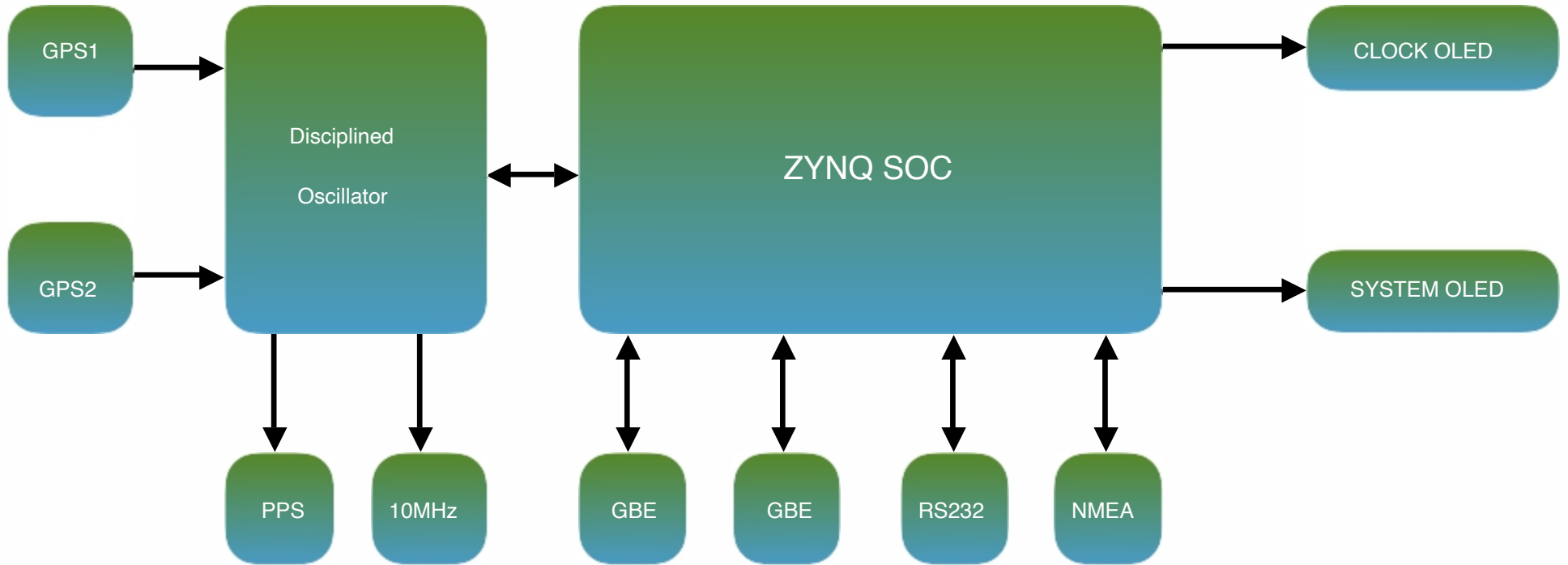# iClock TIME SERVER

iClock Time server is a master clock for time synchronisation for electronic systems such as Telecommunication , Broadcasting , Air traffic management , Instrument , Banking. iClock system architecture base on Satellite time and OCXO to maintains a very precise timing if the PPS signal lost.iClock come with dual satellite receiver for reliable operation and also including the Network time protocol.

KEY FEATURES

-GPS   Stratum   1 operation

-High-bandwidth   NTP   time   server 1000 request/second

-Internal   Oven   control   oscillator

-Dual   satellite   receiver

-GPS   GLONASS BeiDou time and frequency synchronization

-Gigabit   ethernet dual port

-Secure   web-base   control and management

-OLED   display

-SNMPv3 for RCMS management software

Systems Block Diagram

Time server Specification

Internal oscillator	OCXO
Accuracy average after 24 ours with GPS signal	1x10^-10 / day
Stability average after 2 weeks with GPS signal	2x10^-8 / day
Holdover constant temp after 2 weeks of GPS lock	After 24Hr 1uS
Time protocol	NTP v2,v3,v4 , SNTP
Clock display	OLED 6 digit 24Hrs/12Hrs
Network connection	RJ45 1GB x 2
Frequency Stability	+/- 0.05 PPM
Systems synchronization	GPS , GLONASS , BeiDou
Antenna connection	N-Type female x 2
Antenna voltage	3.3VDC / 5VDC / 12VDC
Systems display	OLED 256 x 64
Plus per second output	SMA female
Reference output	SMA female 10 MHz
Systems indication	Alarm, Operation , Synchronization , Network , Receiver
Hardware platform	Xilinx Zynq
Operating systems	Petalinux
Power supply	100 - 240 VAC 50/60Hz & DC 15 - 32 V
Operating temperature	0 - 50 Celsius
Dimensions	1HU 19" Rack 420 x 300 x 44 mm

Slave Clock Specification

Clock display	OLED 6 digit separating for Hour : Minute : Second
Network connection	RJ45 1GB x 1
Free Running Time Reference	TCXO
Time Synchronization	NTP v2,v3,v4
Clock display format	24Hrs/12Hrs
Clock display	OLED 256 x 128
Display color	Green
Display digit height	52 mm
Display brightness control	PWM 10 - 100%
Hardware platform	Jetson Nano
Operating systems	Linux
Power supply	24V PoE , DC 15 - 32 V , AC 220V Adaptor
Operating temperature	0 - 50 Celsius
Dimensions	Width 150 mm Height 90 mm Depth 100 mm with M4 locks.