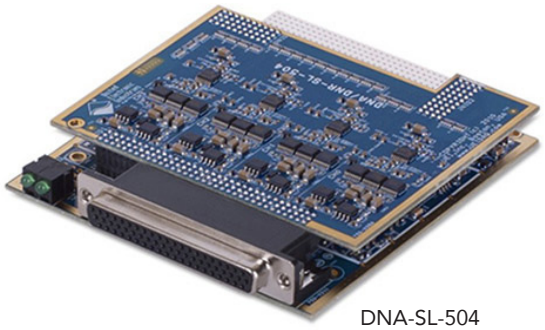
United Electronic Industries / AMETEK

FAQ

Synchronous Serial Communication Boards

The following FAQ provides an overview of UEI synchronous serial communication boards: the DNx-SL-504, DNx-CT-602-804, and DNx-SL-514.



DNA-SL-504

SYNCHRONOUS SERIAL BOARD OVERVIEW

The SL-504, CT-602-804, and SL-514 all send and receive data as bit streams, with bit transmission and reception synchronized to a common serial clock signal.

All three boards support RS-422/RS-485 electrical standards, which specify the physical electrical specifications for signal lines, such as differential signals using twisted pair cables, voltage levels, and bit rates. The SL-504 also supports the RS-232 electrical standard.

The boards differ in the serial protocols they support. This affects whether or not the clock must be a continuous clock stream, what bit pattern signifies the start of a transmission, or what data word lengths are supported.

SL-504, CT-602-804, AND SL-514 FEATURE COMPARISON

Board Type	Electrical Standards	Serial Protocols	Subset of Features
DNx-SL-504	RS-232 RS-485/422	HDLC or SDLC (in RS-485/422 mode)	-Programmable bit rate: -RS-232 max baud rate is 230 kbaud -RS-485/422 max baud rate is 4 Mbaud -RS-485/422 full duplex support -RS-485/422 half duplex support (-801) -5,6,7 or 8 bits/word(character)
DNx-CT-602-804	RS-485/422	General purpose Synchronous Serial (GPSS) or "Clock/Data/ Strobe"	-Programmable bit rate: 300 baud to 16 Mbaud (2Mbaud max sustained) -Differential, simplex (each port is only RX or TX) -Programmable word length: 3 to 32 bits -Programmable frame sync strobe (frame sync identifies valid data shifting) -Requires continuous clock signal
DNx-SL-514	RS-422	Synchronous Serial Interface (SSI)	- Programmable bit rate: up to 2.5 Mbaud -Differential, simplex (each channel provides independent master port and slave port) -Programmable word length: 3 to 32 bits -Clock train initiates data shifting (clock will not be continuous)

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