DATASHEET

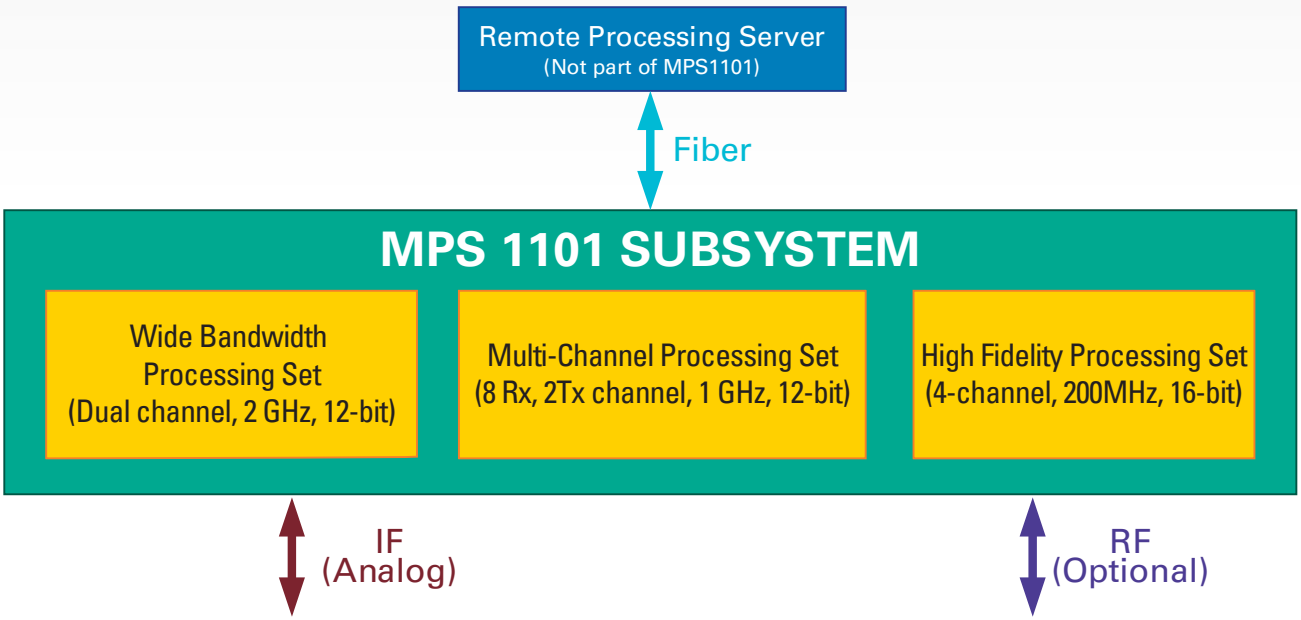
MPS1101 Sensor Processor

Open Architecture Development Subsystem for Mission-to-Mission Flexibility

- **Wide-bandwidth processing set: 2Rx and 2Tx channels, 2 GHz, 12-bit**
- **Multichannel processing set: 8Rx and 2Tx channels, 1 GHz, 12-bit**
- **High-fidelity processing set: 4Rx and 4Tx channels, 200 MHz, 16-bit**

As adversaries bring new electronic warfare capabilities to the spectrum, it's critical to have the necessary technology in place to discover and respond quickly to effectively counter threats. To achieve this, subsystems need to have a modular and reconfigurable architecture to offer a more rapid, yet secure, way of deploying new systems.

To support this need, Mercury Systems has developed the MPS1101 product family that offers an open architecture, application-ready development subsystem for hardware, software and firmware. With the design flexibility built in, users can leverage a wide range of hardware sets, plus turnkey firmware and software, to easily prototype and develop subsystems that meets their mission-specific needs.



Application ready

Users can leverage the MPS1101 subsystem's multiple processing sets and flexible design to build exactly what is needed for a mission-to-mission solution without the long timelines historically required for subsystem builds with similar capabilities.

