

Product Brief v1.10 2012-7 Monolithic SDH TM/PHY Multiplexer and Mapper

Overview

RC7883A1 is a low price product designed on the basis of RC7880A1; The core design and package of RC7883A1 is the same with that of RC7880A1.

RC7883A1 provides three kinds of application modes: TM mode, PHY mode and MAP mode. The three modes can be configured by register.

TM mode is suitable for STM-1 terminal multiplexer; PHY mode is suitable for dual STM-1 optical line multiplexer; and MAP mode is suitable for 24 E1 Mapper. For PHY mode, the telecom-bus can work at floating mode, the C1J1/SPE control signal is added, and VC-4 interface can be provided. For MAP mode, two bus control signals are added, which is convenient for the simplified telecom bus extension. For TM (or PHY, or MAP) mode, some useless units will be inhibited.

Comparison between RC7883A1 and RC7880A1

Model	Mode	STM-1	E1	VC-4 interface	1+1 protection
RC7880A1	ADM	2	24	not supported	optional
RC7883A1	TM	2	24	not supported	necessary
RC7883A1	PHY	2	4	supported	not supported
RC7883A1	MAP	0	24	not supported	optional

Features

■ RC7883A1 is a low price product designed on the basis of RC7880A1; it provides the following three kinds of application modes: TM, PHY and Mapper.

■ TM Mode

- Achieves STM-1 SDH Terminal Multiplexer for point to point network only with 1+1 VC-12 path protection.
 - 24 E1 mapping units are built in, and the number of E1 can be extended to 63 via telecom-bus.
 - Other functions are as same as RC7880A1.
- **PHY Mode**
- Provides 2xSTM-1 optical interface.
 - The function of LOHP, TUPP, SEC, OH-DXC, OHI, EOW, MPI and GSIO unit are the same with that of RC7880A1
 - Provides 4 E1 mapping units.
 - In the PHY mode, the TU-DXC unit does not support 1+1 protection.
 - STB_C/STB_D can be set as TU-12/TU-3/VC-4 structure independently
- **MAPPING Mode**
- 24 E1 mapping /de-mapping to/from STB_C/STB_D Telecom-bus.
 - The function of MPI, GSIO unit is the same with that of RC7880A1.
 - The function of STBI unit is added, two control signals convenient for the simplified telecom bus extension are added.
 - The function of TU-DXC is simplified, which only achieve telecom bus straight through connecting between MAP unit and STBI unit.
 - The function of LOHP, TUPP, SEC, OH-DXC, OHI and EOW are inhibited

