STCD1020/30/40

2-, 3- or 4-channel output-buffered clock distribution circuits

The STCD1020, STCD1030 and STCD1040 are 2-, 3- or 4-channel output, unity-gain clock distribution circuits that are ideal for providing a common frequency clock to multi-mode mobile RF applications. They can also be used in mobile phones as a clock reference for baseband peripheral applications such as WLAN, Bluetooth, GPS and FM radio.

These circuits isolate each driven device by their clock outputs and minimize interference between the devices. Each of the clock buffers can be disabled individually to lower the power consumption, optimizing battery life in hand-held devices. They also accept commonly used mobile master clock frequencies ranging from 10 MHz to 52 MHz.

Key features

- 2-, 3- or 4-channel output-buffered clock distribution
- Single-ended sine-wave or square-wave clock input and output
- Individual clock enable for each output
- Lower fan-out on clock source
- No AC coupling capacitor needed at the input
- Ultra-low phase noise and standby current
- 2.5 V to 3.6 V supply voltage and 1.65 V to 2.75 V supply voltage (option)
- Integrated input DC cut capacitor
- Available in TDFN packages
    - STCD1020 - 8 lead (2 x 2 mm)
    - STCD1030 - 10 lead (2 x 2.5 mm)
    - STCD1040 - 12 lead (2 x 3 mm)
- Operating temperature: -40 °C to 85 °C

Applications

- Multi-mode RF clock reference
- Clock reference for baseband peripheral devices
- Set-top boxes
- MIDs (mobile internet devices)
- All mobile and hand-held devices
- Any application where multiple common frequency crystals are used

Typical application example

Conventional method using multiple TCXOs
(temperature-compensated crystal oscillators)
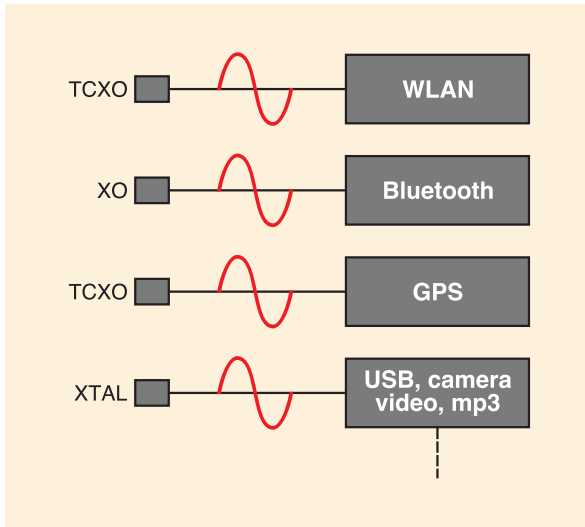
STCD1040 solution using only 1 TCXO
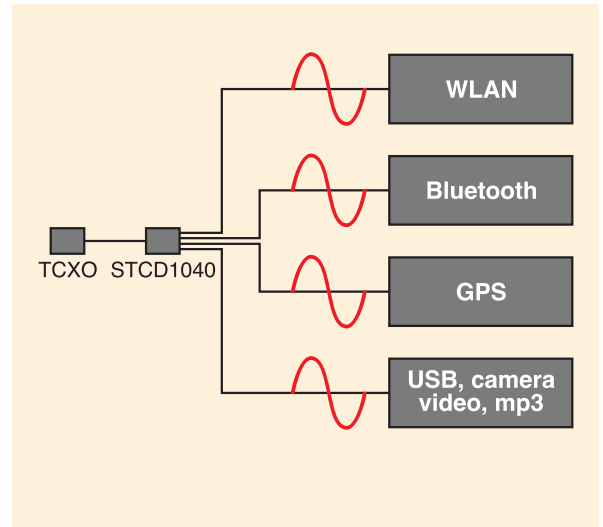
STCD10x0 product family

Part number	Channels	Supply voltage (V)	Package
STCD1020RDG6F	2	2.8	TDFN8
STCD1020PDG6F	2	1.8	TDFN8
STCD1030RDG6F	3	2.8	TDFN10
STCD1030PDG6F	3	1.8	TDFN10
STCD1040RDG6F	4	2.8	TDFN12
STCD1040PDG6F	4	1.8	TDFN12

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