### MX-E Processor with PNP (sourcing) I/O

#### QUICK REFERENCE GUIDE

**DESCRIPTION**

This guide covers MX-E processor models that contain the latter “P.” For example, MX-E20-2P-1. These models provide PNP (sourcing) inputs and outputs.

**The MXE Series machine vision processors offer the most powerful and flexible way to solve even complex machine vision applications.**

- Rugged IP20 housing
- Low Maintenance
- 16 Inputs and Outputs
- Up to 4 GigE cameras
- 16 Inputs and Outputs
- Easily Accessed connectors

#### SYSTEM SPECIFICATIONS

- **Processors:**
  - MX-E20: Intel Celeron 1.4 GHz; MX-E40: Intel Celeron 2.2 GHz; MX-E80: Intel Core i7 2.3 GHz
- **Storage:**
  - MX-E40: 4 GB RAM - 60 GB SSD; MX-E40: 8 GB RAM - 60 GB SSD; MX-E80: 16 GB RAM - 128 GB SSD
- **GigE camera ports:**
  - 1 x RS232 port
  - <4 optically isolated Digital In + 16 x optically isolated Digital Out

#### DIGITAL I/O CABLES AND CONNECTIONS

<table>
<thead>
<tr>
<th>Pin/Terminal</th>
<th>Color</th>
<th>Signal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
<td>Power 4 + 24VDC Supply Plus</td>
</tr>
<tr>
<td>2</td>
<td>Blue</td>
<td>24VDC Supply Plus</td>
</tr>
<tr>
<td>3</td>
<td>Brown</td>
<td>Ground</td>
</tr>
<tr>
<td>4</td>
<td>White</td>
<td>Male Connector Side</td>
</tr>
<tr>
<td>5</td>
<td>Green</td>
<td>Female Connector Side</td>
</tr>
</tbody>
</table>

#### DIGITAL I/O SPECIFICATIONS

**Inputs**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>GPI-coupler isolated input</td>
</tr>
<tr>
<td>Number of Inputs</td>
<td>60+675xx</td>
</tr>
</tbody>
</table>

**Outputs**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td>GPI-coupler isolated open emitter output</td>
</tr>
<tr>
<td>Number of Outputs</td>
<td>60+675xx</td>
</tr>
</tbody>
</table>

#### MECHANICAL DIMENSIONS

- **Dimensions:**
  - 7 x 17 x 2050 mm

#### TECHNICAL DATA

- **Supply voltage:**
  - 24 VDC ± 2.5%
- **Nominal Current Draw:**
  - 5.5 A at 24 VDC
- **Input current:**
  - Off: 0.16 mA or less
  - On: 20 mA or less

#### COMMUNICATIONS

Camera communication uses Cat6 Ethernet cable and provides POE for M10x and E1Tx cameras. Use only Datalogic provided cables.

**Vision Program Manager (VPM) software installed on the processor is used to create vision programs and configure input and output response.** Refer to the Impact Reference Guide for programming details.

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**WARNING**

- Do not disconnect the cable at the connector while power is on.

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**HASP KEY USB PORT**

- **1. Reset Button**
- **2. USB Port for Hasp Key**

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- **1. Reset Button**
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**DIGITAL I/O CONNECTIONS**

- **Digital Do 37-pin X Terminal Block 248-6110**
  - 60-6675-xx
- **Digital Do 37-pin to digital (terminal end)**
  - 60-6675-xx

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**CONNECTORS**

1. USB 3.0 Keyboard/Mouse (4)
2. Ethernet 2
3. Ethernet 1
4. RS232 (COM 1)
5. Display Port
6. DVI for Monitor
7. Supply Voltage
8. GigE Camera Ports (x 2 or 4)
9. 37 pin D-Sub Digital I/O
10. USB 2.0 Keyboard/Mouse Display Port

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**CAMERA CABLES, TERMINALS, AND CONFIGURATION**

Camera trigger and strobe output are provided by an external 6-pin I/O cable with no connection to the processor. Use cable 606-0672-xx (terminal block 661-0399 or 248-0140). Refer to the MXE Series Hardware Guide.

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**EXAMPLE I/O CIRCUIT DIAGRAMS**

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**SUPPORT THROUGH THE WEBSITE**

Select your product model from the dropdown list which gives you access to:

- Downloads including Data Sheets, Manuals, Software & Utilities, and Documents
- Repair Program for On-Line Return Material

www.datalogic.com
The MX-E Processor with NPN (sinking) I/O

**QUICK REFERENCE GUIDE**

**DESCRIPTION**
This guide covers MX-E processor models that contain the letter “N.” For example, MX-E20-2-N-1. These models provide NPN (sinking) inputs and outputs.

