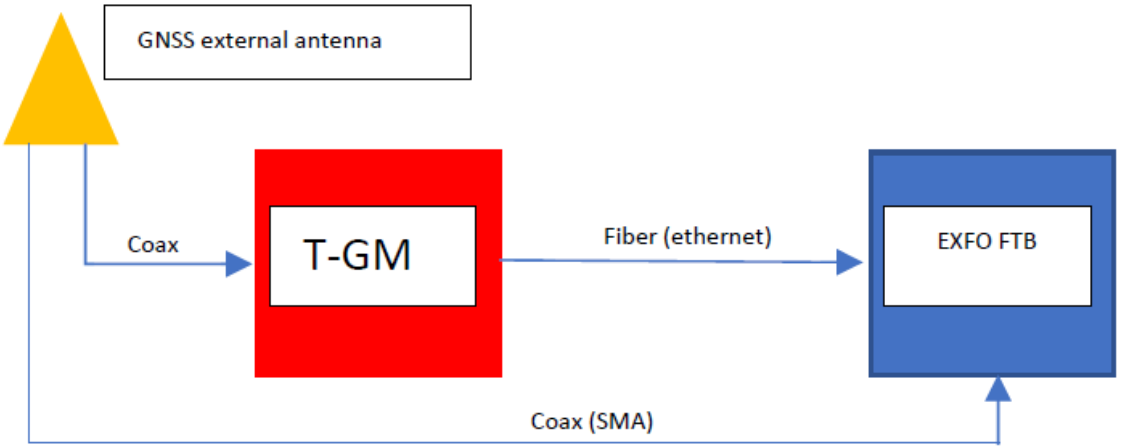
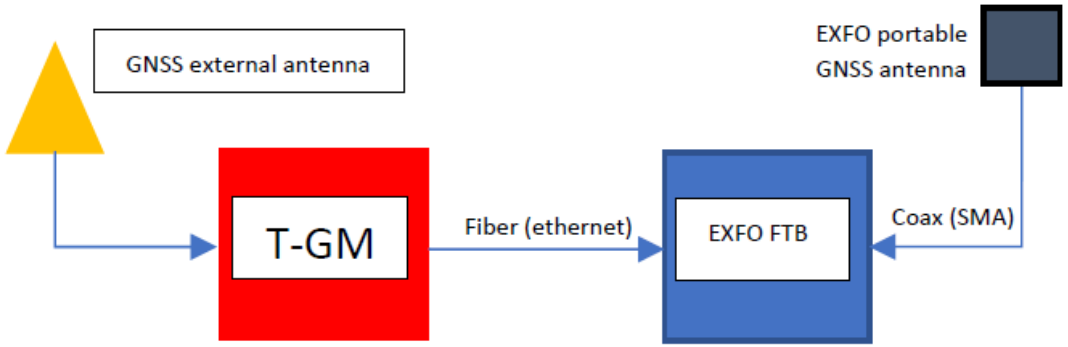
PTPテスター

レポート出力機能

TEST SETUP



Or



EXFO

FTBx-88260 Report

PASS

Report Header:	EXFO Inc.
Report Title:	
Report Date:	6/3/2024 10:58:46 PM
Type:	Time Error/Wander

SUMMARY

Results Summary

Time Error

Time Error metrics	
Max TE (ns)	-315
Min TE (ns)	-351
Max Absolute TE (ns)	351
Max dTEh pk-pk (ns)	--
Last cTE (ns)	-328
Max PDV Fwd (BC -> Client) (ns)	70
Max PDV Rev (Client -> BC) (ns)	102

Test Status	
Test Status	Completed
Pass/Fail Verdict	PASS
Start Time	6/3/2024 10:57:13 PM
Duration	00d:00:00:31
Test Recovery	0

RX Power Level		
	Min	**Max**
Power Range (dBm)	-18.0	1.5
RX Power Level (dBm)	-5.9	-5.9