Functional Block Diagram

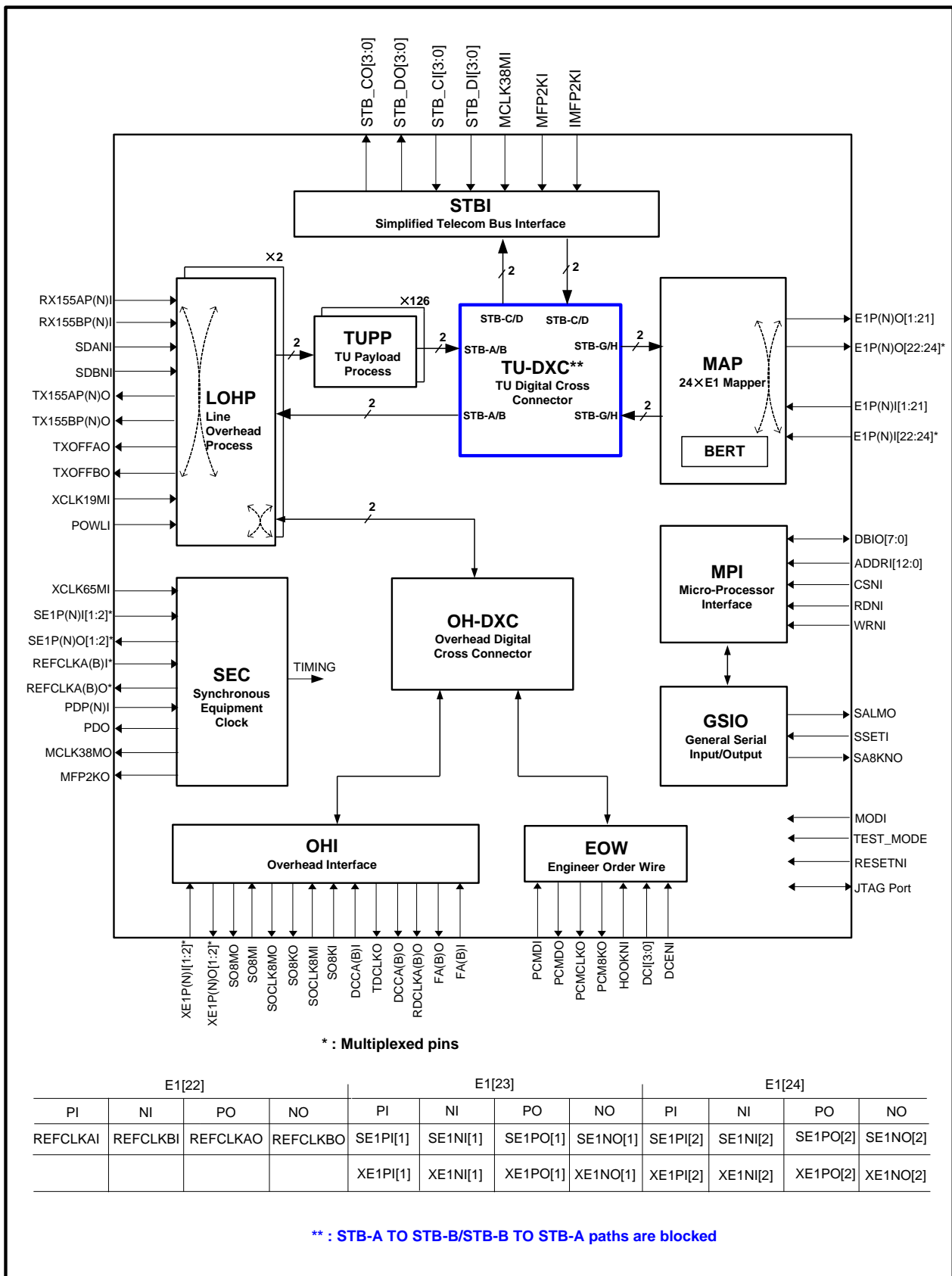


Figure 3-1 RC7883A1 TM mode

