

Data Sheet

b-plus QX550

XTSS solution for IEEE1588v2 (PTP) and 802.1AS-2020 (gPTP) time synchronization.

QX550 is a b-plus PCIe network card with four 10GBASE-T interfaces based on two Intel X550-AT2 dual Ethernet controllers. For compatibility to mainboards without PCIe slot bifurcation support, both controllers are combined via PCIe 3.0 switch.

The **PlatformSyncBoard PSB** is a b-plus I/O board as (g)PTP Master for the QX550. It supports an Intel i210IT to synchronize the clocks to or from external devices. The U-blox GPS Module, PPS in/out, and the PCIe UART with NMEA support enables internal time or synchronization to external grand master clocks.

The PSB is mechanically designed as a PCIe x1 card but without electrical connection to a PCIe slot. PCIe data lanes, power supply, and clock distribution is connected from the QX550 Ethernet card only.

Highlights

QX550

- PCIe 3.0 x8 Ethernet card with PCIe switch
- no bifurcation support required
- 2x Intel X550-AT2
- 4x 10GBASE-T
- Actively cooled for -10°C to +60°C operation
- Pulse distribution to 3 internal slaves

PSB

- 1000BASE-T Master/Slave
- UART / RS-232 port with NMEA support
- External sync pulse PPS Input/Output
- U-blox GPS module

b-plus XTSS license

- PTSS - Platform Time Synchronization Service
- CTSS – Cluster Time Synchronization Service
- TR – Time Relay support
- UDP – UDP support





Specifications

QX550

PSB

PC Interface	PCIe 3.0 x8	OCuLink x4 cable to QX550 Master
Ethernet Interfaces	4x 10GBase-T	1x 1000BASE-T Master/Slave
GPS source	-	U-blox Neo-M8 GPS module
External time source	-	RS-232 / NMEA / PPS-In
PPS distribution	QX550 Master: 3x internal QX550 Slave: none	1x external (PPS-out)
Power Consumption	25 W	5 W
Cooling	Active, with FAN control	Passive
Weight	Approx. 320 g	Approx 80 g
Dimensions	126.09 mm (W), 172.29 mm (D), 21.59 mm (H), FHHL (Full Height, Half Length)	120.74 mm (W), 189.19 mm (D), 21.59 mm (H)
Operating temperature	-10°C ~ +60°C	-10°C ~ +60°C
Non-operating temperature	-45°C ~ +85°C	-45°C ~ +85°C
Relative air humidity	90 % non-condensing within operating temp	90 % non-condensing within operating temp
Approvals	CE, RoHS, REACH	CE, RoHS, REACH

Order Information

Part Number	Name	Description / Scope of Delivery
B21583-XTS-001-0001	QX550 Master	• QX550 Ethernet Card • PlatformSyncBoard • OcuLink Cable 370mm, A1005472 • 6pin UltraFit Connector Kit, A1006029 • XTSS License PTSS/CTSS/TR/UDP • USB stick with XTSS Installer • Short Manual
B21583-XTS-001-0002	QX550 Slave	• QX550 Ethernet Card • PPS sync cable, B21583-XTS-ACC-0001

Order Information Accessories

Part Number	Name	Description
A1005472	OCuLink to OcuLink 4 lanes Cable	370 mm
A1005436	OCuLink to OcuLink 4 lanes Cable	500 mm
B21583-XTS-ACC-0001	PPS Sync Cable QX550-QX550	Picoblade 2pin-to-2pin, 370mm
B21583-XTS-ACC-0002	PPS Sync Cable QX550-proFRAME3 - 600mm	PicoBlade 2pin to 6pin with 3.3V/1.8V divider
B21583-XTS-ACC-0003	PPS Sync Cable QX550-proFRAME3 - 1300mm	PicoBlade 2pin to 6pin with 3.3V/1.8V divider
A1006029	6pin UltraFit Connector Kit	For external SER/PPS Connector at PSB