TL 9000
ISO 9001
KSA 9001

TranSync-UM

Clock Generation and Distribution System

SSU (Synchronization Supply Unit)

DOTS (Digital Office Timing Supply)

- Possible to insert or detect SSM data
- Selectivity for input source
- Various Timing and clock outputs
- Full redundancy for input, clock generation and frame unit
- By passing the external reference input when the malfunction of clock generation units for seamless service.
- Can supply 32 outputs per a unit. (Redundancy 4 x 32 ports)
- Serial communication port for easy control and maintenance.
- Support GUI interface with NMS for remote control and maintenance.
- 10MHz, 1PPS, 1.544MHz, 2,048MHz- E1, T1, 2M SYMC, DS1,64/8KHz (Composite clock), RS-422

TranSync-UM

SSU (Synchronization Supply Unit)
DOTS (Digital Office Timing Supply)

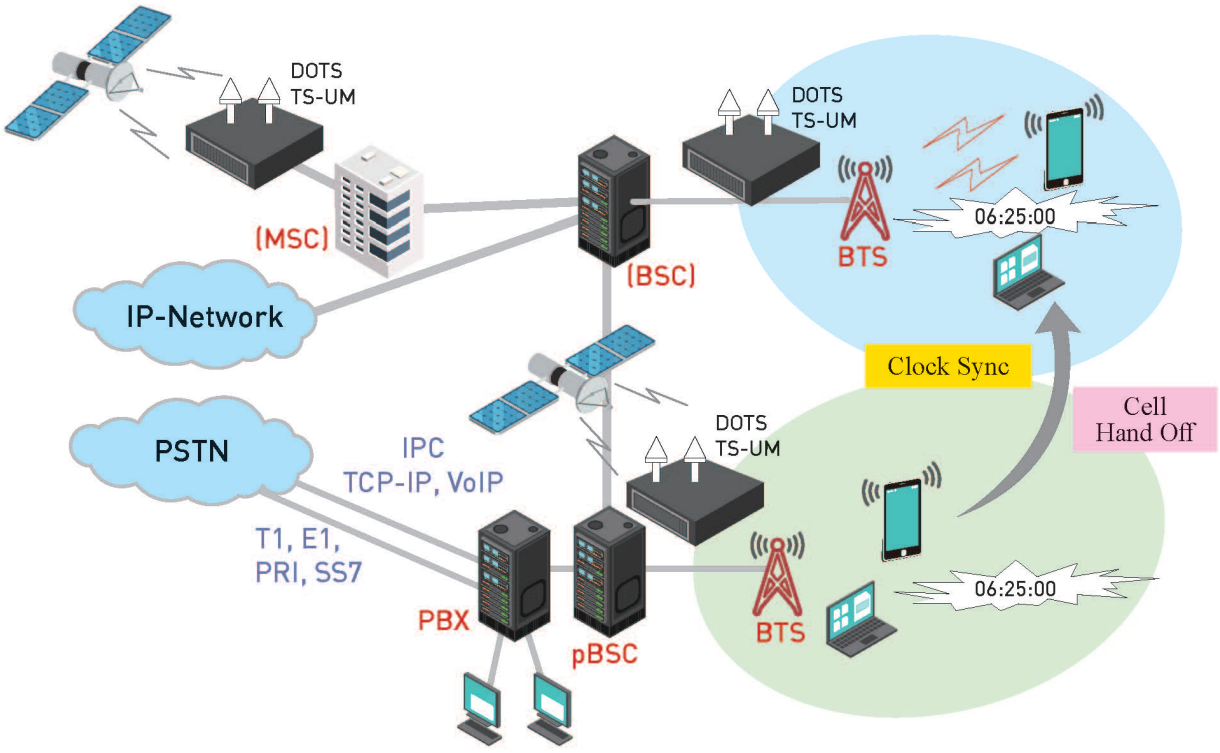
Clock Generation and Distribution System

The concept of telecommunication by customers have been changed from commonly usages for their every lives to their inevitable possessions. That leads the global demands for telecommunication to have increased dramatically over the last few years. The customers are eager for attaining more information rapidly and accurately as much as they can through the networks. The effort that satisfies such demands by customers finds out the solution to make your networks to be synchronized.

Synchronization improves the quality of service as improving network efficiency and accuracy to maximize usage of capacity. It is difficult for customers to search the information in rapid and accurate manner if the synchronization performs improperly.

Building integrated timing supply, Transync UM has been developed to ensure networks run at optimum efficiency as eliminating problems generated by poor synchronization and can provide a highly precise signal to networks.

The TranSync UM is designed as clock generation & distribution system for the small and middle telecommunication base stations since it is capable of being easily expandable. In addition, the full redundancy makes the system to improve its reliability.



