SiTime

THE PRECISION TIMING COMPANY

MEMS Timing Solutions for

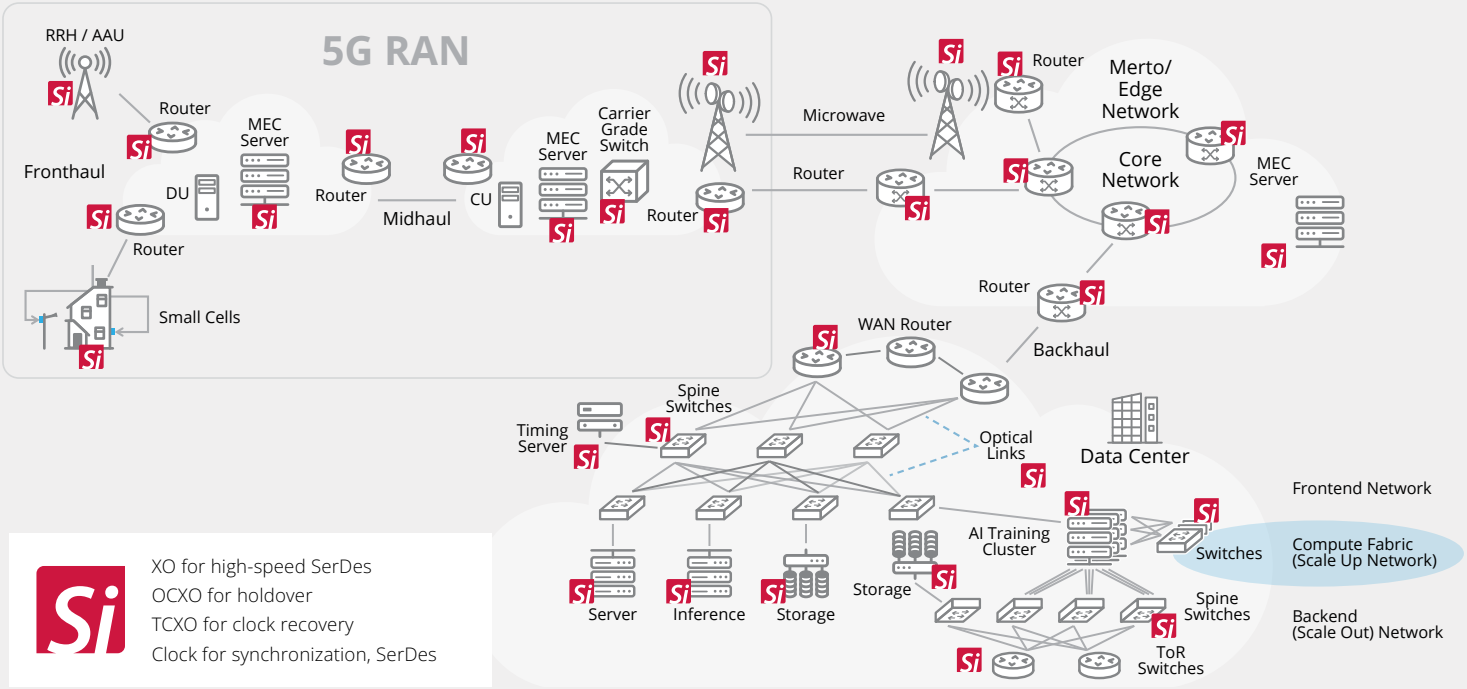
AI, Datacenter, Communications

- Complete timing solution for time synchronization, high speed SerDes
- Best environmental resilience for high power, thermally harsh AI applications
- Flexible, diversified supply chain for demand upsides
- Extensive timing expertise to support your design challenges

The heartbeat of

Datacenters

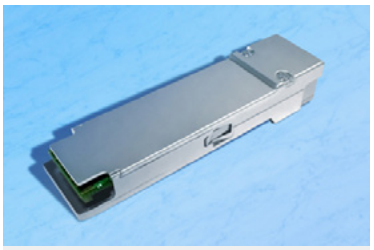
Full Product Portfolio for Every Network Node



XO for high-speed SerDes
OCXO for holdover
TCXO for clock recovery
Clock for synchronization, SerDes

Higher Performance, Environmentally Resilient, Smaller Size

4x more resistant to airflow and heat	30x better reliability	3x lower power consumption
20x better stability under vibration	2x more resistant to supply noise	4x smaller size