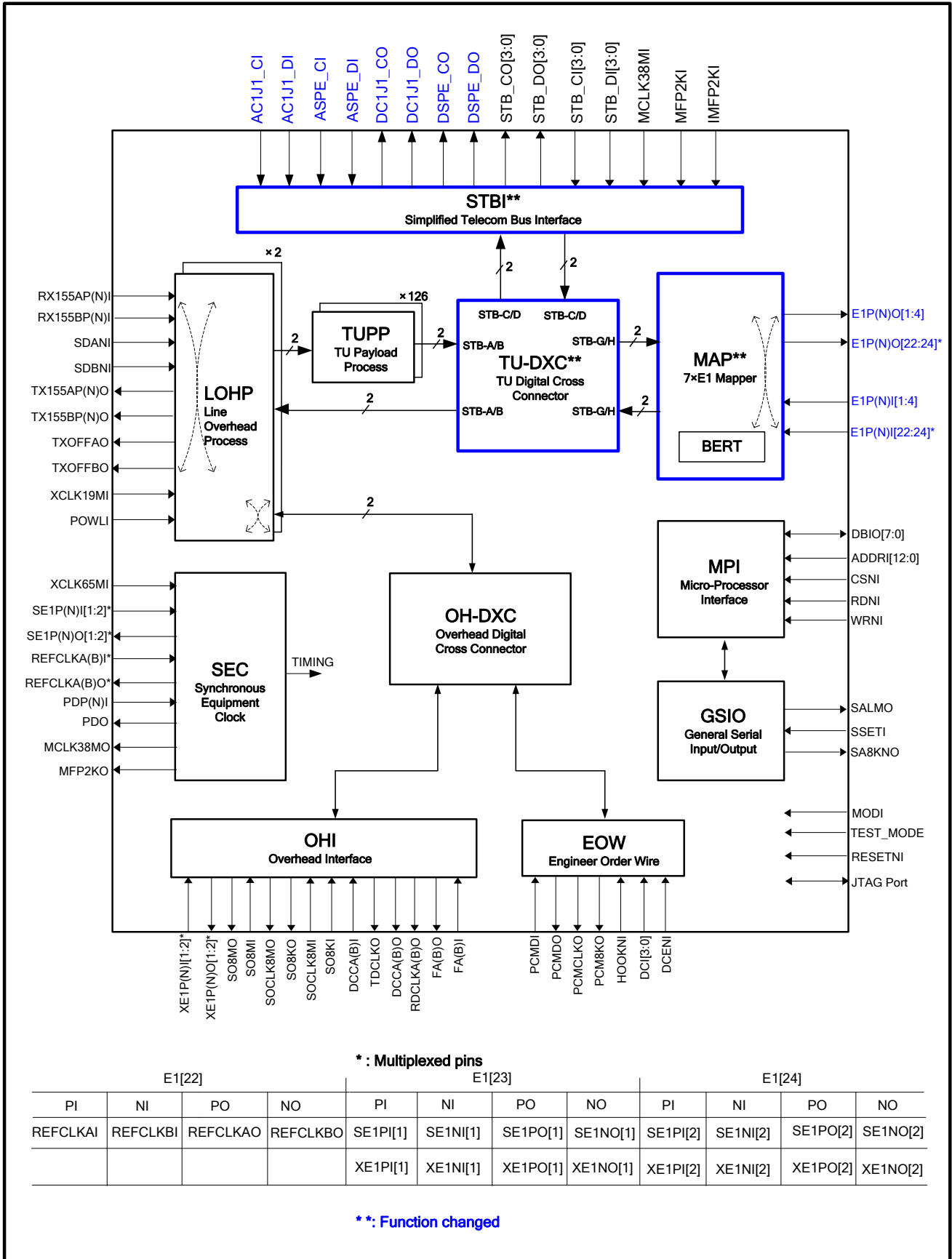


Figure 3-2 RC7883A1 PHY mode

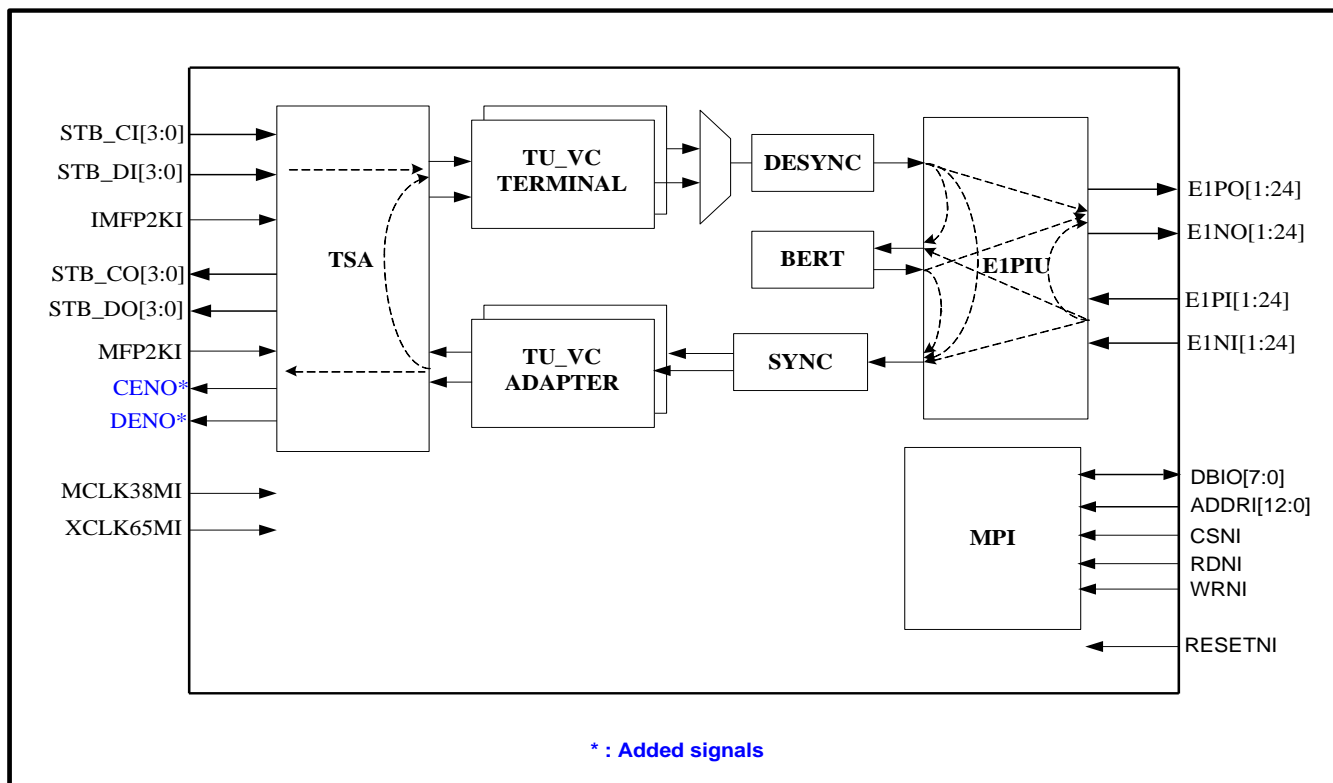


