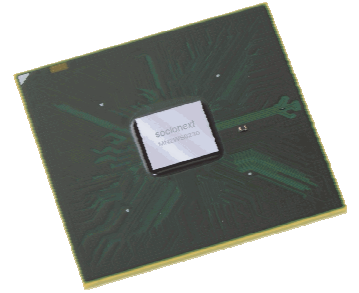


System LSI for High-quality and Multi-channel Distribution (MN2WS0230)

MN2WS0230 (PH1-Pro4) is the system LSI for high-quality and multi-channel video distribution.

With PH1-Pro4, you can quickly develop a home media server to view different images simultaneously through different media, such as TV, smartphone, tablet, PC, and so on. Implementing PH1-Pro4 into cloud-based products allows them to be a low-power system with minimal component count.

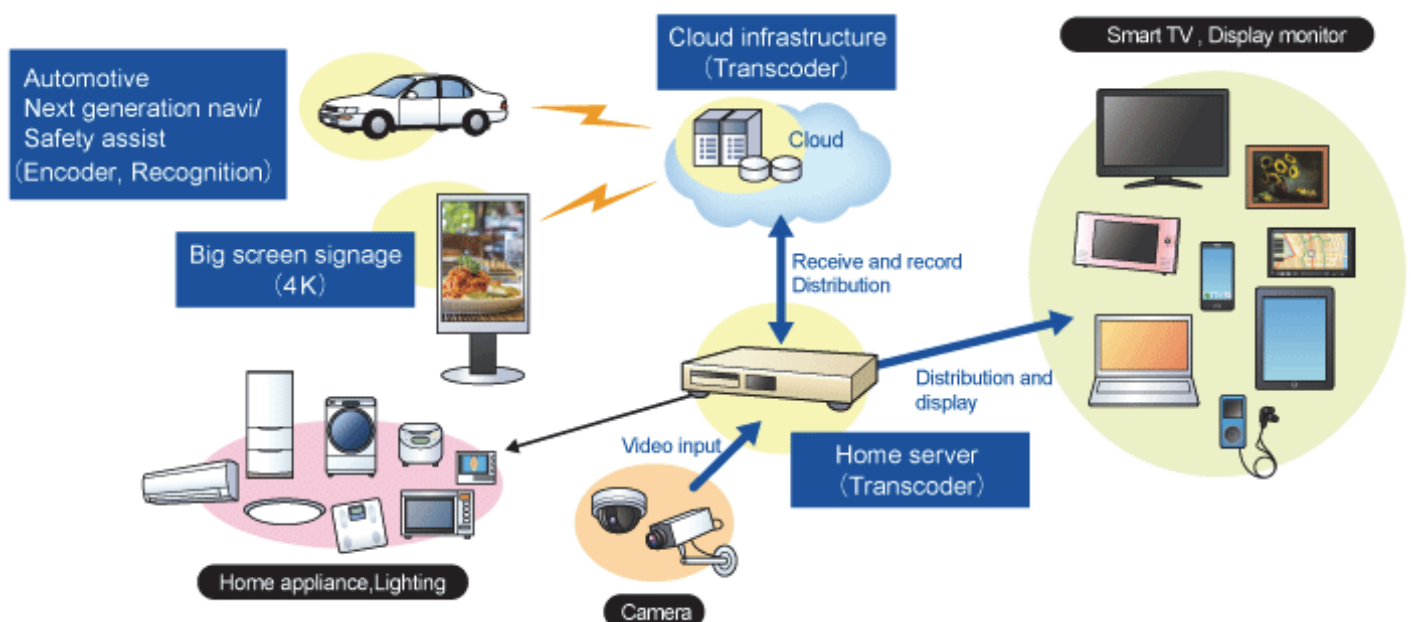


■ Features

- Transcoding/encoding 3-stream full-HD video data simultaneously, enabling 12-stream simultaneous processing for VGA.
- High-quality video encoding even at low latency and low bit-rate.
- Bandwidth-controlled encoding that allows video data to be compressed and redistributed with a rate optimized based on the performance of receiving terminal and the state of communication path.
- Allows real-time image recognition, such as face recognition and object detection, by controlling the processors through our original software.
- High-end decoding for 4K(30fps) video data.
- Up-converts video data from full-HD to 4K.

