

# ProDAQ Data Acquisition Function Cards

## ProDAQ 3058 Intel® Pentium®-Based VXIbus Slot-0 Controller



### OVERVIEW

The ProDAQ 3058 Intel® Pentium®-based embedded slot-0 controller is the first embedded controller to support fully the VXI-1 4.0 interface standard. Using Bustec's high speed PCI Express to VXIbus interface it supports all VXIbus transfer modes defined in the standard including the new 2eSST block transfer mode with up to 320 MB/sec throughput.

The quad-core Intel® Pentium® N3710 with a boost clock of up to 2.56 GHz is part of Intel's new Braswell platform. Due to the new 14 nm low power process with tri-gate transistors, it shows improved performance with better energy efficiency compared to its predecessors. In addition to the CPU cores, the SoC offers a DirectX 11.2 capable GPU and a dual channel DDR3L memory controller with up to 25.6 GB/s throughput.

#### Graphics Interface

The on-board Intel HD Graphics 405 with 16 execution units and a clock speed of up to 700 MHz supports DirectX 11.2 and video up to 4K/H.265. The HDMI interface on the front panel allows connecting monitors with a resolution up to 3840x2160 at 30 Hz or 2560x1600 at 60Hz.

#### Front Panel I/O

The ProDAQ 3058 features two USB 2.0 and one super-speed USB 3.0 ports as well as a Gigabit Ethernet interface on the front-panel.

#### Hard Disk

The ProDAQ 3058 features an internal M.2 slot for solid state drive modules of different sizes. Optional external drives can be connected using the super-speed USB 3.0 connector in the front panel.

#### LXI-Compatible Trigger Bus (optional)

The optional trigger interface of the ProDAQ 3058 is compatible to the LXI revision 1.3 standard. This trigger interface is an eight-channel multipoint LVDS (M-LVDS) signalling system for sourcing or receiving VXIbus TTL trigger lines and CLK10 signals from other VXI devices and LXI devices in hybrid test systems. Devices can be connected in a daisy-chain configuration through separate input and output connectors or in a star configuration through hubs.

#### Software Support

The ProDAQ 3058 supports different desktop and embedded Microsoft Windows operating systems as well as the Linux OS.

### Features & Benefits

- ▶ **Single-slot**, C-size VXIbus slot-0 controller
- ▶ **Intel® Pentium® N3710 Quad Core** processor with **1.6 / 2.56 GHz**
- ▶ **4 GB DDR3L SDRAM** (dual channel, 1600 MT/s)
- ▶ **Intel HD Graphics 405** (DVI/HDMI output)
- ▶ Front Panel I/O: **Gigabit Ethernet, 2 x USB 2.0, 1 x USB 3.0**
- ▶ **First** Embedded Slot-0 Controller to support the full **VXI-1 4.0 Standard**
- ▶ **High-speed VXI Interface** supports **2eVME** and **2eSST** block transfer modes
- ▶ Optional **SSD Hard Drive**
- ▶ Optional **LXI compatible trigger bus** on front panel
- ▶ Optional **PCI Express x4 Downlink** for ProDAQ 3030 Slot-0 Interface (multi-mainframe system support)

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## SPECIFICATIONS

Processor		
Type	Intel® Pentium® N3710 Quad Core	
Processor Speed	1.6 GHz, Boost up to 2.56 GHz	
L2 Cache	2 MB	
On-board Memory		
Type	DDR3L SDRAM, 1600 MT/s, dual channel	
Size	4 GB	
Front Panel I/O		
USB 2.0	Dual Type A	
USB 3.0	Single Type A	
Ethernet	10 Base-T / 100 Base-T / 1000 Base-T (RJ45)	
Monitor	HDMI (DVI)	
Trigger I/O	1 x In / 1 x Out, TTL Level	
CLK10 I/O	1 x bidirectional, TTL Level	
Mass Storage		
Type	Solid State Disk Module (M.2)	
Size	64 GB to 512 GB	
Graphics Interface		
Type	Intel HD Graphics 405	
Resolution	up to 3840x2160 at 30 Hz or 2560x1600 at 60Hz	
VXIbus Interface		
Address Ranges	A16, A24 and A32	
Data Transfer	D08, D16, D16BLT, D32, D32BLT, D64MBLT, 2eVME, 2eSST	
Interrupt Capabilities	Interrupter/Handler, IRQ 1-7	
Trigger Lines	VXIbus TTL Trigger 0-7, VXIbus ECL Trigger 0-1	
LXI Trigger interface (optional)		
Type	LXI Rev. 1.3 Class A compatible	
Level	M-LVDS	
Lines	8	
Connector	Dual-stacked 25-pin Micro-D	
Power Requirements		
Current Consumption	Voltage (V)	Current (mA)
	+5	6500
	-5.2	150
Other voltages not utilized. Optional features and external cabling may require additional power on +5V.		
Power Consumption	Up to 35 Watts	
Miscellaneous		
Dimensions	VXIbus single slot C-size module	
Weight	1300 gr	
Temperature	0 °C to +50 °C (operational) -40 °C to +70 °C (storage only)	
Humidity	10% - 90% (non-condensing)	
Software Support		
Supported OS	Microsoft® Windows® 7 Microsoft® Windows® Embedded Standard 7 Microsoft® Windows® Embedded Compact 7 Microsoft® Windows® 8 Microsoft® Windows® Embedded Standard 8 Microsoft® Windows® 10 Linux	
Warranty Period		
Standard	12 months	
Extended	up to 36 months (available at additional cost)	

## Ordering Information

See table on next page.

### Related Products:

- ▶ **ProDAQ 3030** PCI Express VXIbus slot-0 Interface
- ▶ **ProDAQ 8034** PCI Express x4 copper cable
- ▶ **ProDAQ 8035** PCI Express x4 active optical cable
- ▶ **ProDAQ 8036** LXI trigger bus cable
- ▶ **ProDAQ 8037** LXI trigger bus terminator

## ORDERING INFORMATION

Part Number	Description
3058-AA	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM and 64 GB Solid State Disk
3058-AB	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM and 128 GB Solid State Disk
3058-AC	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM and 256 GB Solid State Disk
3058-AD	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM and 512 GB Solid State Disk
3058-BA	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM, 64 GB Solid State Disk and LXI-compatible LVDS Trigger Interface
3058-BB	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM, 128 GB Solid State Disk and LXI-compatible LVDS Trigger Interface
3058-BC	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM, 256 GB Solid State Disk and LXI-compatible LVDS Trigger Interface
3058-BD	Intel® Pentium® N3710 based VXIbus Slot-0 Controller with 4GB RAM, 512 GB Solid State Disk and LXI-compatible LVDS Trigger Interface

For other options, please contact your distributor or sales representative.

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