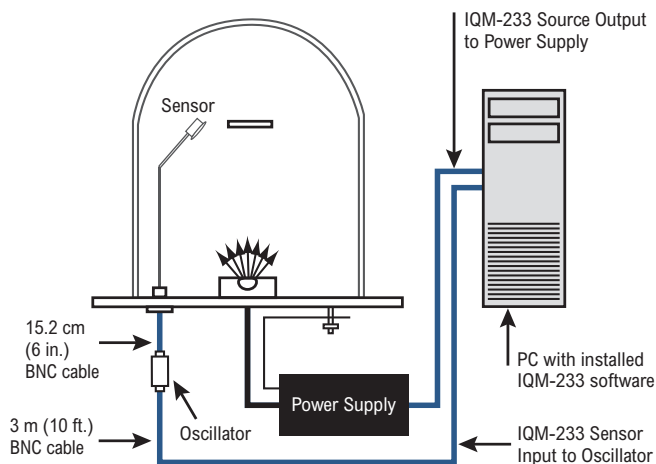# IQM-233
Thin Film Deposition Controller Card

LOW-COST DEPOSITION CONTROL ON A PCI EXPRESS CARD

The IQM-233 PCI Express card turns your computer (PC) into a thin film deposition controller. This INFICON designed and manufactured product is the ideal choice for system OEMs, or anyone wishing to incorporate a thin film deposition controller into an existing computer or PLC controlled system. Installation is simple—all you need is an unoccupied PCI Express slot. IQM-233 is available to fit in standard or small form factor computer towers.

UNPARALLELED FEATURES

IQM-233 features three QCM sensor inputs and three source outputs on each card. Up to two IQM-233 cards can be installed in a single computer (using optional IQS-233 software), giving you a maximum of six sensor inputs and six source outputs. Only INFICON offers this level of flexibility in a fully integrated computer controlled QCM controller.

IQM-233 is compatible with INFICON oscillator, PN 782-900-010, so replacing an SQM-242 card does not require a new oscillator. It is also compatible with all INFICON single and dual sensor heads.

Typical system configuration.

FEATURES AT A GLANCE

▪ PCI Express

▪ Three sensor inputs, three control outputs

▪ Install multiple cards in a computer

▪ Codeposition of multiple sources

▪ Easy PLC integration to add I/O capabilities

▪ Easy-to-use

▪ Value price

CHOOSE THE SOFTWARE SOLUTION RIGHT FOR YOU

IQM-233 includes basic Windows® software for setup and control of simple sequential or codeposition processes with one IQM-233 card. The optional IQS-233 advanced Windows software allows for more complex process setup, including multi-layer codeposition, graphing, and PLC integration with event selectable relay/input functions. IQS-233 software also allows for use of up to two IQM-233 cards.

As an alternative for customers wanting to write their own software, IQM-233 includes a LabVIEW™ sample program to provide basic functionality and demonstrate programming techniques.

INFICON WORLDWIDE SUPPORT

The IQM-233 card is designed and supported by INFICON, a worldwide leader in QCM control. No matter where you are, you get fast answers, attentive service, and the support you need to keep your INFICON product running smoothly. With offices around the world, INFICON offers local technical support and service where you need it.

SPECIFICATIONS

Computer Requirements

- 1.5 GHz or better CPU
- 2 GB RAM
- 200 MB of free HD space
- Minimum screen resolution of 1152 x 648
- Windows XP SP3, Windows 7 32/64-bit, Window 8 32/64-bit
- One PCI Express slot (any size) is required for each IQM-233 card

IQM-233 Thin Film Deposition Controller Card

Sensor Inputs	Three QCM Sensor Inputs	Outputs	Three Analog Source Outputs
Connectors	SMA – Includes one SMA/BNC adapter	Connectors	15-pin high density D-sub
Measurement frequency range	6.1 to 4.0 MHz (adjustable)	Signal	0 to ±10 V (dc) (adjustable)
Frequency resolution[1]	±0.10 Hz @ 6 MHz	Resolution	15-bit plus sign
Thickness and rate resolution/measurement[2]	±0.12 Å	Impedence	50 Ω
Measurement interval	0.1 to 2.0 s (adjustable)	Computer Interface	PCIe x1 – PCI Express Slot (Std or SFF)

[1] Resolution given for 0.25 s measurement interval
[2] Tooling/density = 100/1, fundamental frequency = 6 MHz, 0.25 s measurement interval

ORDERING INFORMATION

782-IQM-233-G1	IQM-233 QCM controller card for standard PCI Express slot[3]
782-IQM-233-G2	IQM-233 QCM controller card for Small Form Factor (SFF) PCI Express slot[3]
782-IQS-233	IQS-233 Codeposition software
600-1441-P1	SMA to BNC adapter for IQM-233 sensor inputs (one required for each sensor input)

[3] Includes one SMA to BNC adapter (600-1441-P1)

IQM-233 Standard Software (included with IQM-233)

- Windows program provides basic setup and deposition control for one IQM-233 card.
- Simultaneous monitoring and/or control of up to three sensors and/or sources.
- A LabVIEW sample program and its source code are also included.

Optional IQS-233 Codeposition Software

- Provides complete setup and deposition control for one or two IQM-233 cards.
- Simultaneous monitoring and/or control of up to 6 sensors and/or sources.
- Multi-layer process recipes, pre/post conditioning, data logging, real-time data graphing, and digital I/O capabilities (requires a PLC).

INFICON Instruments for Intelligent Control˙