TEST SETUP

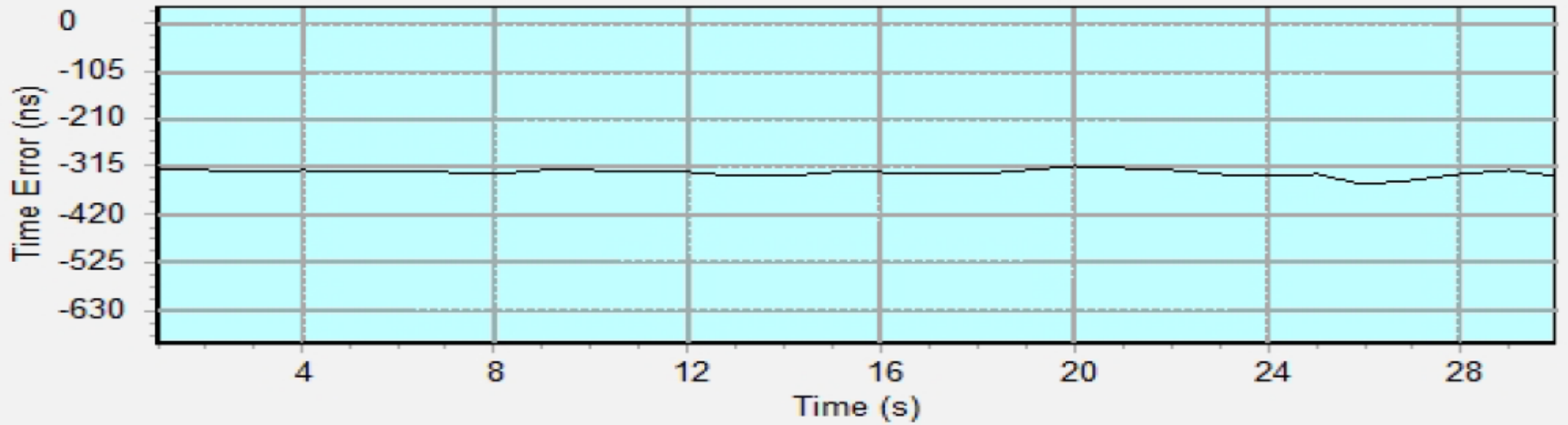
Reference	
Mode	Internal GNSS
Internal GNSS	
Reference	1PPS
Connector	Antenna

1588 PTP

BC Info		
Attribute	**Description**	**Code**
Port Identity		00-C0-10-FF-FE-0A-E3-03
Grandmaster Identity		00-17-47-FF-FE-70-2C-E2
UTC Offset	37 s	
Clock Class	QL-PRC/PRS	6
Clock Accuracy	Accurate within 100 ns	21
Time Source	GPS	20
Clock Type	One-step	
Steps Removed		1