Figure 3-3 RC7883A1 MAPPING mode

Application

- SDH TM Multiplexer
- SDH Hub
- SDH E1 Mapper

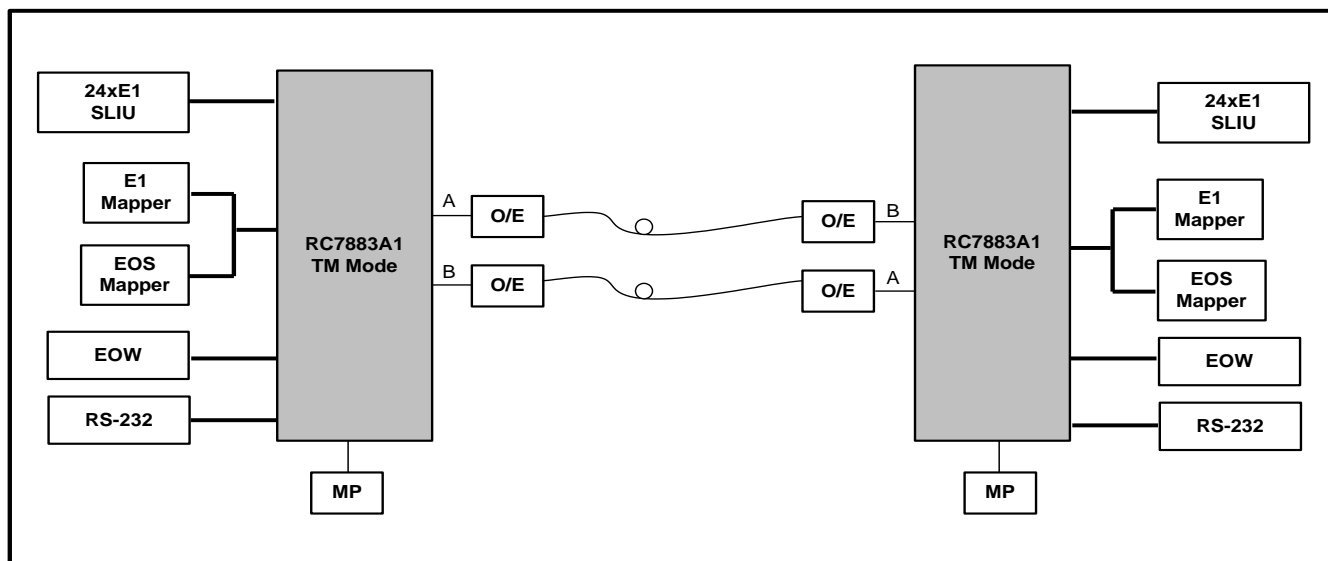