**SYSTEM SPECIFICATIONS**
- Processors: MX-E20: 4 GB RAM - 60 GB SSD; MX-E40: 8 GB RAM - 60 GB SSD; MX-E50: 16 GB RAM - 128 GB SSD
- GigE camera ports: 2 or 4 (all are PoE capable)
- USB5, located behind the Front Cover
- Power Connector: 24 VDC ± 25%
- Dimensions: 330 x 270 x 254.75 mm
- Weight: 2060 g
- Shock resistance (EN60068-2-27)

**DIGITAL I/O SPECIFICATIONS**
- Camera Trigger and Strobe: Output 9
- Camera Output: Output 10
- Input/Output Current: Input 10, Input 11
- Supply Voltage: 5.5 A at 24 VDC
- Temperature: 20 °C to 60 °C
- Humidity: Operating: 10 to 90%
- Storage: 5 to 95%
- Vibration: 2 to 200 Hz, 0.5 g rms
- Love Maintenance
- Rugged IP20 housing
- Up to 4 GigE cameras
- 1 x RS232 port
- Ethernet/IP, Modbus TCP, OPC, PROFINET communications supported
- 2 x 10/100/1000 Mbps Base-T Network Interface
- 16 x Optically Isolated Digital In + 16 x Optically Isolated Digital Out
- MX-E20: 4 GB RAM - 60 GB SSD; MX-E40: 8 GB RAM - 60 GB SSD; MX-E50: 16 GB RAM - 128 GB SSD

**DIGITAL I/O CONNECTIONS AND TERMINALS**
- Display Port
- 4. RS232 (COM 1)
- 3. Ethernet 1
- 2. Ethernet 2
- 1. USB 3.0 Keyboard/Mouse (4)

**MECHANICAL DIMENSIONS**
- Display Port
- 4. RS232 (COM 1)
- 3. Ethernet 1
- 2. Ethernet 2
- 1. USB 3.0 Keyboard/Mouse (4)

**DIGITAL I/O CABLES SPECIFICATIONS**
- Camera Communication
- Vision Program Manager (VPM) software installed on the processor is used to create vision programs and configure input and output response. Refer to the Impact Reference Guide for programming details.
- Camera communication uses Cat5 Ethernet cable and provides POE for M10x and E10x cameras. Use only Datalogic provided cables.

**SUPPLY VOLTAGE CONNECTION**
- Camera interface
- GigE (x 2 or 4 depending on model)
- Non-maintained
- Storage:
- 110 MB (95 MB)

**STATUS LEDS AND BUTTONS**
- Power
- Green
- Red
- Yellow
- Not available
- Input 11
- Input 12
- Input 13
- Input 14
- Input 15
- Input 16
- Input 17
- Input 18
- Input 19
- Input 20
- Input 21
- Input 22
- Input 23
- Input 24
- Input 25
- Input 26
- Input 27
- Input 28
- Input 29
- Input 30
- Input 31
- Input 32

**HASP KEY USB PORT**
- Reset Button
- USB Port for HASP Key to enter cable names and licenses, insert the provided HASP key in the USB port (labeled USB5), located behind the Front Cover.

**COMMUNICATIONS**
- Camera communication uses Cat5 Ethernet cable and provides POE for M10x and E10x cameras. Use only Datalogic provided cables.

**TECHNICAL DATA**
- Supply voltage (V): 24 VDC ± 25%
- Minimum Current draw: 2.5 A
- Maximum Current draw: 4.5 A
- Input current: 2.0 mA or more
- Input 10 opto-isolated
- Output current: 100 mA max per output
- Output saturation voltage: 16/100/1000 Mbps Ethernet 2
- Camera interface: GigE (2 or 4 depending on model)
- Dimensions: 330 x 270 x 254.75 mm
- Data retention: Non-volatile SDRAM memory
- Temperature: Operating: 10 to 60 °C
- Storage: -20 to 80 °C
- Relative Humidity (30 °C): 9 to 95%
- Vibration: 2 to 200 Hz, 1.67 g rms (ISO 22010-2-6)
- Weight: 2060 g
- Protection: IP65

**FCC COMPLIANCE**
- This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**IMPACT REFERENGE GUIDE**
- Camera trigger and strobe output are provided by an external 6-pin I/O cable with no connection to the processor. Use cable 606-0674-xx (unterminated) or cable 606-0674-xx (with terminal block 661-0399 or 248-0140). Refer to the MX-E Series Hardware Interface Guide for programming details.

**EXAMPLE I/O CIRCUIT DIAGRAMS**
- Camera trigger and strobe output are provided by an external 6-pin I/O cable with no connection to the processor. Use cable 606-0674-xx (unterminated) or cable 606-0674-xx (with terminal block 661-0399 or 248-0140). Refer to the MX-E Series Hardware Interface Guide for programming details.

**DIGITAL I/O SPECIFICATIONS**
- Inputs
  - Specification
  - Format: Opto-coupler isolated input
  - Resistance: Max 2.2 kohm
  - On current: 5.5 mA or more
  - Off current: 500 mA
  - Response Time: Min 200 µs

- Outputs
  - Specification
  - Format: Opto-coupler isolated open collector output
  - Off voltage: 5 VDC (max)
  - On voltage: 12 VDC (max)
  - Residual voltage: 1.5 V or less
  - Response Time: Min 200 µs

- Camera communication uses Cat5 Ethernet cable and provides POE for M10x and E10x cameras. Use only Datalogic provided cables.

- Vision Program Manager (VPM) software installed on the processor is used to create vision programs and configure input and output response. Refer to the Impact Reference Guide for programming details.

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