Analysis - Time Error or Time Interval Error

Time Error



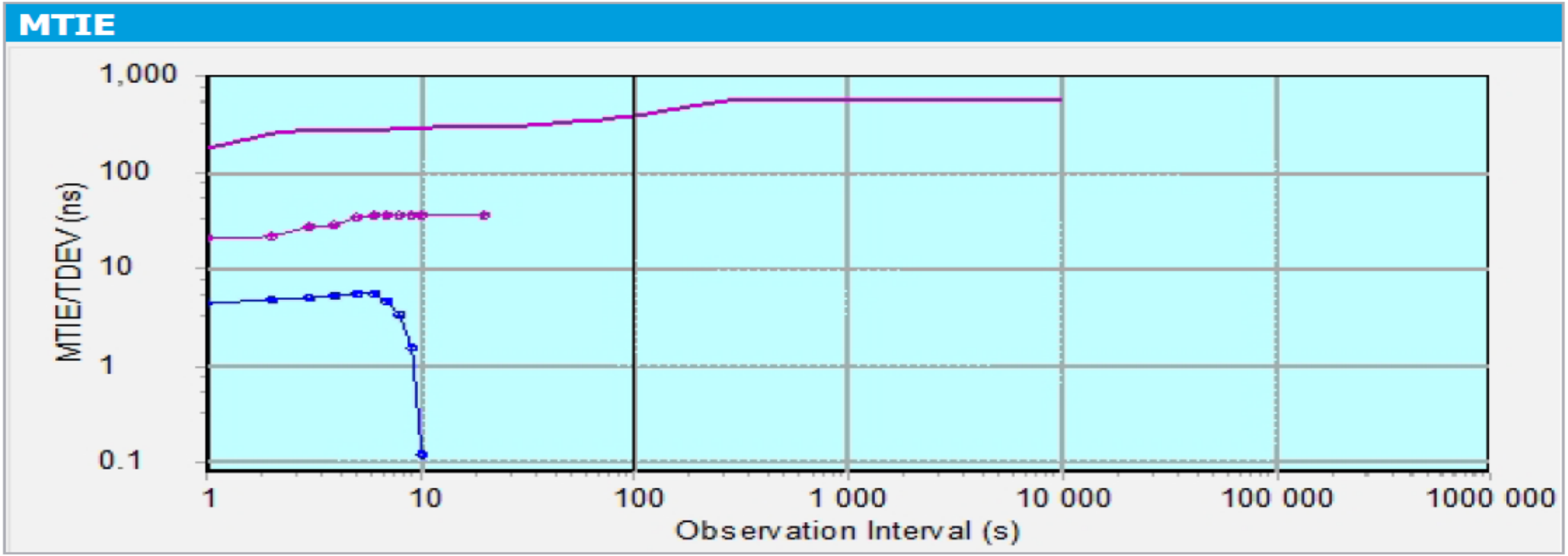
Time Error	Start	End
Time (s)	1	30

Display full range on Test Stop	Enabled
Remove Offset	Disabled

Offset	
Frequency Offset (ppm)	-3.4660734149E-04

Analysis - MTIE/TDEV

MTIE



MTIE/TDEV

Mask	G.8271.1- Dynamic Time Error
MTIE Graph	Enabled
TDEV Graph	Enabled
Remove Offset	Disabled

PTP Stats

PDV

Direction	Average (ns)	Maximum (ns)	Standard Deviation (ns)
Forward (BC -> Client)	21	70	13
Reverse (Client -> BC)	54	102	27

Round-Trip Delay

	Average	Minimum	Maximum
Delay (ns)	1622	1613	1631

Message Count/Rate

TX			RX		
PTP Message	**Count**	**Rate (msg/s)**	**PTP Message**	**Count**	**Rate (msg/s)**
Delay Req	479	16.0001	Delay Resp	951	32.8677
			Sync	480	16.0001
			Follow Up	0	--
			Announce	240	8.0
Total	479		Total	1671	

EXFO

FTB-5GPro Kit

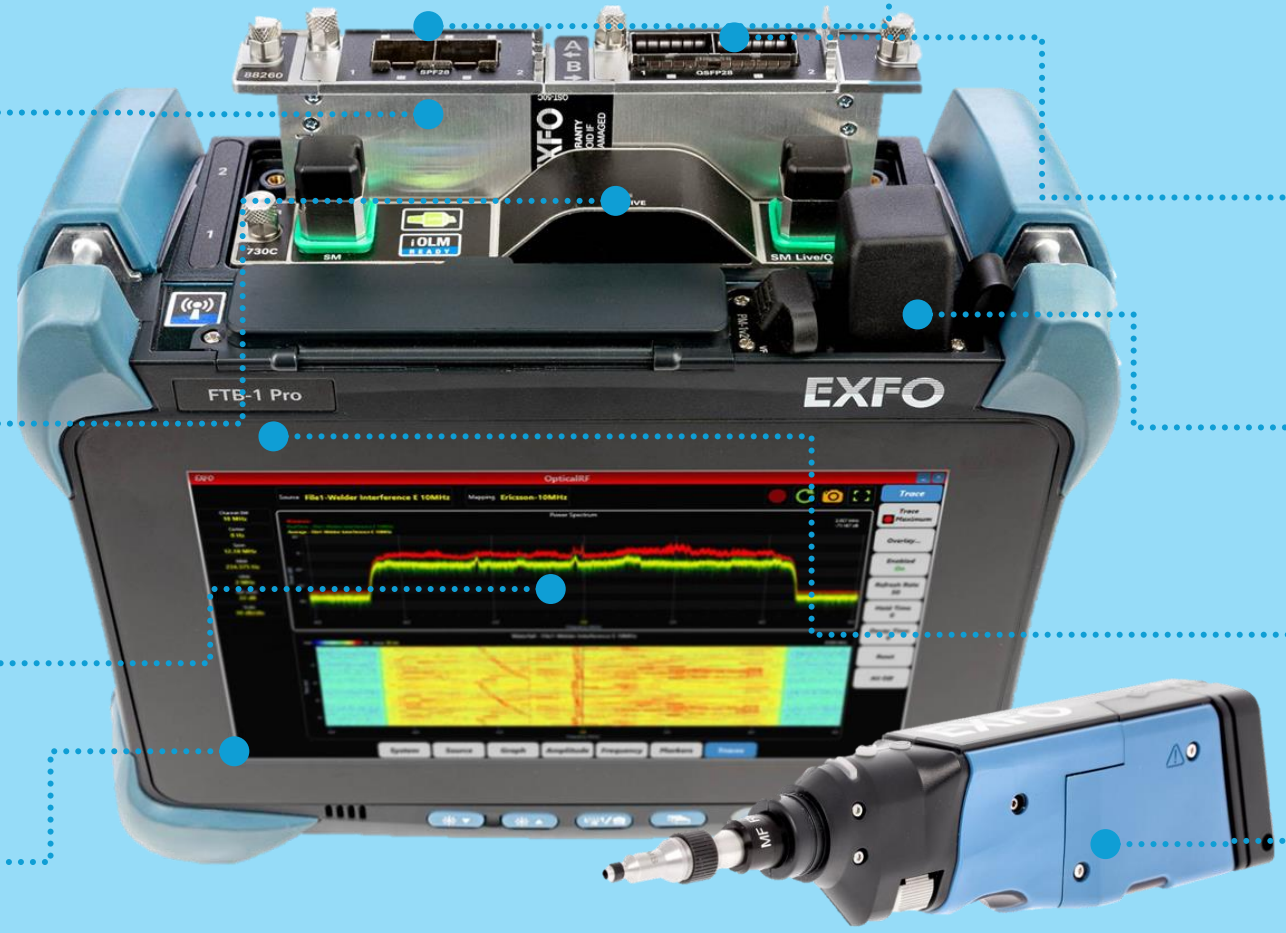
Streamline field operations when deploying 5G fronthaul, midhaul and backhaul networks