■ Applications

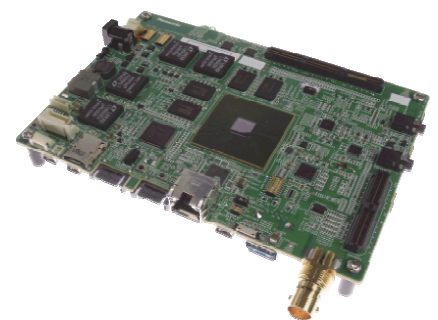
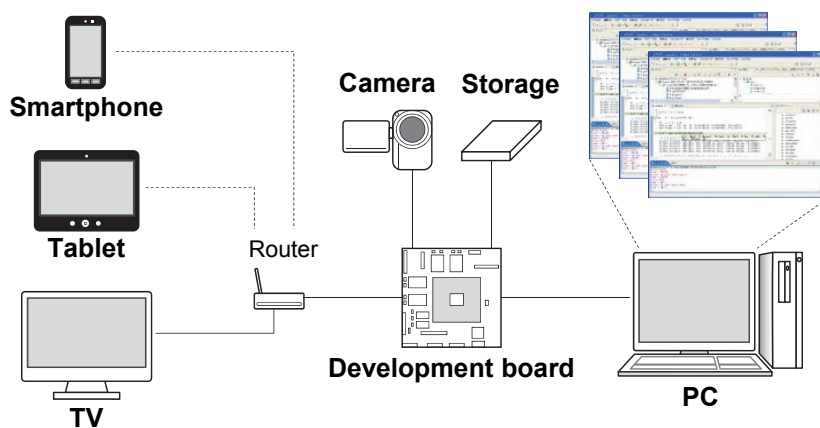
Cloud service, automotive, security, and digital signage equipment.



■ Specifications

Stream		
Input	Stream	MPEG-2 TS (Max.: 40Mbps), etc.
	Bit-rate	Up to 40Mbps (@1-stream)
Output	Stream	MPEG-2 TS (Max.: 20Mbps), etc.
	Bit-rate	VBR/CBR/ABR 100kbps - 20Mbps (@1-stream)
Video		
Input	Digital input	YUV422 8bit/16bit BUS
	Frame rate	Max.: 60fps @1920x1080
	Frame size	Max.: 1920x1080
	Channel	1 channel
Output	Digital output	YUV422/YUV444/RGB 8bit/10bit/12bit
	Frame rate	Max.: 60fps @1920x1080, 30fps @3840x2160
	Frame size	Max.: 3840x2160
	Channel	1 channel
Decode	Codec	H.264, MPEG-2, MPEG-4, DivX, VC-1, AVS, VP8, RealMedia 8/9/10, etc.
	Frame rate	Max.: 60fps
	Frame size	Max.: 1920x1080
	Channel	3 channel (@Full-HD decode)
Encode	Codec	H.264 (High Profile/Main Profile/Baseline Profile, Up to Level 4.1)
	Frame rate	Max.: 60fps
	Frame size	Max.: 1920x1080
	Channel	3 channel (@Full-HD decode)
Audio		
Input	I ² S	x2 (5.1ch+2ch, 2ch)
Output	I ² S	x3 (7.1ch, 2ch) * Partially multiplexed with SPDIF
	SPDIF	x2 (2ch IEC60958) * Partially multiplexed with I ² S
Decode	Codec	Dolby Digital, MPEG-1 L2/L3, MPEG-2 L2/L3/AAC/AAC-SBR, LPCM, DVD-Video/BD-ROM, CD-DA, etc.
Encode	Codec	Dolby Digital, LPCM, MPEG-2 AAC, MPEG-2 AAC-SBR, MP3, etc.

■ Block Diagram



System development board

The Products and product specifications described in this document are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements. All company names, brand names and trademarks herein are property of their respective owners.

Copyright 2016 Socionext Inc.
AD04-00084-1E February 2016
Edited : Visual System Business Unit

Socionext America, Inc.

1250 E. Arques Ave; MS 335
Sunnyvale, CA 94085
(408) 737-5400 | Toll free: (844) 680-3453
www.us.socionext.com
SNA_inquiry@us.socionext.com