OSA 5533C SDU

Synchronisation Distribution Unit

➢ Synchronisation Distribution Unit with holdover capability

➢ Input signals: single or dual synchronisation inputs

➢ Output signals: up to 48 synchronisation outputs (Option 64 outputs depending on connector type)

➢ Re-timing function: up to 24 E1 or T1 traffic carrying signals

➢ Holdover capability: Compliant to ITU-T G.812 SSU (Type III) requirements

➢ Full support of SSM on E1/T1, both on inputs and outputs

➢ Wide choice of output interfaces [2.048 Mbit/s (E1), 1.544 Mbit/s (T1), 64/8 kbit/s Composite Clock (CC), 2.048/5/10 MHz]

➢ Output protection: protected (1:1) and unprotected mode

➢ Wide choice of connectors and impedances

➢ Fully manageable, both locally (RS-232) via Local Manager SW and remotely (10BaseT Ethernet) via SyncView™ Management SW

➢ Fully maintenance-free operation

The leading partner for your synchronisation needs

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Introduction

The steady expansion and growth of telecommunication services has resulted in the implementation of complex networks. These often contain a large number of network elements requiring proper synchronisation to ensure a smooth network operation with the required quality of service.

Further growth results in additional output capacity being required at the network nodes to synchronise the supplementary elements and thus makes it necessary to implement expansion synchronisation equipments.

To meet this requirement, Oscilloquartz proposes its compact Synchronisation Distribution Unit **OSA 5533C SDU**.
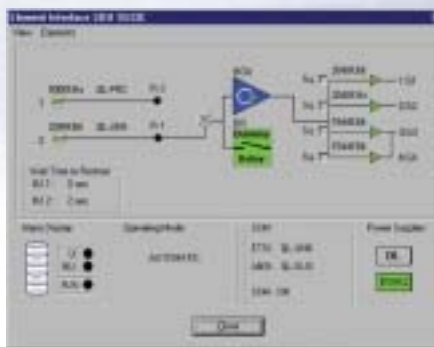
Overview

The **OSA 5533C SDU** provides a very economic and reliable solution to the distribution of synchronisation references to network elements, such as switches, cross-connects and multiplexers.

The **OSA 5533C SDU** provides up to 48 outputs referenced to the selected input or to the Holdover Unit. A 1:1 card protection is optionally available for all output cards.

With the **OSA 5533C SDU** it is also possible to re-time up to 24 traffic-carrying signals. Hence the **OSA 5533C SDU** is ideally suited to stand-alone clock distribution requirements in all SDH or SONET nodes where a stable reference is available.

The equipment can be configured with single or dual inputs and it accepts references such as E1, T1 or various frequencies (2.048/1.544/1/5/10 MHz).

Finally, the **OSA 5533C SDU** fully supports Synchronisation Status Messaging (SSM) to implement self-healing synchronisation networks.

Holdover function

A highly functional Holdover Unit (HOU) ensures that the **OSA 5533C SDU** continues to deliver output references even when all inputs are lost/not valid.

The HOU contains an oven controlled crystal oscillator with a stability better than 5E-10/day, exceeding the requirements of ITU-T G.812 SSU (Type III).

