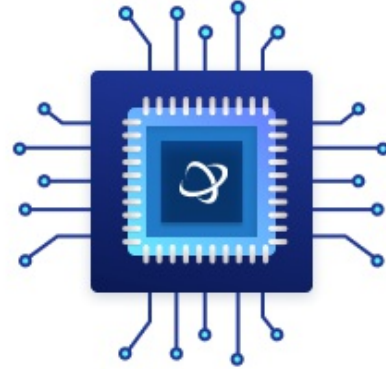


System Synchronizer for IEEE 1588 - Eight Channels

Manufacturers	Renesas Technology Corp
Package/Case	
Product Type	Clock & Timer ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for 8A34001E-000AJG8 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

RFQ

General Description

The 8A34001 System Synchronizer for IEEE 1588 generates ultra-low jitter; precision timing signals based on the IEEE 1588 Precision Time Protocol (PTP) and Synchronous Ethernet (SyncE). The device can be used as a single timing and synchronization source for a system or two of them can be used as a redundant pair for improved system reliability. Digitally Controlled Oscillators (DCOs) are available to be controlled by IEEE 1588 clock recovery servo software running on an external processor. The device supports physical layer timing with Digital PLLs (DPLLs) and other timing blocks necessary to implement a Synchronous Equipment Timing Source (SETS) for SyncE. The DCOs can be controlled using IEEE 1588 information alone, or they can combine IEEE 1588 time information with physical layer frequency information from SyncE in accordance with ITU-T G.8273.2. The device can be used to actively measure and compensate for clock propagation delays across backplanes and across circuit boards to ensure the distribution of accurate time and phase with minimal time error between IEEE 1588 Time Stamp Units (TSUs) in a system. The device supports multiple independent channels that control: IEEE 1588 clock synthesis; SyncE clock generation; jitter attenuation and universal frequency translation. Input-to-input, input-to-output and output-to-output phase skew can all be precisely managed. The device outputs ultra-low-jitter clocks that can directly synchronize SERDES running at up to 28Gbps; as well as CPRI/OBSAI, SONET/SDH and PDH interfaces and IEEE 1588 TSUs.

Features

Eight independent timing channels

Jitter output below 150fs RMS (typical)

Digital PLLs (DPLLs) lock to any frequency from 0.5Hz to 1GHz

DPLLs / Digitally Controlled Oscillators (DCOs) generate any frequency from 0.5Hz to 1GHz

DCO outputs can be aligned in phase and frequency with the outputs of any DPLL or DCO

DPLLs comply with ITU-T G.8262 for Synchronous Ethernet (SyncE)

IEEE 1588 Support:

DCOs can be controlled by external IEEE 1588 software to synthesize Precision Time Protocol (PTP) / IEEE 1588 clocks with frequency resolution less than 1.11×10^{-16}

Combo Bus simplifies compliance with ITU-T G.8273.2

Precise (1ps) resolution for phase measurement and control

All outputs/inputs can be configured to decode/encode PWM clock signals

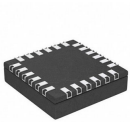
PWM can be used to transmit and receive embedded frame and sync pulses; as well as Time of Day (ToD) and other data

Device requires a crystal oscillator or fundamental-mode crystal: 25MHz to 54MHz

Optional XO_DPLL input allows a wider range for XO, TCXO or OCXO frequencies from 1MHz to 150MHz for applications that require a local oscillator with high stability

Serial processor ports support 1MHz I2C or 50MHz SPI

Related Products



[8SLVP1208ANBGI](#)

Renesas Technology Corp
28-WFQFN



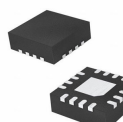
[83058AGILFT](#)

Renesas Technology Corp
16-TSSOP (0.173", 4.40mm Width)



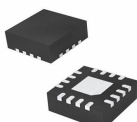
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Renesas Technology Corp
TSSOP-16



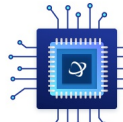
[8V89308ANLG18](#)

Renesas Technology Corp
32-VFQFN



[8V89308ANLGI](#)

Renesas Technology Corp
32-VFQFN



[8T39S08ANLG18](#)

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[8SLVP2108ANLG18](#)

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48-VFQFN



[8SLVP2108ANLG1/W](#)

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48-VFQFN