PicoZed™

AVNET®

Reach Further™

PicoZed™ is a highly flexible, rugged, System-On-Module, or SOM that is based on the Xilinx Zynq®-7000 All Programmable SoC. It offers designers the flexibility to migrate between the 7010, 7015, 7020, and 7030 Zynq-7000 All Programmable SoC devices in a pin-compatible footprint.

The PicoZed module contains the common functions required to support the core of most SoC designs, including memory, configuration, Ethernet, USB, and clocks. It provides easy access to over 100 user I/O pins through three I/O connectors on the backside of the module. These connectors also support access to dedicated interfaces for Ethernet, USB, JTAG, power and other control signals, as well as the GTP/GTX transceivers on the 7015/7030 models. The transceiver based 7015 and 7030 versions of PicoZed are a superset of the 7010/7020 version, adding four high-speed serial transceiver ports to the I/O connectors. Designers can simply design their own carrier card, plug-in PicoZed, and start their application development with a proven Zynq-7000 All Programmable SoC sub-system.

TARGET APPLICATIONS

- Embedded system-on-module (SOM)
- Embedded vision
- Test & measurement
- Motor control
- Software-defined radio
- Industrial automation

FEATURES

User I/O (via three board-to-board connectors)

- 7Z010 Version
    - 113 User I/O (100 PL, 13 PS MIO)
    - PL I/O configurable as up to 48 LVDS pairs or 100 single-ended I/O
- 7Z015 Version
    - 148 User I/O (135 PL, 13 PS MIO)
    - PL I/O configurable as up to 65 LVDS pairs or 135 single-ended I/O
    - 4 GTP transceivers
- 7Z020 Version
    - 138 User I/O (125 PL, 13 PS MIO)
    - PL I/O configurable as up to 60 LVDS pairs or 125 single-ended I/O
- 7Z030 Version
    - 148 User I/O (135 PL, 13 PS MIO)
    - PL I/O configurable as up to 65 LVDS pairs or 135 single-ended I/O
    - 4 GTX transceivers

To purchase this kit, visit www.picozed.org

DESIGNED BY AVNET
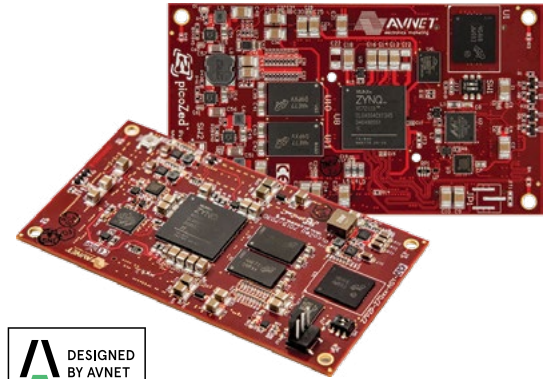
KIT INCLUDES

- PicoZed board

ADDITIONAL FEATURES

- SoC options
    - XC7Z010-1CLG400
    - XC7Z020-1CLG400
    - XC7Z015-1SBG485
    - XC7Z030-1SBG485
- Memory
    - 1 GB of DDR3 SDRAM
    - 128 Mb of QSPI Flash
    - 4 GB eMMC
- Communications
    - 10/100/1000 Ethernet PHY
    - USB 2.0 PHY
- Other
    - JTAG configuration port accessible via I/O connectors
    - PS JTAG pins accessible via I/O connectors
    - 33.33 MHz oscillator
    - Software
        - Linux BSP and reference design