Figure 4-1 SDH Terminal Multiplexer Application

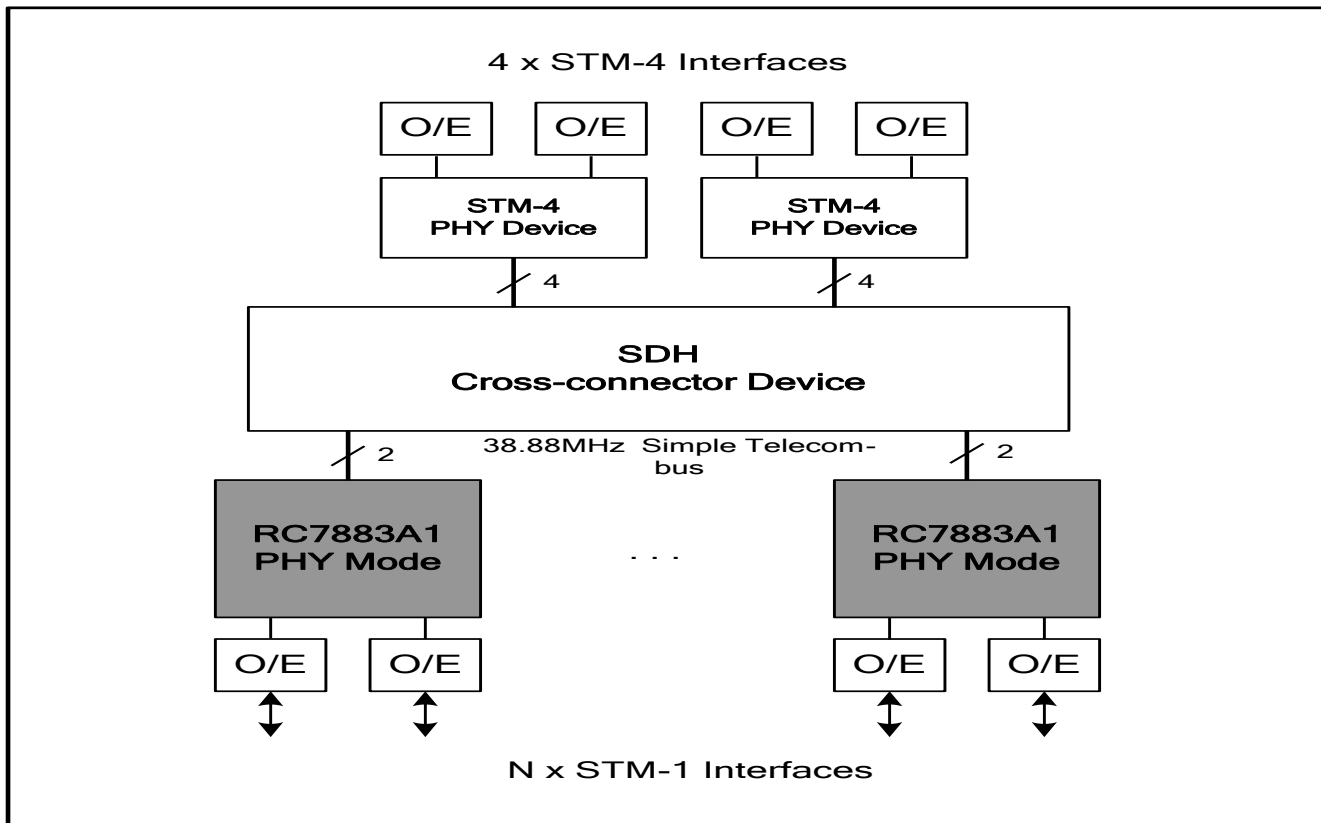