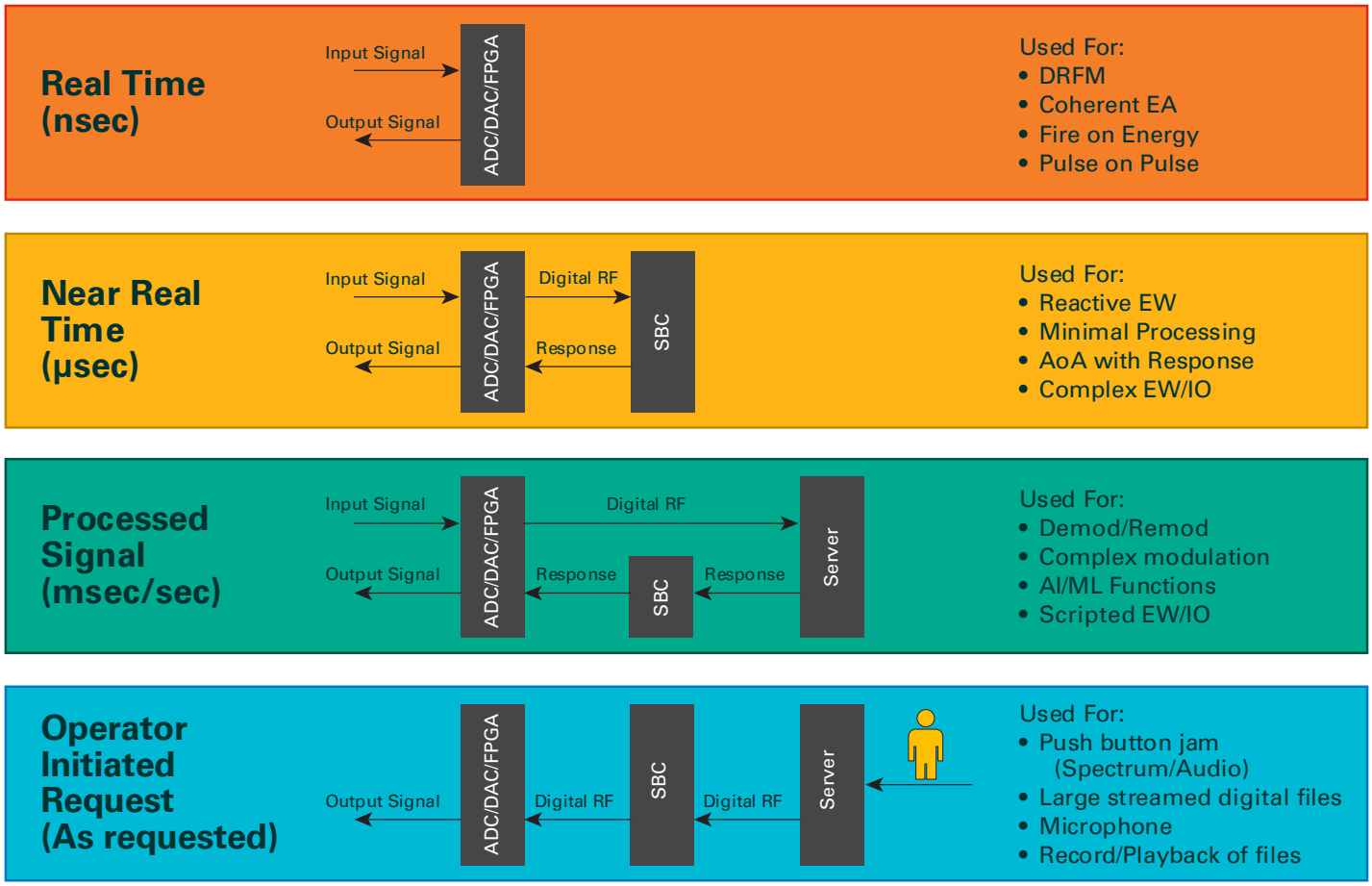
Multiple processing components

- Rapid prototyping
- Tactical application demonstrator
- Radar/EW (wideband, low latency)
- Communications (multichannel, wideband)
  - Communication protocols
  - COMINT
  - SDR
- ELINT processor
  - High fidelity, multichannel
- AI/cognitive/machine learning
- Remote sensor
  - High-power, intelligent processing
  - Off-subsystem data transmission over high-speed fiber

Multiple software execution loops for multiple applications

- Real-time execution loop
  - FPGA processing resources of the hardware
- Near real-time loop
  - FPGA capabilities of the hardware and embedded real-time processing from the Intel-based microprocessors
- Processed Signal loop
  - Leverages the signal reduction capabilities of the processing hardware to refine waveforms for large data set processing (AI, PDW, Machine Learning)
- Operator initiated loop
  - Main-in-the-loop commands

A customizable subsystem with open hardware, software and firmware allows for the creation of a product that not only has the ability to test systems prior to deployment, but also the security features necessary for reliable and expedited deployment. The MPS1101 helps ensure effectiveness of the subsystem from design phase to operation in the field.



MPS1101 Module List

Module Description	Processing Set	Processor Type
Single Board Computer (LDS3517)	Dual Channel, Wideband, Low Latency	CPU
Digital Transceiver (DCM3220)	Dual Channel, Wideband, Low Latency	FPGA
Optical I/O Module (IOM400)	Dual Channel, Wideband, Low Latency	Fiber Interface
RFSoC Module (WB3XBM 26)	Multi-Channel (Eight receive, two transmit)	FPGA
CPU (1064 2464)	Multi-Channel	CPU
FPGA Module (5983 w/ 324)	High-Fidelity (Four channel receive/transmit)	FPGA
Single Board Computer (SBC347D)	High-Fidelity (Four channel receive/transmit)	CPU
Critical I/O Storpack	Common Modules	Storage (3TB)
PCIe gen3 Switch (qty2 in subsystem)	Common Modules	Switch
Ethernet Switch	Common Modules	Switch

Need more Help? Need a variant of this product?

For further information, please contact Mercury Systems at electronicwarfare@mrcy.com

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