Moreover, the HOU ensures hitless input switchover, provides jitter and wander attenuation, and maintains output phase changes within the limits specified in G.812.
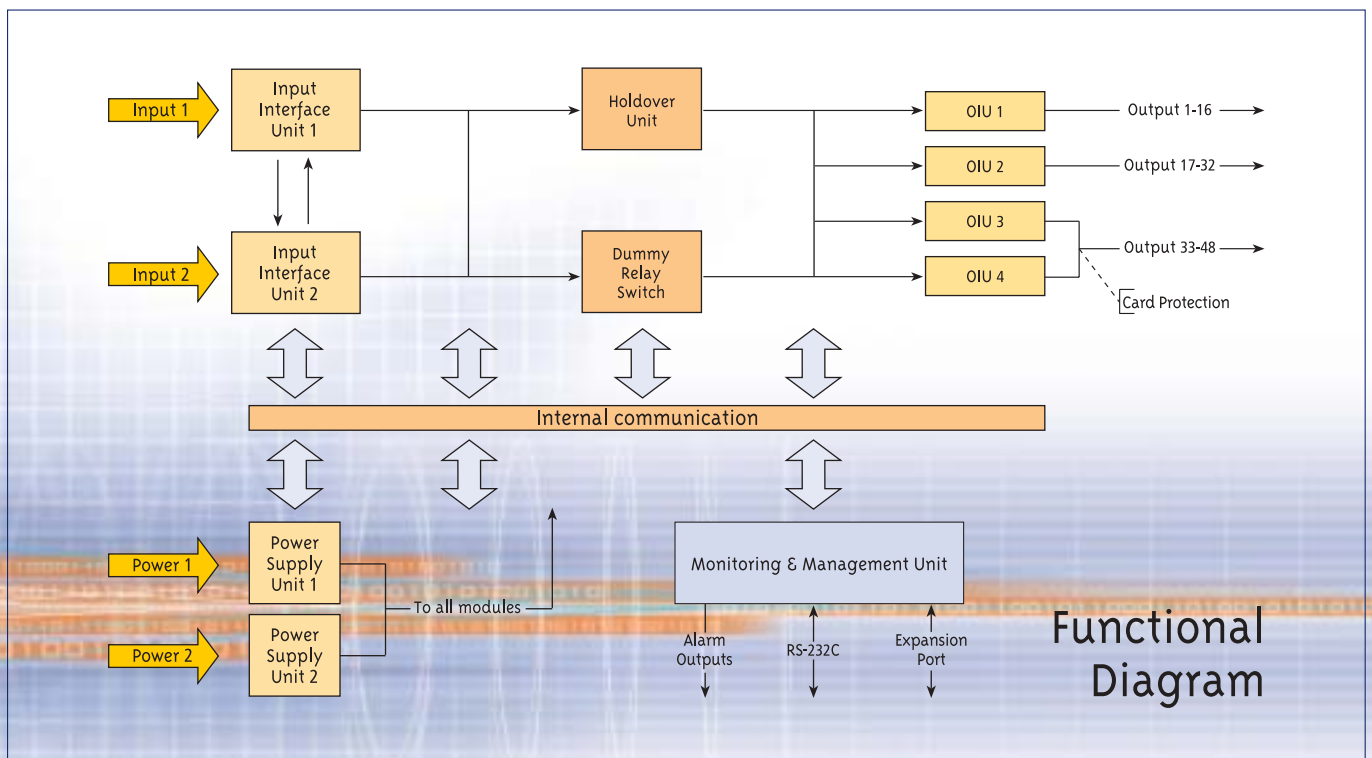
Output and re-timing

The **OSA 5533C SDU** can provide both synchronisation distribution and traffic re-timing, avoiding the need for separate equipment (and additional management connections).

It can provide up to 48 output synchronisation signals of telecom formats (E1, T1, and/or various frequencies), up to 24 E1/T1 re-timing channels or a combination of outputs and re-timing. Optionally, 64 outputs are available depending on connector type.

Full SSM management

The **OSA 5533C SDU** can effectively be employed in self-healing synchronisation networks thanks to its full implementation of Synchronisation Status Message (SSM) management.

Functional Diagram

Management

The **OSA 5533C SDU** is manageable in three different ways :

➤ Locally, through the RS-232 port using the OSA Local Manager for 5533C, a graphical, intuitive, windows-based application.

➤ Remotely, through the RS-232 port and modem/LAN connection, using the same Local Manager coupled with the OSA Remote Access Manager (RAM) software.

➤ Remotely, through TCP/IP connection to the network management centre, using Oscilloquartz' renowned synchronisation management system SyncView™.

Technical Specifications

Physical dimensions (H x W x D) :

➢ ETSI: 6U (266 x 535 x 240) mm
➢ 19": 3U (133 x 483 x 270) mm

Power :

Up to 2 power supplies in any combination of :

➢ 36-72 VDC
➢ 150-265 VAC
➢ 65-132 VAC

Holdover Unit (HOU) :

➢ Based on OSA OCXO 8741
➢ Long term stability :   < ±5E-10/day
                            < ±1E-7/year

Input signals :

Up to 2 synchronisation inputs chosen among[1] :

➢ 2.048 MHz
➢ 2.048 Mbit/s (E1)
➢ 1.544 Mbit/s (T1)
➢ 64kHz
➢ 1 MHz
➢ 1.544 MHz
➢ 5 MHz
➢ 10 MHz

Output signals :

Up to 48 unprotected / 32 protected outputs selectable
in groups of 16 among :

➢ 2.048 MHz
➢ 2.048 Mbit/s (E1)
➢ 1.544 Mbit/s (T1)
➢ 64/8 kbit/s Composite Clock (CC)
➢ 5MHz
➢ 10MHz

(Option 64 outputs depending on connector type)

Re-timing :

➢ Re-timing of up to 24 E1/T1 traffic-carrying signals

Management :

➢ Local Manager through RS-232C connection
➢ Remotely manageable through RS-232C + modem (POTS/LAN) via RAM for Local Manager (see separate Remote Access Manager datasheet)
➢ Remotely manageable through 10BaseT Ethernet interface via the OSA SyncView™ synchronisation management system

[1] E1 input/output cards cannot be mixed with T1 or CC input/output cards in the same equipment

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