OPTICAL COMMUNICATIONS

HYPERSCALE SERVERS

DATACENTER SWITCH

EDGE SERVER, DU

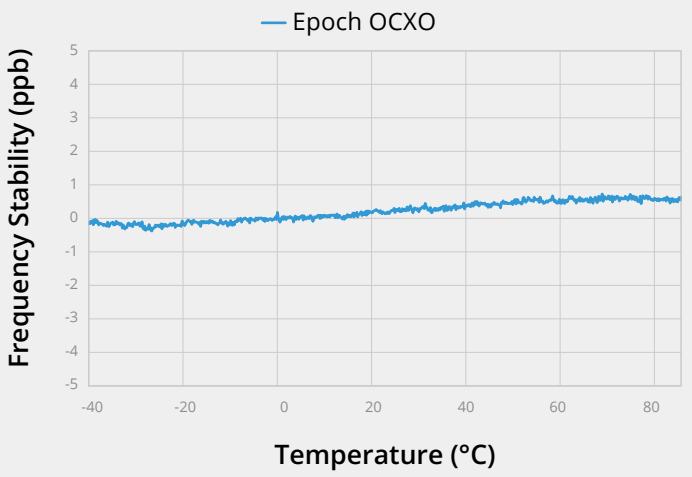
CARRIER GRADE ETHERNET

5G RRU, SMALL CELL

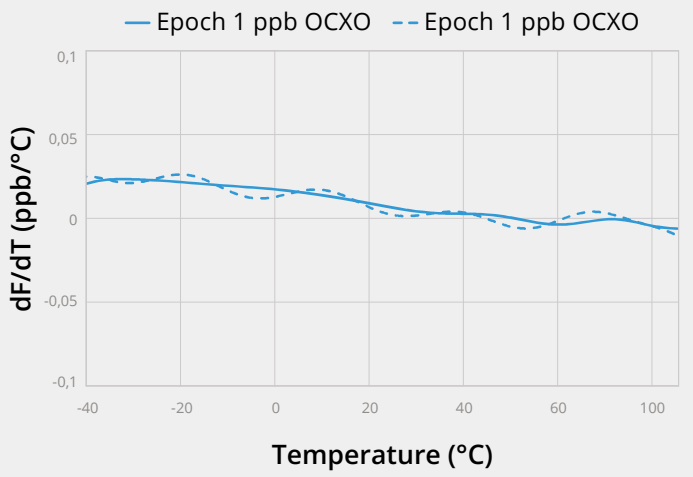
MICROWAVE BACKHAUL

GNSS TIMING

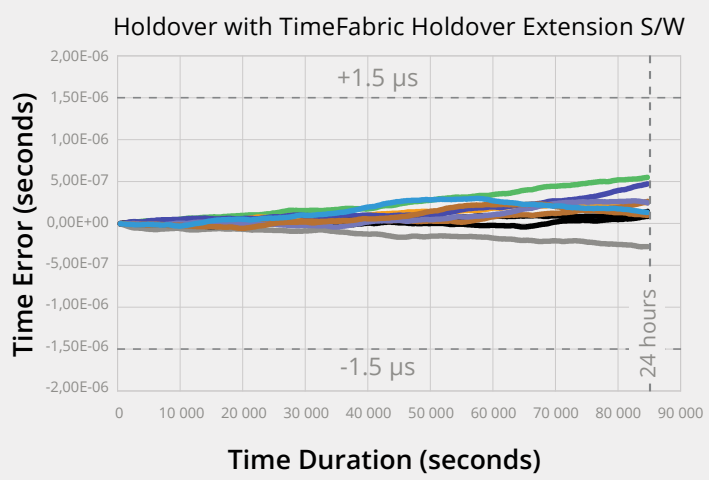
Better Stability



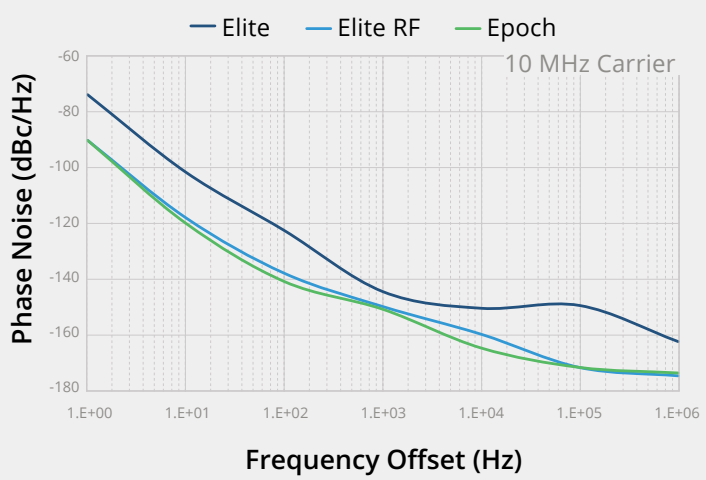
Better Frequency Slope



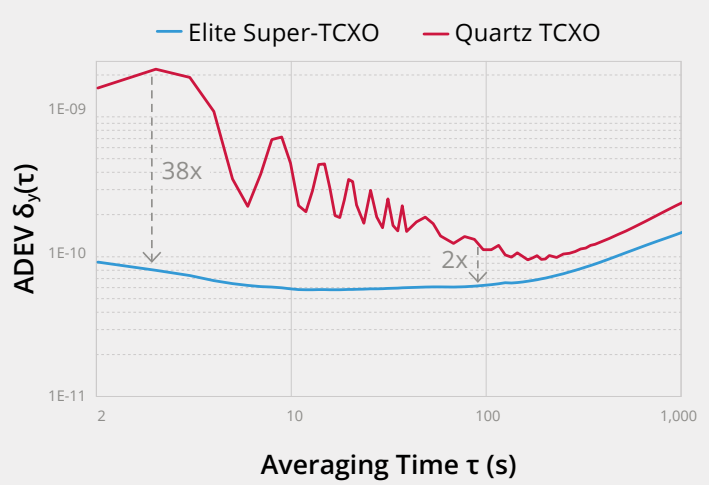
Longer Holdover



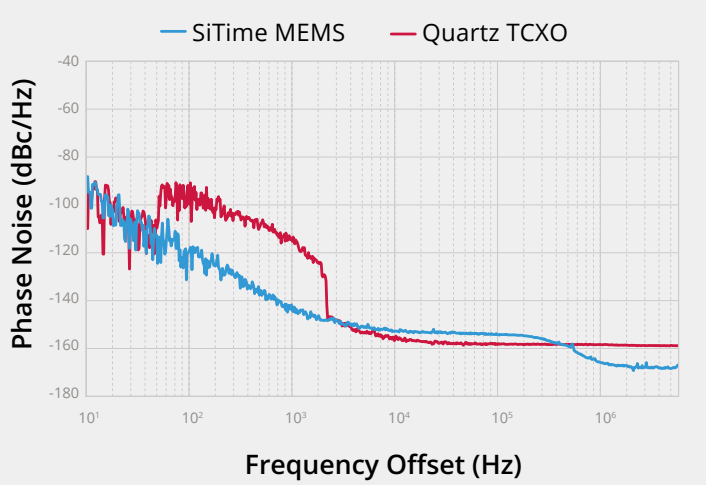
Ultra-low Phase Noise



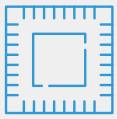
Better Allan Deviation



Better Vibration Resistance

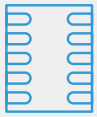


Complete Product Portfolio Enables 100% MEMS Clock Tree



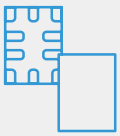
Jitter Cleaners, Network Synchronizers & Clock Generators

- Clock-SOC | Integrated MEMS, reduce BOM, simplify design
- Most resilient | Resistant to vibration, board bending, EMI, supply noise
- Best reliability | >1 billion hours MTBF, no quartz related failures
- Rich features | Up to 2.1 GHz, 4 clock domains, fast hitless switching



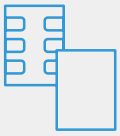
Holdover Oscillators (OCXOs)

- ±1 ppb, up to 24 hour holdover w/ TimeFabric™ Software
- Resistant to airflow, thermal shock | ±0.05 ppb/°C
- Resistant to board noise | On-chip LDO, I^2C frequency tuning
- Smallest size | 9 x 7 mm^2



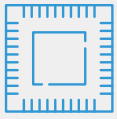
Ultra-stable Super-TCXOs

- LVCMOS / Differential outputs: 1 to 250 MHz, 80 fs jitter
- Resistant to airflow, thermal shock | ±1 ppb/°C
- Most stable at high temp | ±100 ppb up to 105°C
- No activity dips or micro-jumps



