

SAGEM ADR 10000

Multi-Service STM64 NG SDH platform



- Secure transport over SDH
- Flexible, scalable and fully protected platform
- Innovative data interfaces with advanced Ethernet Switch features



Sagem Communication
SAFRAN Group



SAGEM ADR 10000

Multi-Service STM64 NG SDH platform

OVERVIEW

As TDM, packet, and data services in metro networks grow continuously, metro core layer is not only required to provide large transmission bandwidth, but also large-capacity cross-connect scheduling of different services, and end-to-end cross-connection of various services. As an STM-64 MSTP, **SAGEM ADR 10000** is equipped with large-capacity SDH cross-connect plane and independent data switching plane, providing high-efficiency cross-connect scheduling of different services at metro core layer, therefore full-path connection of services in the entire network.

KEY FEATURES

- Supports 12 STM-64 or 14 STM-16 optical interfaces, fully satisfying networking needs of complex topology such as ring/mesh networks at metro core layer.
- L1/L2 dual-core architecture, providing optimal transmission solutions combining TDM services and data services.
- Powerful TDM cross-connect processing plane, providing 1024*1024 VC-4 high-order cross-connect processing capability, and 94*44 VC-4 (equivalent 5922*5922 VC-12) low-order cross-connect processing capability.
- Independent data switching core supporting 10G data switching, realizing flexible scheduling of data services at the core layer.

TECHNICAL FEATURES

SDH SPECS

SDH INTERFACE

- Supports I-64.1, S-64.2b, L-64.2a, V-64.2a, and V-64.2b optical interfaces
- Supports S16.1, L16.1, L16.2, V-16.2 optical interfaces
- Supports S4.1, L4.1, L4.2, V-4.2 optical interfaces
- Supports S1.1, L1.1, L1.2 optical interfaces
- Supports up to 12 STM-64 optical interfaces
- Supports up to 14 STM-16 optical interfaces
- Supports up to 56 STM-4 optical interfaces
- Supports up to 224 STM-1 optical interfaces
- Supports up to 128 STM-1 electrical interfaces
- Compliant with ITU-T G.957, G.958, G.825, G.691, YD/T767-1995

PDH SPECS

E1 INTERFACE

- Supports up to 504 E1 interfaces (1 group 1:4 TPS)
- Provides 75 ohm/120 ohm resistance

E3/T3 INTERFACE

- Supports up to 96 E3/T3 interfaces (2 groups 1:4 TPS)
- Configurable interface mode as E3 or T3

STANDARD COMPATIBILITY

- Compliant with ITU-T G.703, G.704, G.823, G.824, YD/T877-1996

CLOCK AND OVERHEAD

CLOCK

- Supports three modes: tracking/free running/hold
- Supports three clock sources: external/line/tributary
- Built-in crystal Stratum 3
- Provides 2 input/output external clock interfaces (2048kHz and 2048kbit/s)
- Supports SSM protocol, auto switch-over between clock sources
- Compliant with ITU-T G.813, G.704, YD/T900-1997

OVERHEAD PROCESSING AND ECC

- Supports 84 DCC directions
- Supports using E1 interface to transmit DCC information

DATA SPECS

ETHERNET INTERFACE

- Supports up to 224 10/100BASE-T interfaces (IEEE 802.3-2000, IEEE 802.3u)
- Supports up to 224 100BASE-Fx (IEEE 802.3-2000, IEEE 802.3z)
- Supports up to 14 1000BASE-SX/LX (IEEE 802.3-2000, IEEE 802.3z)

MAPPING AND ENCAPSULATION

- Uses GFP encapsulation (ITU-T G.7041)
- Supports VC-12-Xv/VC-3-Xv/VC-4-Xv mapping (ITU-T G.707)
- Supports up to 32 VCG
- Supports LCAS (ITU-T G.7042)

PROCESSING CAPABILITY

- Supports Ethernet switching and bridging (IEEE 802.1d)
- Supports VLAN, ranging 1~4095 (IEEE 802.1q)
- Supports VLAN or physical port based VLL and VPLS user classification
- VLL and VPLS services support CAR, with the CAR adjustment range of 64kbps~1000Mbps, at the step of 64kbps
- Supports standard MPLS labeling

VLL SERVICE

- Supports port aggregation of FE to FE, FE to GE, GE to GE
- The max. aggregation ratio for FE ports is 128:1, for GE port is 1024:1

VPLS SERVICE

- Each physical port supports up to 128 VPLS domains
- Supports MAC address diffusion within VPLS domain
- Supports L2 broadcast/multicast

OVERALL SPECS

CROSS-CONNECT CAPACITY

- Supports VC-4/VC-3/VC-12 level cross connect processing
- High-order cross-connect capacity: 1024*1024 VC-4
- Low-order cross-connect capacity: VC-4 (equivalent 5922x3922 VC-12)
- Data switching capacity: 10G

DEVICE PROTECTION

- Supports 1+1 backup of -48V power supply
- Supports 1+1 protection of the clock unit
- Supports 1+1 protection of the cross-connect unit
- Supports 1 group 1:4 TPS of E1/T1
- Supports 2 groups 1:4 TPS of E3/T3 or STM-1(e)

NETWORK PROTECTION

- Supports 2-fiber bi-directional MSP
- Supports 4-fiber bidirectional MSP
- Supports SNCP, DNI
- Supports linear multiplex section 1+1/1:1 protection
- Compliant with ITU-T G.841

NETWORK ELEMENT TYPES

- TM, ADM, MADM

PERFORMANCE

- ITU-T G.783, G.826, G.829

STANDARD COMPATIBILITY

- ITU-T G.707

AUXILIARY INTERFACES

- 1 RJ-45 orderwire interface
- 3-input and 1-output Boolean interfaces
- 1 Ethernet management interface, and supports management interface cascading
- 1 USB interface

SUBRACK

- Dimension: W 436mm D 255mm H 977mm
- Weight: 30kg

INSTALLATION

- ETS300 119 standard 300mm-depth rack

ENVIRONMENT AND SAFETY REGULATIONS

OPERATING TEMPERATURE

- Long term: -5/+45°

RELATIVE HUMIDITY

- Long term: 10%/85%

POWER SUPPLY

- -48V DC, range of -36V/-72V (typical configuration: 300W)

EMC AND SAFETY REGULATIONS

- EN60950
- EN55022 Class B ETSI EN300 386V1.2.1 (2000)
- GR-1089-CORE(1999) Level 3

