

MxC110 MuxCapacitor® Plus Forward Converter Chip Set

The MxC110 MuxCapacitor plus Forward Converter three-chip set solution offers the highest energy efficiency for a 65W AC-DC isolated power supply. A multi-gain MuxCapacitor delivers the optimum voltage to a forward converter. The forward converter employs an advanced pulse skipping algorithm to maximize no-load and standby operation power efficiency.

The MxC110 chip set includes a pin configurable output voltage control. Four different output voltages are available compatible with USB-C requirements.

Also included are reset, internal references and regulation & gain control logic. The chip set's high efficiency reduces thermal loading for lower packaging costs. Other output voltages are available with a simple gain trim

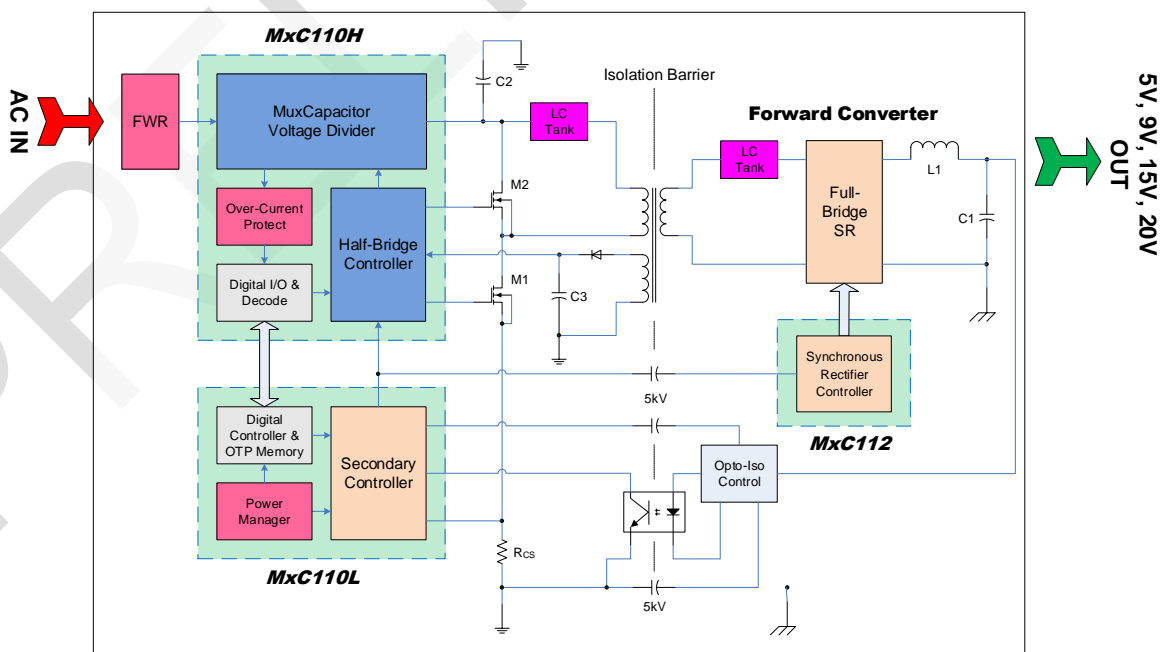
Features

- 85-264VAC Input Voltage
- High Voltage MuxCapacitor
- Soft-Start
- 20V, 65W Output
- 5V, 9V, 15V, 20V Output Voltages
 - Pin Configurable
- ±5% Output Voltage Regulation
- > 95% Average Efficiency
 - 25%, 50%, 75%, 100%
- < 5mW Zero-Power Mode Consumption
- I²C Configuration Interface

Applications

- USB-C Compatible Output Voltages
- Smart Outlets
- IoT and IIoT Gateways
- Remote Sensors
- Smoke and CO Detectors

MxC110 Block Diagram



High-Efficiency Conversion Features

- Utilizes Helix MuxCapacitor™ Technology – Equalizes Primary-Side Voltage Variation
- Half-Bridge Forward Driver with LC Tank - Minimizes Transformer Winding Losses
- Full-Bridge Synchronous Rectifier - Maximizes Power Transfer at Peak Loads
- Synchronous Rectifier Controller IC for USB-C PD 3.0 Output Voltage Delivery
- Compatible with Other Secondary Architecture
- Three Chip Set
 - MxC110H – High Voltage MuxCapacitor IC
 - MxC110L – Low Voltage Controller IC
 - MxC112 – Synchronous Rectifier Controller IC

MxC110 Chip Set Efficiency vs Output Power (20v)

