XMICRO-7SEG

Technical Manual

V1.0 2018-06-02
Applies to hardware V1

Features:

2-Byte hexadecimal LED display
10-bit LED bar graph
Card ID register for system self-configuration

Table 1 – Card Configuration

Setting	Function
JP1	Hexadecimal display common pin polarity
JP2	Bar graph common pin polarity

Table 2 – Onboard Registers

Address	D7	D6	D5	D4	D3	D2	D1	D0
$X00 (W)	Hexadecimal Display (least-significant byte)							
$X01 (W)	Hexadecimal Display (most-significant byte)							
$X02 (W)	Bar Graph (least-significant byte)							
$X03 (W)	$X01 Enable	$X00 Enable	D4 Decimal	D3 Decimal	D2 Decimal	D1 Decimal	Bar Graph Bit 9	Bar Graph Bit 8
$XFF (R)	Card ID							

General Description

The XMICRO-7SEG is a simple LED display card intended for use in debugging or as a very limited information display in an XMICRO system. The display registers are all read-only, so values must also be stored in memory to be reused. Jumpers may be set to accommodate LED modules with both common-cathode and common-anode pins.

Hexadecimal Display

The hexadecimal display shows the two-byte little-endian value stored in $X00-$X01. Each byte can be turned off individuially with D<7..6> of register $X03.

Bar Graph Display

The bar graph display shows the 10-bit binary value stored in $X02 and bits D<1..0> of $X03. The graph can be extended to 14 bits by including the decimal points of the hexadecimal display. These can be activated using bits D<5..2> of $X03.