Transport test module
Validate Ethernet up to 100G, CPRI, OBSAI and eCPRI transport links. Also check Wander, SyncE, 1588-PTP...

OTDR/iOLM module
Automated fiber characterization & expert-level fault-finding capabilities

iORF
Intelligent RF Spectrum Analysis over CPRI

5GPro RF Spectrum
4G and 5G RF spectrum analyzer / demodulation



iOptics
Check transceivers (SFP, QSFP, CFP4) from 10Mb to 100G

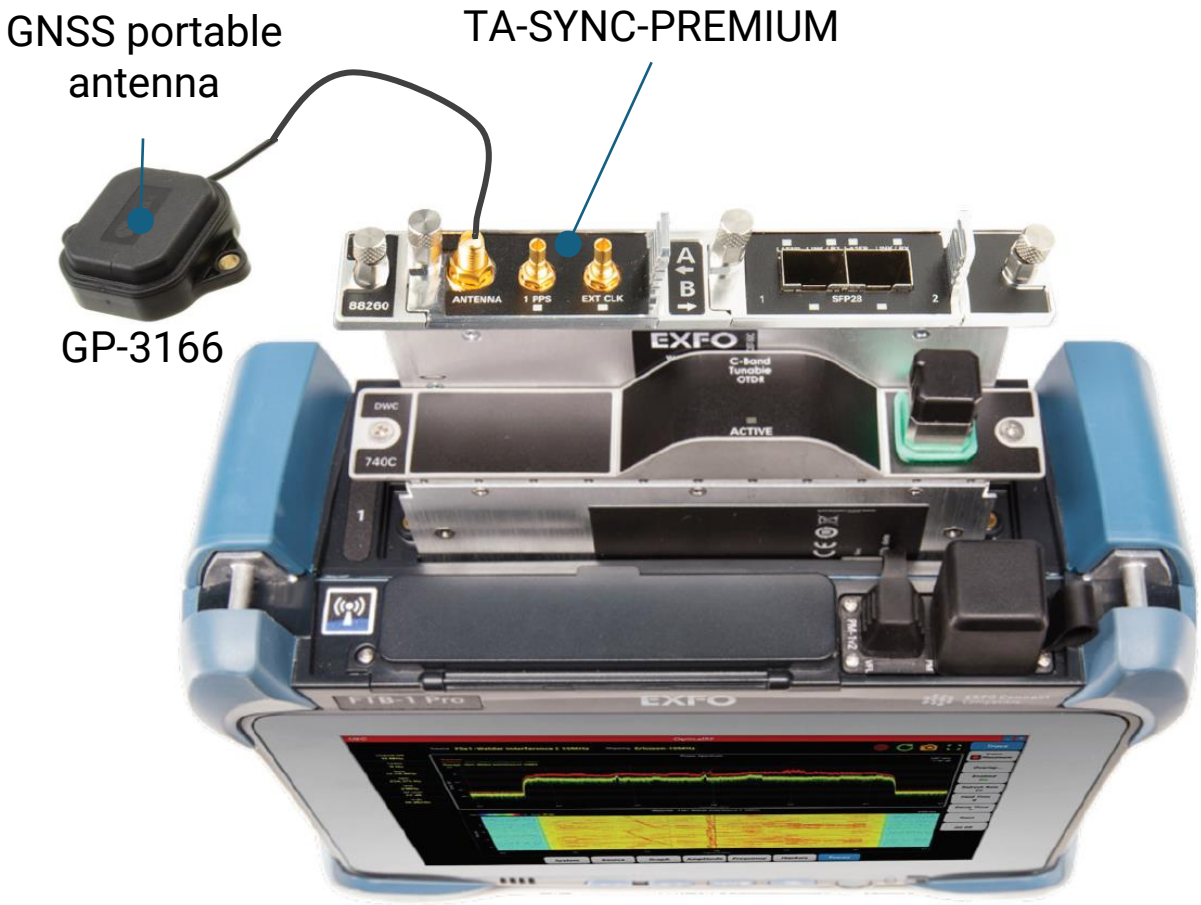
OTS (Open Transceiver)
Future-proof for 50GE, 100GE on DSFP, SFP-DD, etc.