Main system Construction

RCV Unit : Receive external reference signals

- E1 RCV : GPS signal 1 port + 2.048Mbps signal 4 ports
- T1 RCV : GPS signal 1 port + 1.544Mbps signal 4 ports
- 2M SYNC RCV : GPS signal 1 port + 2.048MHz 4 ports
- 1:1 Redundancy

Clock Unit : Generate and supply highly reliable timing signal

- CGU-2E(LV-2E) : Rubidium oscillators (Stratum 2E)
- CGU-3E(LV-3E) : OCXO(Oven controlled crystal oscillators), (Stratum 3)
- Supports GUI interface with NMS for remote control and maintenance.
- Can supply 32 outputs per a unit. (Redundancy 4 x 32 ports)

DIS Unit : Make and supply various type of output signals

- E1 DIS : 2.048Mbit/s(ITU-T G.703/6, 120Ω) max. 32 ports / Unit
- T1 DIS : 1.544Mbit/s(ITU-T G.703/2, 100Ω) max. 32 ports / Unit
- 2M SYNC DIS : 2.048MHz(ITU0T G.703/10, 100Ω) max. 32 ports/Unit
- CC DIS : 64/8K composite clock, ITU-T G.703/1, max. 32 ports/unit
- DS1 DIS : DSX-1 pulse template corner point according to CS119, max. 32 ports/Unit
- 2M RS-422 DIS : TB 244nsec, TR 24.4nsec, Vss = 2~6Vpp
- 1.5M RS-422 DIS : TB 244nsec, TR 24.4nsec, Vss = 2~6Vpp
- Output protection : 1:1

TIM unit : Insert local timing data

- E1 TIM : Insert timing data on W1 signal (CAS,CCS,HDB3) Input signal monitoring for LOS,AIS,LOF
- T1 TIM : Insert timing data on T1 signal (D4,ESF,B8ZS/AMI) input signal monitoring for LOS,AIS,OOF

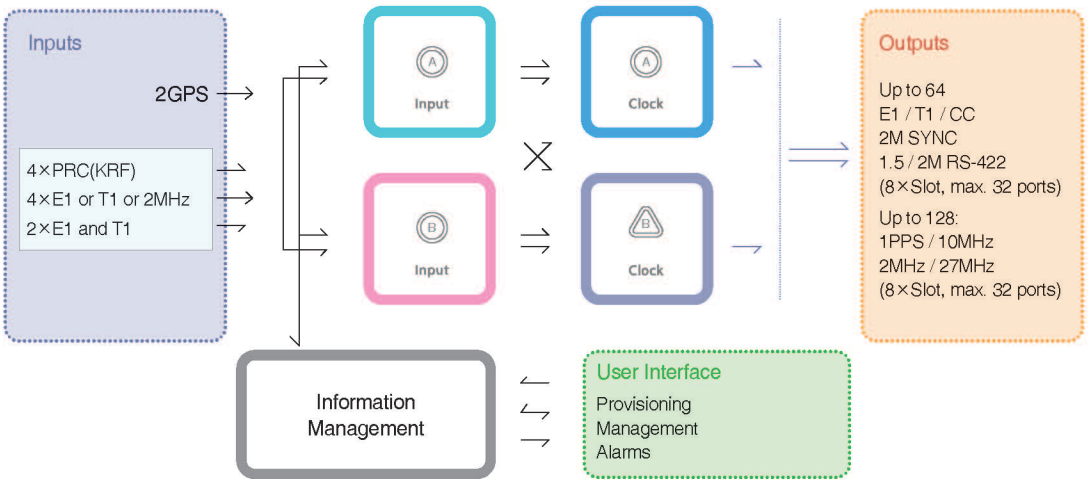
PSM unit : Monitor phase and frequency of the input signals in comparison to the active clock unit or clock input signal.

- E1 PSM : Precision synchronization monitoring for E1 (LOS,AIS,LOF,CRC,EBER), calculate MTIE.
- T1 PSM : Precision synchronization monitoring for T1 (LOS,AIS,LOF,CRC,EBER), calculate MTIE.

SMU Unit : Used in both main shelf configurations to report major and minor alarms to MCU Unit.

CGU unit : Installed in the main shelf, provide office and remote telemetry surveillance and control for the Transync UM system.

System Diagram



TranSync-UM

Clock Generation and Distribution System

Reference Sinal Source				
Signal Type	E1	T1	2M	GPS / GLONASS
Interface	G.703 / 6	G.703 / 2	G.703 / 10	DC Power 5 ± 0.5V
Rate	2.048 Mb/s	1.544 Mb/s	2.048 Mb/s	1574.42 ~ 1614.94 MHz
Impeddance	120Ω	100Ω	120Ω	50Ω (Normal)

Internal Clock		
Clock Type	CGU-2E Rubidium	CGU-3E OCXO
Holdover (Constance Temp)	2×10^{-11}	1×10^{-10}
Pull - in Range	1.6×10^{-8}	1.75×10^{-7}

Timing Output						
Signal Type	E1	T1	2M / SYNC	Composite Clock	Analog	PTP / NTP
Interface	G.703 / 6	G.703 / 2	G.703 / 10	Bipolar RTZ	Sine Wave	LAN (1G, 10G)
Frequency or Rate	2.048Mb/s	1.544Mb/s	2.048Mb/s	64 / 8Kbps	5 / 10MHz	Network Time Protocol. IEEE1588

Communication Management	
Port	RJ - 45 (LAN interface), RS - 232C (Serial port)
Speed	RJ - 45 : 1G lan

Communication Management	
Size	Shelf : 4U 19 Inch 177.0mm(H)×482.4mm(W)×419.1mm(D)
Power	Supply : -48V DC(-43~54V DC), Consumption : 300W
Operafing Temperature	0°C ~ 50°C
Storage Temperature	0°C ~ 70°C

* Specifications are subject to change without notice

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