



## OVERVIEW

The IPM-561 provides a high-channel-density solution to your ARINC 561/568 Avionics Databus requirements. Available as a 32 MHz single-size Industry Pack (IPack) module. The IPM-561 offers message scheduling and time-tagging with a precision of one microsecond.

On-board transmit/receive buffers have programmable almost-full/almost-empty thresholds, which fully support both polling and interrupt-driven software strategies to ensure optimal real-time performance.

The IPM-561 transmitters are short-circuit protected and offer programmable bit-rate and optional parity generation.

Receivers can be programmed to filter incoming messages based on their ARINC 561/568 labels. In addition, receivers can be configured for internal loopback or external loopback verification.

## CARRIER BOARD SUPPORT

The functionality of the IPM-561 is further enhanced by the power of MAX Technologies' line of intelligent multi-platform (PCI, CPCI and PXI) carrier boards. All modules and carrier boards are synchronized and time correlated to 32-bit microsecond-resolution.

## SOFTWARE SUPPORT

The MX-Foundation library provides high-level abstraction of hardware and allows to easily control mixed protocols and I/O modules on one or multiple carrier boards.

## FEATURES

- ▶ Up to 8 ARINC 561/568 channels on a single size IPack Module
- ▶ Up to 32 ARINC 561/568 channels on one single carrier board
- ▶ Configurable data rate per channel between 3906 bps to 15625 bps
- ▶ 32 ARINC Word FIFO expandable to 16 MB when used with MAX Technologies' intelligent carrier board
- ▶ Precision of one microsecond
- ▶ Complete independent channel configuration and operation
- ▶ Parity Error and Short Word Error detection
- ▶ Short circuit protection on transmitters
- ▶ Available in extended temperature

## SOFTWARE

- ▶ MX-Foundation multi-protocol software API available for Windows, Linux and Mac OS X
- ▶ MAXIM Windows GUI



# IPM-561

## ARINC-561/568 IPACK Module

### SPECIFICATIONS

<b>Number of channels</b> <ul style="list-style-type: none"><li>• 4 TX, 4 RX channels</li></ul>	<b>Environmental</b> <ul style="list-style-type: none"><li>• Standard Operating Temperature: 0°C to 70°C</li><li>• Relative Humidity for operation: 0 to 95% (non-condensing)</li></ul>
<b>Channel speed</b> <ul style="list-style-type: none"><li>• Two independent speeds, configurable per channel</li><li>• Tx and Rx Speed Range: 3906 bps to 15625 bps</li></ul>	<b>Reliability MTBF (MIL-HDBK-217 FN2, 30 °C)</b> <ul style="list-style-type: none"><li>• 760 566 hours</li></ul>
<b>Error Injection and Detection</b> <ul style="list-style-type: none"><li>• Parity, +/- 1bit, gap length</li></ul>	<b>Power consumption</b> <ul style="list-style-type: none"><li>• +5V @ 125 mA max</li><li>• +12V @ 40 mA max</li><li>• -12V @ 25 mA max</li></ul>
<b>Time Synchronization</b> <ul style="list-style-type: none"><li>• 32-bit Timetag, Resolution: 1 microsecond, Accuracy: 1 microsecond</li></ul>	<b>Electrical</b> <p>Standard ARINC-561 Voltage Level:</p> <ul style="list-style-type: none"><li>• Receive: 7 to 17V for High &amp; <math>\pm 3V</math> for Low</li><li>• Transmit: 0V for Low &amp; 12V for High</li></ul>
<b>IPACK Module bus clock</b> <ul style="list-style-type: none"><li>• 32 MHz</li></ul>	<b>Additional features</b> <ul style="list-style-type: none"><li>• Label Selection</li><li>• Word Filtering</li></ul>
<b>Physical dimensions</b> <ul style="list-style-type: none"><li>• IPack Standard Single Size</li><li>• 3.9" x 1.8" (9.906 cm x 4.572 cm)</li></ul>	

### Supported IndustryPACK Carrier Boards

The IPM-561 is a standard IndustryPack (IPack) module that can be used with MAX Technologies' **PCI, CPCI and PXI** intelligent carrier boards.

### Software

<b>MAXIM</b>	MAXIM is a powerful and easy-to-use test & measurement GUI application for Windows XP
<b>MX Foundation</b>	MX-Foundation is a multi-protocol high-level API that takes full advantage of the MAX Technologies' intelligent carrier boards. MX-Foundation is available for Windows, Linux and Mac OS X.

### Ordering Information

Part Number	Description
MAX-IP-200116	IPM-561 4TX-4RX