

LXMC-X105 XMC

XMC FPGA Board with I/O



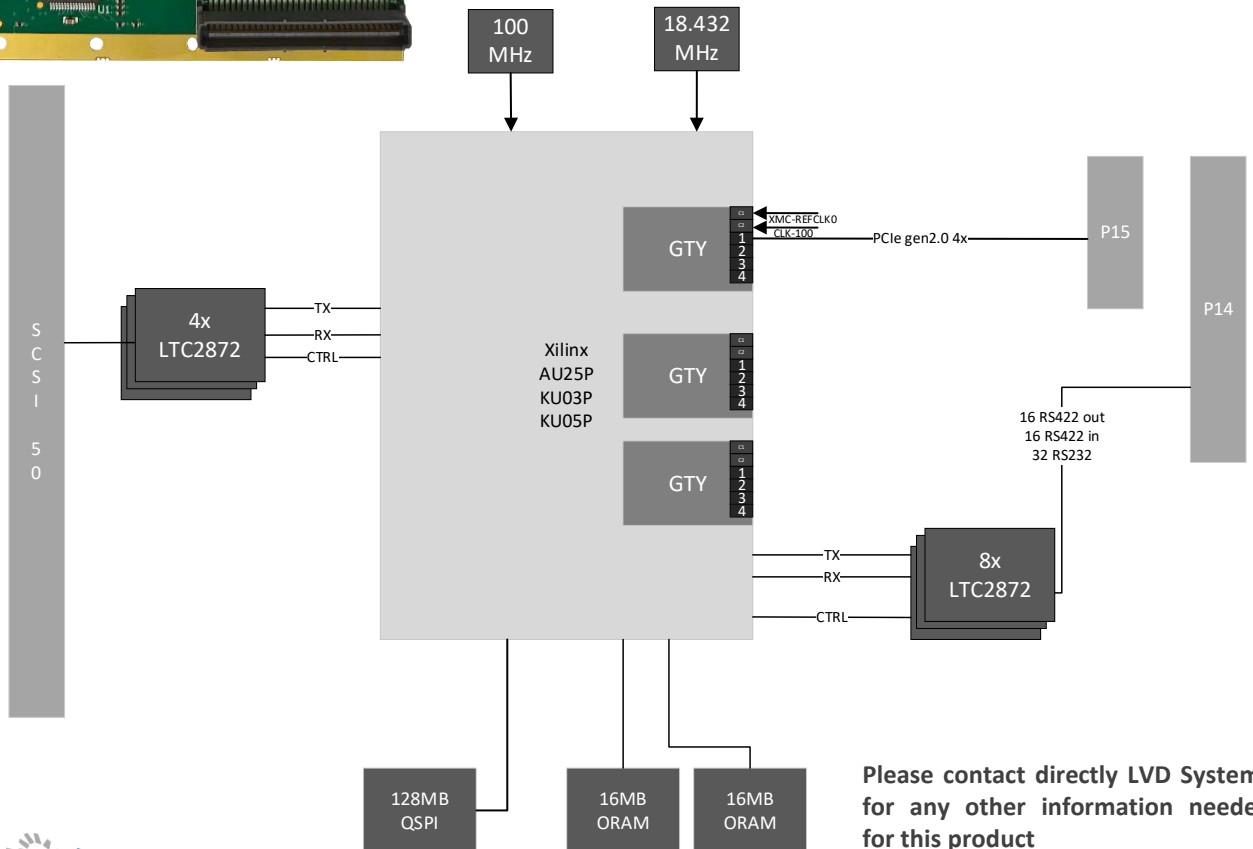
Key Features

LXMC-X105 is a Xilinx Ultrascale+ (Artix or Kintex) XMC board with configurable RS232/RS485/RS422 interfaces (with software programmable termination resistors).