Figure 4-2 SDH Hub application

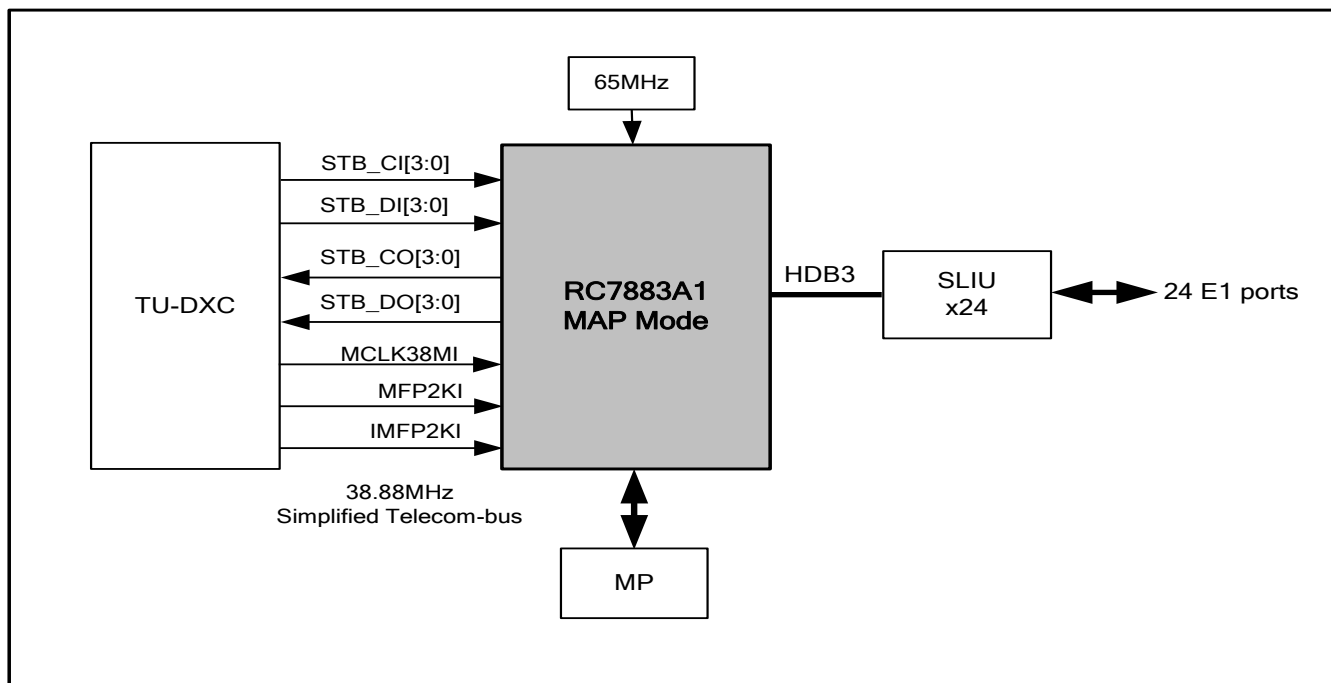


Figure 4-3 SDH E1 Mapper application