibit gray scales to the digital data so that the images will at least compare favorably to, or even exceed, the quality of analog images. Astrodesign has some up high-speed, multi-gray-scale image depiction technology which enables them to strike the increasingly voluminous amounts of data accompanying multiple gray scales.

Standard system signal generation and analysis technology
Standard system signals span a broad spectrum that ranges from conventional standard TV and high-definition TV signals to the signals of the latest consumer use digital AV interface called “HDMI,” and all of these standard signals are now being strictly demanded. Astrodesign’s engineers harness the company’s technology so as to generate, measure and analyze these standard system signals to even greater levels of precision.

Data compression and multiplexing technology
The amounts of data inherent to moving images are quite huge, and compressing and multiplexing this data are absolutely essential processes for ensuring the transmission of data by digital broadcasting or over the Internet. In compressing and multiplexing digital data, Astrodesign is constantly acquiring patents and working hard in many other different ways to deepen the pool of its technological resources.

High-resolution video signal processing technology
Resolution conversion entails increasing or decreasing the video data. With a view to creating very natural-looking images which resemble the original images most closely, Astrodesign’s high-resolution conversion processing technology provides interpolation when the data is to be increased and compensation when it is to be decreased regardless of the resolution of the images concerned.

Scanning line conversion technology
Whether we see them on regular TV receivers, high-definition TV sets or personal computers, the images that grow our eyes every day are transmitted and displayed by means of scanning line systems. What Astrodesign’s technology does is convert the scanning lines of images in different ways by, for instance, increasing or reducing the number of these lines to convert regular TV images into high-definition TV images.

Measurement and analyzing solution technology
High-speed digital signal processing technology

Digital broadcasting technology

VP-8400
Super HD dedicated image processor

DM-3400
HDMI SD with LCD monitor

HR-7401
HDTV Uncompressed Digital Disc Recorder

SC-2055A
Super Scan Converter

MC-2070
Multimedia Scan Converter

VG-870
Programmable Video Signal Generator

VA-1809A
HDMI Protocol Analyzer

WM-3014
HDSD-6 inch Waveform Monitor

CX-569
PCI-bus compatible TD multiplexer board

PRODUCTS LINE UP

High-speed, multi-gray-scale image depiction technology
As images have come to adopt digital technology more and more, so has the demand arisen for greater powers of expressing those images by introducing multibit gray scales to the digital data so that the images will at least compare favorably to, or even exceed, the quality of analog images. Astrodesign has come up with high-speed, multi-gray-scale image depiction technology which enables them to strike the increasingly voluminous amounts of data accompanying multiple gray scales.

Standard system signal generation and analysis technology
Standard system signals span a broad spectrum that ranges from conventional standard TV and high-definition TV signals to the signals of the latest consumer use digital AV interface called “HDMI,” and all of these standard signals are now being strictly demanded. Astrodesign’s engineers harness the company’s technology so as to generate, measure and analyze these standard system signals to even greater levels of precision.

Digital broadcasting technology

VP-8400
Super HD dedicated image processor

DM-3400
HDMI SD with LCD monitor

HR-7401
HDTV Uncompressed Digital Disc Recorder

SC-2055A
Super Scan Converter

MC-2070
Multimedia Scan Converter

VG-870
Programmable Video Signal Generator

VA-1809A
HDMI Protocol Analyzer

WM-3014
HDSD-6 inch Waveform Monitor

CX-569
PCI-bus compatible TD multiplexer board

PRODUCTS LINE UP

High-speed, multi-gray-scale image depiction technology
As images have come to adopt digital technology more and more, so has the demand arisen for greater powers of expressing those images by introducing multibit gray scales to the digital data so that the images will at least compare favorably to, or even exceed, the quality of analog images. Astrodesign has come up with high-speed, multi-gray-scale image depiction technology which enables them to strike the increasingly voluminous amounts of data accompanying multiple gray scales.

Standard system signal generation and analysis technology
Standard system signals span a broad spectrum that ranges from conventional standard TV and high-definition TV signals to the signals of the latest consumer use digital AV interface called “HDMI,” and all of these standard signals are now being strictly demanded. Astrodesign’s engineers harness the company’s technology so as to generate, measure and analyze these standard system signals to even greater levels of precision.

Data compression and multiplexing technology
The amounts of data inherent to moving images are quite huge, and compressing and multiplexing this data are absolutely essential processes for ensuring the transmission of data by digital broadcasting or over the Internet. In compressing and multiplexing digital data, Astrodesign is constantly acquiring patents and working hard in many other different ways to deepen the pool of its technological resources.

High-resolution video signal processing technology
Resolution conversion entails increasing or decreasing the video data. With a view to creating very natural-looking images which resemble the original images most closely, Astrodesign’s high-resolution conversion processing technology provides interpolation when the data is to be increased and compensation when it is to be decreased regardless of the resolution of the images concerned.

Scanning line conversion technology
Whether we see them on regular TV receivers, high-definition TV sets or personal computers, the images that grow our eyes every day are transmitted and displayed by means of scanning line systems. What Astrodesign’s technology does is convert the scanning lines of images in different ways by, for instance, increasing or reducing the number of these lines to convert regular TV images into high-definition TV images.