/PICOZED™

BLOCK DIAGRAM

```
┌──────────────────────┐        ┌──────────────────────┐        ┌──────────────────────┐
│    128 Mb QSPI       │◄──────►│                      │◄──────►│      OSC @           │
└──────────────────────┘        │   XC7Z010/20-1       │        │    33.33 MHz         │
                                │     CLG400           │        └──────────────────────┘
┌──────────────────────┐        │                      │        ┌──────────────────────┐
│     1 GB DDR3        │◄──────►│   XC7Z015/30-1       │◄──────►│     USB 2.0          │
└──────────────────────┘        │     SBG485           │        │    ULPI PHY          │
                                │                      │        └──────────────────────┘
┌──────────────────────┐        │                      │        ┌──────────────────────┐
│     4 GB eMMC        │◄──────►│                      │◄──────►│     Ethernet         │
└──────────────────────┘        │  Processing          │        │      PHY             │
                                │   System             │        └──────────────────────┘
┌──────────────────────┐        │                      │
│   JX1 Micro Header   │◄──────►│                      │        ┌──────────────────────┐
│   50/58 User I/O     │        │                      │        │   JX3 Micro Header   │
│ (7Z010/7Z015-20-30)  │        │                      │        │  Ethernet / USB 2.0 OTG
└──────────────────────┘        └──────────────────────┘        │   10/20 User I/O     │
                                ┌──────────────────────┐        │  (7Z020/7Z015-30)    │
┌──────────────────────┐        │   Programmable       │◄──────►│  4 GTP/GTX Ports     │
│   JX2 Micro Header   │◄──────►│     Logic            │        │  (7Z015/7Z030)       │
│   50/57 User I/O     │        │                      │        └──────────────────────┘
│ (7Z010/7Z015-20-30)  │        └──────────────────────┘
└──────────────────────┘
```
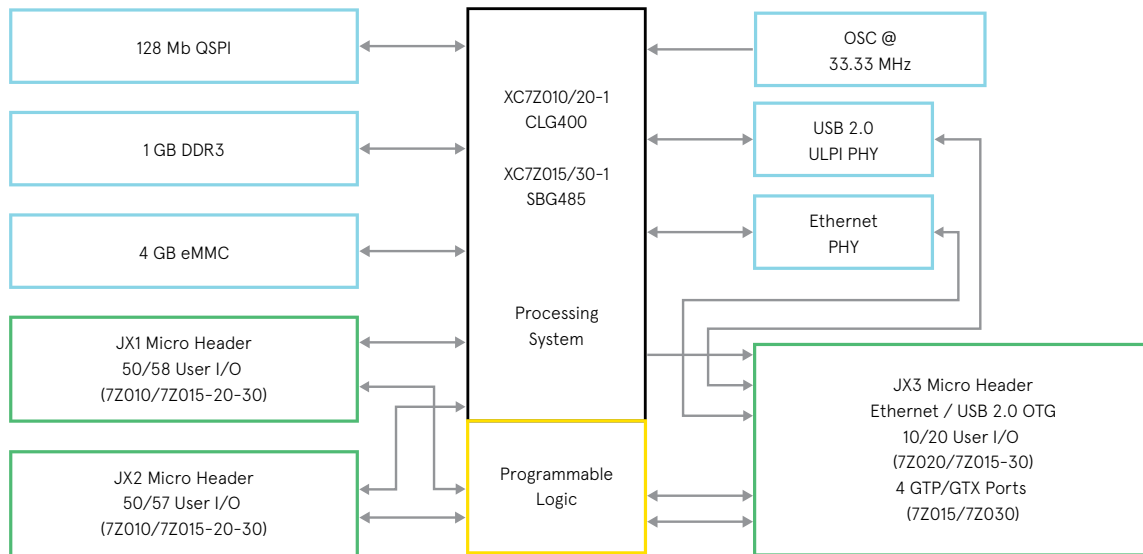
FEATURED MANUFACTURERS

XILINX ALL PROGRAMMABLE.   ABRACON CORPORATION   MICRON   MARVELL®

MICROCHIP   FCi   TEXAS INSTRUMENTS   SPANSION®

PARTS

Part Number	Description	Pricing
AES-Z7PZ-7Z010-SOM-G	7010 PicoZed SOM	See online catalog*
AES-Z7PZ-7Z010-SOM-I-G	7010 Industrial Temperature PicoZed SOM	
AES-Z7PZ-7Z015-SOM-G	7015 PicoZed SOM	
AES-Z7PZ-7Z015-SOM-I-G	7015 Industrial Temperature PicoZed SOM	
AES-Z7PZ-7Z020-SOM-G	7020 PicoZed SOM	
AES-Z7PZ-7Z020-SOM-I-G	7020 Industrial Temperature PicoZed SOM	
AES-Z7PZ-7Z030-SOM-G	7030 PicoZed SOM	
AES-Z7PZ-7Z030-SOM-I-G	7030 Industrial Temperature PicoZed SOM	

RELATED PARTS

Part Number	Description	Pricing
AES-PZCC-FMC-G	PicoZed Carrier Card with FMC	See online catalog*

*Contact your local Avnet sales office for pricing on higher quantities

*VISIT ONLINE CATALOG: WWW.AVNET.COM

CONTACT INFORMATION

North America
2211 S 47th Street
Phoenix, Arizona 85034
United States of America
eval.kits@avnet.com
1-800-585-1602

Europe
Gruber Str. 60c
85586 Poing
Germany
marketing@silica.com
+49-8121-77702

Japan
Yebisu Garden Place Tower, 23F
4-20-3 Ebisu, Shibuya-ku
Tokyo 150-6023 Japan
eval-kits-jp@avnet.com
+81-(0)3-5792-8210

Asia
151 Lorong Chuan
#06-03 New Tech Park
Singapore 556741
XilinxAPAC@avnet.com
+65-6580-6000