Ultra-low Jitter Oscillators

- Ultra-low phase noise | 26 fs jitter (4 MHz HPF)
- Best PSRN | 0.1 ps/mV, eliminates external LDOs
- Smallest size | Differential or LVCMOS in 2.0 x 1.6 mm^2
- Most flexible | 1 to 725 MHz, up to105°C, ±10 to ±50 ppm



Fan-out and PCIe Buffers

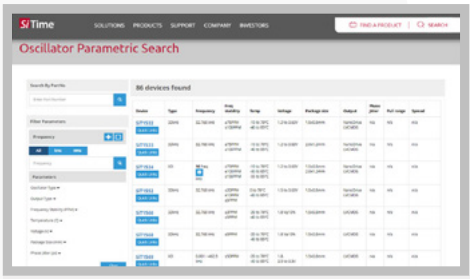
- Flexible | Support all signaling types – LVCMOS, LVPECL, LVDS, HCLS, LPHCSL
- Best skew control | 0.2 ns variable delay
- Future proof | PCIe gen 1 to 7
- Standard footprint | Drop-in replacement of standard buffers

TimeFabric™ Software

- IEEE1588 software | Proprietary servo for partial timing support (PTS)
- Holdover extension | Up to 24 hour holdover via additional software compensation
- Easy integration | Standard Linux driver for device control via I^2C

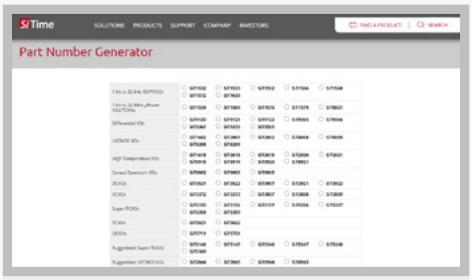
Online Tools to Make Your Timing Design Simpler

Find the Right Part



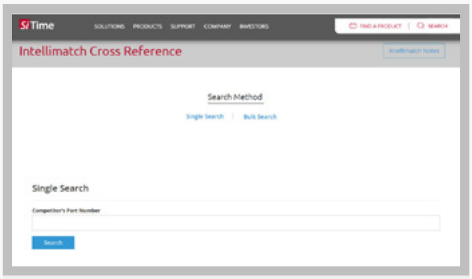
PARAMETRIC SEARCH

Find products fast based on your search criteria



PART NUMBER GENERATOR

Configure your oscillator to your exact requirements



CROSS REFERENCE

Find SiTime alternatives with SiTime's Intellimatch™

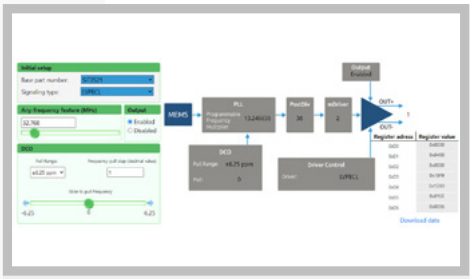
Program & Test the Part

TIME MACHINE II PROGRAMMER

Instantly program oscillator frequency, voltage, stability & more

EVALUATION BOARDS

Find the right evaluation board to reduce your design time



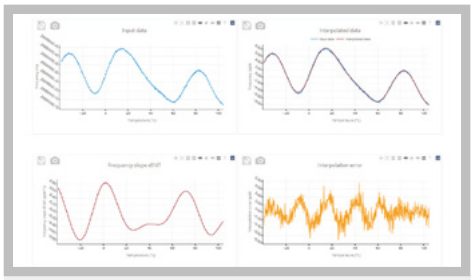
TIME MASTER DEVICE CONFIGURATION SOFTWARE

Easily evaluate SiTime oscillators configured via I²C/SPI interfaces

Get Performance Data

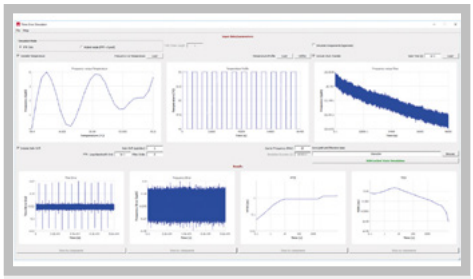
JITTER CALCULATOR & PLOTS

Convert phase noise to phase jitter (rms) and find phase noise plots



FREQUENCY SLOPE DF/DT CALCULATOR

Instantly calculate frequency slope by inputting your data



TIME ERROR SIMULATOR SOFTWARE

Quickly simulate and analyze the impact of the local oscillator

Learn more about timing solutions from SiTime

Buy at www.SiTimeDirect.com

Contact us salessupport@sitime.com

Subscribe