VITA 42 XMC FPGA board

Ideal platform for:

- ▶ Serial communication
- ▶ Synchronous or asynchronous serial interfaces



Please contact directly LVD Systems for any other information needed for this product



Specification

Characteristics

- ▶ XMC FPGA Board
- ▶ FPGAs
 - XCAU25P
 - XCKU3P
 - XCKU5P
- ▶ 32MB static RAM
- ▶ Programmable interfaces based on LTC2872
- ▶ 20Mbps RS485 and 500kbps RS232
- ▶ P14 configuration
 - 16 RS422 output and 16 RS 422 input
 - Configurable as 8x HDLC lines
 - 32 RS232
- ▶ Front panel configuration
 - 8 RS422 output and 8 RS422 input
 - Configurable as 4x HDLC
 - 16 RS232

Environmental

- ▶ Commercial operating temperature (N-grade): 0°C to +55°C, air cooled
- ▶ Extended operating temperature (E-grade): -25°C to +70°C, air cooled
- ▶ Industrial operating temperature (K-grade): -40°C to +70°C, air cooled
- ▶ Ruggedized Conduction cooled (RC-grade): -40°C to +85 °C – no front panel

Power consumption - 5 - 15 W (user FW dependent)

Mechanical - VITA 42

Certification - REACH / RoHS compliant

Firmware (available through the LVD FPGA FDK – to be ordered separately)

- ▶ PCIe end-point
- ▶ multi channel DMA engine
- ▶ HDLC serial handling
- ▶ Full source code

Software

- ▶ Linux Driver
- ▶ VxWorks driver
- ▶ Full source code

Base Part Number: LXMC-X105-aaaa-vv-t

Variant (-aaaa)	FPGA
LXMC-X105-AU25-t	XCAU25P-1SFVB784
LXMC-X105-KU3P-t	XCKU3P-1SFVB784
LXMC-X105-KU5P-t	XCKU5P-1SFVB784

Popular Example: LXMC-X105-AU25 : XCAU25P FPGA, commercial temperature grade

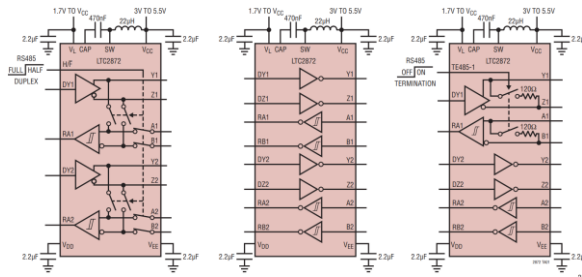
Related products

LVD-FDK/X105-xy

LVD-SDK/X105-xy

RS232/RS485/RS422 driver

Each driver can be configured by the software to act as RS422 full duplex, RS485 half duplex or RS232.

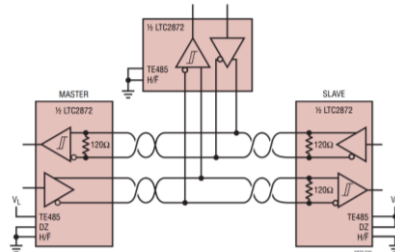


Software can enable termination independently for each channel. Driver terminations are embedded in the LTC2872 driver.

The drivers can work up to 20Mbps in RS485 mode and 500kbps in RS232 mode.

RS485 receiver full fail safe eliminates UART lockup.

Up to 256 nodes can be used on the network.



Diagnostics

- ▶ Each LTC2872 driver can be switched in loopback mode to test the board functionality.
- ▶ The LTC2872 implements full failsafe against external short, floating or terminated input.
- ▶ All power rail are monitored by the onboard MCU. Values are propagated to the user through the firmware and the driver

Compatibility - P14 pin function is compatible with C212 HSS8 PMC adapter.

Ordering information

Variant (-t)	Grade
LXMC-X105-aaaa	N-grade
LXMC-X105-aaaa-E	E-grade
LXMC-X105-aaaa-K	K-grade
LXMC-X105-aaaa-RC	RC-grade

NOTE: Add 2 for Humiseal conformal coating