Power Meter & VFL
Ensure fiber continuity & troubleshoot simple issues

FTB-1 Pro
Powerful and intelligent handheld test platform

FIP-435B
Fiber inspection probe to detect dirty or damaged connectors

TA-SYNC-PREMIUM

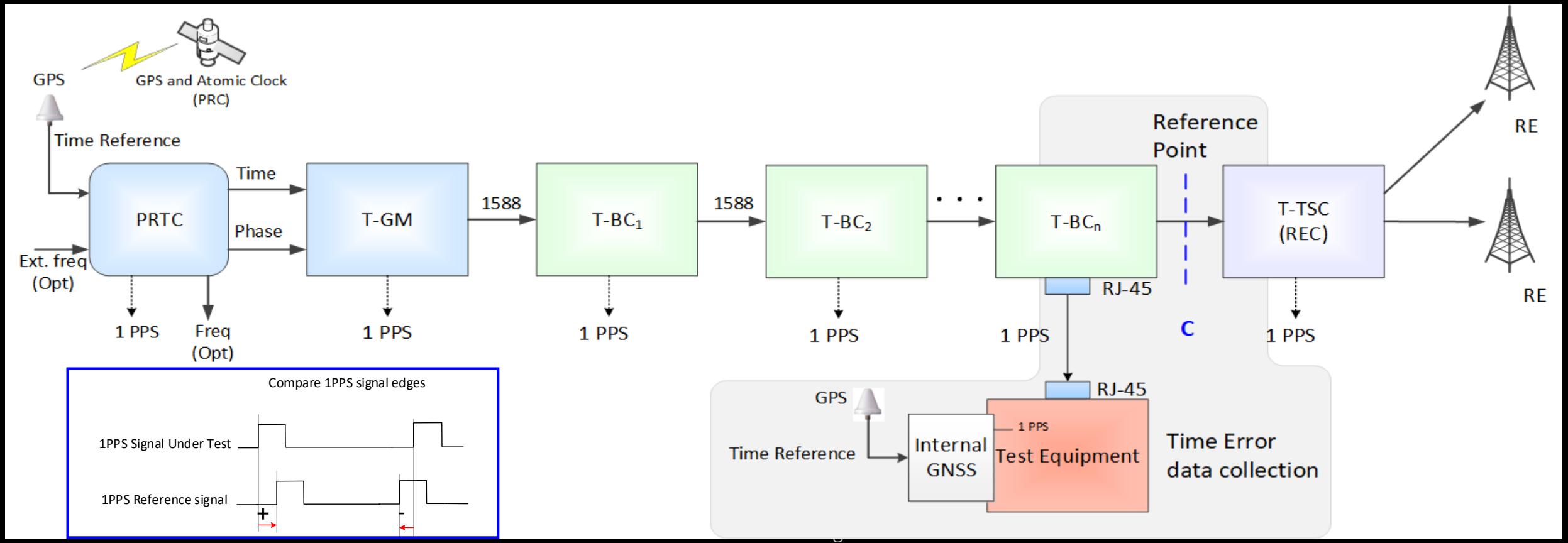


- Integrate new best-in-class, very high accuracy GNSS receiver
- ±**5ns** accuracy in less than **20 min**.
- **90%** quicker than any other test solution on the market
- Stratum 3E oven-controlled oscillator (OCXO) for holdover

Feedback from a Tier-1 operator: “This is a real game changer!”

Time Error

- Method 1 – Physical Method
  - The Test equipment measures the Time Error of the T-BC by comparing two physical signals:
    - Uses the 1PPS signal from the T-BC at reference Point C for Time Error measurement
    - Uses the 1PPS signal from the Internal GNSS as the reference signal



Time Error

- Method 2 – Packet-Based Method (Active Measurement Probe)
  - The Test equipment measures the Time Error of the T-BC by collecting timestamps from the PTP messages
    - Intrusive method since the Test Equipment replaces the Telecom Time Slave Clock